

Medical Specialist Preferences and Reasons among Fresh Nigerian Interns

Madu AJ, Ubesie A¹, Madu KA², Nonyelu C³, Ibegbulam OG

Departments of Hematology and Immunology, and ¹Pediatrics, University of Nigeria Enugu Campus, ²Department of Orthopedic Surgery, National orthopedic Hospital, Enugu, ³Department of Hematology and Immunology, University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu State, Nigeria

Address for correspondence:

Dr. Anazoeze Jude Madu,
Department of Hematology and
Immunology, University of Nigeria
Enugu Campus, PMB 01129,
Enugu 400001, Enugu State, Nigeria.
E-mail: anazoeze@yahoo.com

Abstract

Background: Developing countries like face dire shortage of medical manpower due to brain drain. Young doctors intending to specialize usually prefer certain specialties and sub-specialties to the neglect of others. This creates avoidable gaps in health care delivery. **Aim:** The aim of the following study is to determine the choices of career and reasons for those choices among young medical doctors. **Subjects and Methods:** A cross-sectional study of fresh interns using a pre-validated 13 item questionnaire was done at the University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu Nigeria. **Results:** A combination of the various surgical specialties was the most common choice made in 29/110 26.4% of the respondents. The top four specific choices were pediatrics 28/110 (25.5%), internal medicine 11/110 (10%), obstetrics and gynecology 10/110 (9.1%) and public health 8/110 (7.3%). The most common factor influencing choice of specialty was interest in 86/109 (78.9%) of the respondents. A higher proportion of males 24/69 (34.8%) compared with females 4/41 (10%) chose a specialty because of brighter prospect ($P = 0.01$). **Conclusion:** The most frequently chosen specialties by young interns were a combination of surgical specialties, internal medicine, pediatrics and obstetrics and gynecology. Interest was the most common reason for choice of specialty although males are significantly influenced by brighter prospects.

Keywords: Career choices, House officers, Interns, Nigeria, Specialty

Introduction

Health care systems around the world are facing up to the necessity for change in order to fulfill the needs of the population they serve. With more information currently available on the population at risk with regards to health care, as well as their predominant disease affectations, there arises the need for the medical workforce to be well appropriated and distributed. This must take into account the peculiar health problems and health personnel requirements of each community. Concurrently, there have been dramatic shifts in career choices of medical graduates as many of them prefer to travel abroad in search of greener pastures.^[1] In developing countries like Nigeria, the continuing exit of qualified health

personnel due to poor remuneration creates the urgent need to assess and evaluate gaps in medical personnel with respect to areas of specialization. This will evoke policy development which will make the deficient areas more attractive; in order to create balanced development of the health sector and serve the health needs of the population.

The feminization of the workforce and demand for a better work/life balance by both genders are leading to predicted shortages of some specialists in some countries.^[2,3] Workforce planners have the difficult task of predicting future needs for various specialists in the context of a rapidly changing health service. Ensuring the recruitment of sufficient numbers of trainees for each specialty, while anticipating changing health service requirements during long training periods remain a challenge.

The lack of qualified specialists in certain field of medicine, like laboratory- and research-oriented medicine portends danger for the country's health system.^[4,5] The implication is that patients requiring their services will have to make expensive oversea medical trips which further deplete the country's lean resources; that could have been used in strengthening

Access this article online

Quick Response Code:	Website: www.amhsr.org
	DOI: *****

the country's health system. Those that cannot afford such expensive trips suffer various morbidities due to the absence of proper and timely interventions and ultimately death as a result.

There is also the emerging gradual shift in the nature of the predominant health problems in the country; from infectious and other preventable diseases to the chronic, noninfectious systemic diseases and malignancies.^[6] The unacceptably high maternal and infant mortality rates and the rising incidence of chronic and malignant diseases, requires that urgent attention must be given to the issue of career choices in our environment.^[6] This will entail better incentives in training specialists in some otherwise unattractive specialties. The aim of this study is to examine the choice of and factors that affect choice of specialization and sub specialization among medical interns in Nigeria.

Subjects and Methods

Setting

This was a cross-sectional survey of 110 fresh house officer employed at the University of Nigeria Teaching Hospital (UNTH), Ituku/Ozalla, Enugu in 2012. The UNTH is a major referral tertiary institution in Nigeria located in the south-eastern part of the country. The institution is involved in training of various cadres of health workers, clinical services and medical research.

Instrument

A self-administered prevalidated questionnaire was completed by willing respondents employed within the year, who gave informed consent. Information obtained were age, gender, marital status, potential specialty choice, and reasons for the choice as well as intentions for future practice. The anonymity of the participants was ensured by none use of names in the questionnaire completion process.

Ethical approval

Ethical approval was obtained from the Health Research and Ethics Committee of the UNTH, Ituku/Ozalla, Enugu.

Data analysis

Data were analyzed using Statistical Package for Social Sciences (SPSS) 19.0 (Chicago Illinois). Z-test was used to compare the proportion of males and females that chose various specialties. Chi-square test was used to test for significant association of the categorical variables and *t*-test was used to compare the mean of outcome continuous variables. All reported *P* values are double-tailed and values <0.05 was considered to be significant.

Results

A total of 110 respondents were involved in the study; (69 males and 41 females). Their median age was 26 years (range 22-40 years). 103/110 (95.6%) of the 110 respondent were single, 6/110 (5.5%) were married and one person 1/110 (0.9%) was divorced.

A combination of the various surgical specialties was the most common choice made in (29/110) 26.4% of the respondents. The specialty choice of the interns is shown in Figure 1. The top four individual choices were pediatrics 28/109 (25.7%), internal medicine 11/109 (10.1%), obstetrics and gynecology 10/109 (9.2%) and public health 8/109 (7.3%). While 14/109 (12.8%) were still undecided.

Demographics and career choice

Nineteen of the 28 respondents (67.9%) that chose pediatrics were female ($P < 0.01$). All six choices for pediatrics surgery were males and this showed a trend that failed to attain statistical significance ($P = 0.06$). The detail of specialty choices according to gender is shown in Table 1. Ten of 69 males (14.5%) compared to four of 40 females (10%) were still undecided on choice of specialization ($P = 0.57$). None of the seven married interns (0%) compared to 14 of 101 single interns (13.9%) was undecided ($P = 0.53$). Undecided interns were slightly older (37.0 [26.4] years) compared to those that were decided (32.6 [20.4] years) although this difference was not statistically significant ($P = 0.47$).

Factors influencing choice of specialty

The most common factor influencing choice of specialty was interest in 86/109 (78.9%) of the respondents. Other identified factors were job satisfaction, brighter prospect, need for more time and financial benefits in (42/109) 38.5%, (28/109) 25.7%, (13/109) 11.9%, and (14/109) 11%, respectively. A higher proportion of males 24/69 (34.8%) compared to females 4/40 (10%) chose a specialty because of brighter prospect ($P = 0.01$). Similarly, a higher proportion of males

Table 1: Gender distribution of specialty choices

Specialty	Specialty choice n (%)			P value
	Male	Female	Total	
Undecided	10 (14.5)	4 (10)	14 (12.8)	0.46
Internal medicine	6 (8.7)	5 (12.5)	11 (10.1)	0.53
Pediatrics	9 (13.0)	19 (47.5)	28 (25.7)	<0.001*
Ophthalmology	2 (2.9)	1 (2.5)	3 (2.8)	0.90
Obstetrics and gynecology	7 (10.0)	3 (7.5)	10 (9.2)	0.66
Radiology	2 (2.9)	2 (5.0)	4 (3.7)	0.57
Hematology	1 (1.4)	0 (0.0)	1 (0.9)	0.01*
Microbiology	1 (1.4)	0 (0.0)	1 (0.9)	0.01*
General surgery	4 (5.8)	1 (2.5)	5 (4.6)	0.43
Urology	3 (4.3)	0 (0.0)	3 (2.8)	0.18
Pediatric surgery	6 (8.7)	0 (0.0)	6 (5.5)	0.06
Cardio-thoracic surgery	2 (2.9)	0 (0.0)	2 (1.8)	0.28
ENT surgery	1 (1.4)	0 (0.0)	1 (0.9)	0.45
Orthopedic	2 (2.9)	0 (0.0)	2 (1.8)	0.28
Plastic surgery	1 (1.4)	0 (0.0)	1 (0.9)	0.45
Neurosurgery	6 (8.7)	0 (0.0)	6 (5.5)	0.06
Anesthesia	1 (1.4)	1 (2.5)	2 (1.8)	0.68
Public health	4 (5.8)	4 (10.0)	8 (7.3)	0.42
Others	1 (1.4)	0 (0.0)	1 (0.9)	0.45

*significant value $P < 0.05$

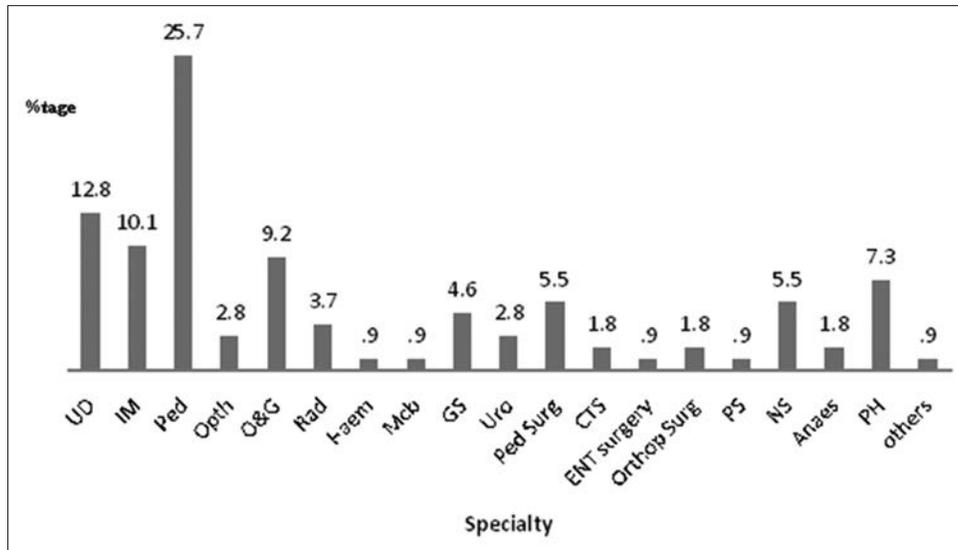


Figure 1: Specialty choices of the interns

12/69 (17.4%) compared to females 2/40 (5%) made their career decision because of financial considerations and this trend showed a statistical trend ($P = 0.08$). A comparison of the reasons for choices of specialties between the genders is shown in Table 2. Table 3 shows intentions for future medical practice. Five of the 109 respondents (4.6%) reported an unlikely probability of practicing medicine. Their reasons for opting out were poor remuneration 2/5 (40.0%) and lack of interest 3/5 (60%). Fifty-five (50.5%) of 109 respondents would prefer practicing in Nigeria. Twenty-three (21.1%) said they wouldn't mind practicing anywhere in the world while 18 (16.6%) will prefer North America or Europe.

The mean age of respondents that will likely study medicine again (33.7 years) compared to those that will not (30.8 years) if given a second chance was not statistically significant ($P = 0.60$). Fourteen of 69 males (20.3%) will not study medicine again compared to five of the 40 females (12.5%) ($P = 0.43$).

Reasons for wanting to leave Nigeria

Among the interns, four of 46 (8.7%) that will prefer leaving Nigeria compared to 10 of 63 (15.9%) that want to stay back would do so because of financial considerations ($P = 0.39$). Twenty-nine of 46 (63.0%) will leave compared to four of 63 (6.3%) because of lack of facilities in Nigeria ($P < 0.01$). Eighteen of 46 (39.1%) among those that want to leave compared to only one of 63 (1.6%) among those that preferred to stay back would do so because of prospect of job satisfaction ($P < 0.01$). Two of 46 (4.3%) will leave Nigeria compared to three of 63 (4.8%) because of prestige ($P = 0.65$).

Discussion

We report that the top choices of the interns in our center were pediatrics (25.7%), internal medicine (10.1%), obstetrics and gynecology (9.2%) and public health (7.3%). Combined

Table 2: Factors influencing specialty choices among the interns

Factor	Male(%)		Female(%)		P value
	Yes	No	Yes	No	
Interest	52 (75.4)	17 (24.6)	34 (85.0)	6 (15.0)	0.33
Job satisfaction	30 (40.5)	39 (56.5)	12 (30.0)	28 (70.0)	0.22
Brighter prospect	24 (34.8)	45 (66.2)	4 (10.0)	36 (90.0)	<0.01
Skills	6 (8.7)	63 (91.3)	1 (2.5)	39 (97.5)	0.42
Financial considerations	12 (17.4)	57 (82.6)	2 (5.0)	38 (95.0)	0.08
Prestige	5 (7.2)	64 (92.8)	0 (0.0)	40 (100.0)	0.16

Table 3: Intentions for future medical practice

Variable	n	Percentage
Probability of not practicing medicine in future	5/109	4.6
Reasons for not wanting to continue		
Poor remuneration	2	40.0
Lack of interest	3	60.0
Total	5	100.0
Place of future practice		
Nigeria	55	50.5
Anywhere	23	21.1
North America	9	8.3
Other African countries	5	4.6
Europe or North America	5	4.6
Europe	4	3.7
Undecided	8	7.3
Total	109	100.0
Reason for desiring to leave Nigeria		
Poor remuneration	8	13.3
Poor state of facilities	33	55.0
Job satisfaction prospect	19	31.7
Total	60	100.0

surgical specialties were however, the most common. This contrasts with the findings from a United Kingdom study

among medical students where the reported top choices were general practice, medicine, and surgical specialties.^[2] This variation can be explained by difference in locality and study participants in the two studies. While general practice is a well-established and lucrative specialty in the United Kingdom, the same cannot be said in Nigeria. Odusanya and Nwawolo^[3] in Lagos and by Ohaeri *et al.*,^[1] in Ibadan, both in south-west Nigeria^[1,3] reported that the four top choices after qualifying from medical school were surgical specialties, obstetrics and gynecology, dental sciences and pediatrics which is similar to the findings of this current study. Other Nigerian studies have reported that obstetrics and gynecology, surgery, and pediatrics were most common specialty choices among intending resident doctors.^[7,8] This is in spite of human resources for health profile of Nigeria that these specialties already have the highest number of trained doctors unlike specialties like General Medical Practice and Oto-Rhino-Laryngology in the country.^[9] It can therefore be opined that the country of undergraduate medical training and practice may influence choice of specialty. That level of medical training or exposure could also influence choice of specialty is further highlighted in the Lagos study where the authors noted difference in choices participants made as students and as young doctors.

Our study also showed that higher number of females than males significantly chose pediatrics, figure 2. This agrees with the findings from the Lagos study where all respondents that chose pediatrics were females.^[3] The female medical graduates' choices are mainly influenced by marital and social circumstances.^[10] Different studies have shown that having and raising children has a negative influence on becoming a specialist^[11,12] among women. Females therefore seem to choose subspecialties that will avail them more time for their family and a much easily controllable lifestyle.

This may explain the predominance of female entrants into such programs as pediatrics, radiation and preventive medicine which presumably gives them more "family time". This is as opposed to the paucity of female residents in urology, cardiothoracic and neurosurgery, which may be more time-consuming and physically exerting.^[8] The influence of a controllable lifestyle has drawn increasing attention in United States and United Kingdom where increasing number of medical students are applying to radiology and anesthesiology programs as opposed to general surgery and family practice programs.^[13] In the context of medical specialties, controllable lifestyle is defined by the following characteristics; personal time free of practice, requirements for leisure, family, and a vocational pursuit and control of total weekly hours spent on professional responsibilities. This is related to the amount of time remaining for activities independent of medical practice and is a reflection of total work hours as well as number of calls/month. However, it would be interesting to investigate this aspect in a more controlled study and really discern if these professionals would prefer less working hours and less pay or the reverse, and if the situation in our environment is the same.

Our study showed that the most common factors influencing choice of specialty were interest, job satisfaction and brighter prospect in chosen discipline. This agrees with the findings of the researchers in Lagos.^[3] Eze *et al.*,^[7] studied older medical graduates aged 24-53 years who have taken basic sciences examination for postgraduate training in Nigeria and reported that interest was the most common reason for choice of specialty among their respondents. Interestingly, a significant proportion of our male respondents compared to the females were influenced by specialties that have brighter prospect. This underscores the higher expectations and societal pressures in our society. This assertion is further supported by a higher proportion of males compared to females also making their decision based on financial considerations; a difference that showed a trend but failed to attain statistical significance. An approximate half of the respondents would prefer practicing in Nigeria and this differs from 31.4% reported by Odusanya and Nwawolo^[3] in Lagos. This may be a reflection of improved remuneration of health workers in Nigeria. However, the global economic crisis and unemployment might have also served to discourage this search for greener pastures. Among interns that have decided to leave the country, lack of facilities and brighter prospect outside Nigeria were significant predictors. Conversely, financial consideration and prestige were not significant factors for wanting to leave the country. Some of the reasons documented in the literature for migration of health professionals from Africa include poor health facilities, poor remuneration and lack of opportunities for career advancement.^[14] Financial consideration was not a significant reason for wanting to migrate from this study. A previous study of 73 interns in Nnewi, Nigeria also showed that financial consideration did not significantly influence choice of specialization.^[8]

The low patronage of some specialties impacts negatively on the healthcare systems of Nigeria. The very limited supply of specialists in these area results in suboptimal service delivery with attendant persistent low life expectancy. This is compounded by lack of facilities, an identifiable reason for continued brain drain. It is therefore, imperative that infrastructures are upgraded in public hospitals and incentives provided to encourage specialization in "less attractive areas" in order to improve health outcomes.

Although our study is limited by its cross-sectional design, it has nonetheless provided insight to post-graduate medical training in Nigeria and factors that influence choices that young doctors make.

Conclusion

The most frequently chosen specialties by young interns were a combination of surgical specialties, internal medicine, pediatrics and obstetrics and gynecology. Females are more likely to specialize in pediatrics. While interest was the most common reason for choice of specialty, male medical

graduates are influenced by brighter prospects and financial considerations.

Acknowledgments

We are grateful to our interns for their participation in this study.

References

- Ohaeri JU, Akinyinka OO, Asuzu MC. The specialty choice of interns at Ibadan general hospitals. *West Afr J Med* 1993;12:78-81.
- Morrison JM, Murray TS. Career preferences of medical students: Influence of a new four-week attachment in general practice. *Br J Gen Pract* 1996;46:721-5.
- Odusanya OO, Nwawolo CC. Career aspirations of house officers in Lagos, Nigeria. *Med Educ* 2001;35:482-7.
- Ohaeri JU, Akinyinka OO, Asuzu MC. Beliefs and attitudes of interns at Ibadan General Hospitals concerning ten medical specialties. *Afr J Med Med Sci* 1994;23:341-6.
- Akinyinka OO, Ohaeri JU, Asuzu MC. Beliefs and attitudes of clinical year students concerning medical specialties: An Ibadan medical school study. *Afr J Med Med Sci* 1992;21:89-99.
- Ahmad OB, Lopez AD, Inoue M. The decline in child mortality: A reappraisal. *Bull World Health Organ* 2000;78:1175-91.
- Eze BI, Okoye OI, Maduka-Okafor FC, Aguwa EN. Factors influencing choice of medical specialty of preresidency medical graduates in southeastern Nigeria. *J Grad Med Educ* 2011;3:367-71.
- Ugezu A I, Modekwe V I. House officers' choice of specialty in Nnewi, South East, Nigeria. *Afrimed J* 2012;3:17-9.
- WHO. Human Resources for Health. Country Profile-Nigeria. http://www.unfpa.org/sowmy/resources/docs/library/R050_AHWO_2008_Nigeria_HRHPProfile.pdf. Assesed January 14, 2008.
- Diderichsen S, Johansson EE, Verdonk P, Lagro-Janssen T, Hamberg K. Few gender differences in specialty preferences and motivational factors: A cross-sectional Swedish study on last-year medical students. *BMC Med Educ* 2013;13:39.
- Maseghe Mwachaka P, Thuo Mbugua E. Specialty preferences among medical students in a Kenyan university. *Pan Afr Med J* 2010;5:18. Fukuda Y, Harada T. Gender differences in specialty preference and mismatch with real needs in Japanese medical students. *BMC Med Educ* 2010;10:15.
- Turner G, Goldacre MJ, Lambert T, Sear JW. Career choices for anaesthesia: National surveys of graduates of 1974-2002 from UK medical schools. *Br J Anaesth* 2005;95:332-8.
- Naicker S, Plange-Rhule J, Tutt RC, Eastwood JB. Shortage of healthcare workers in developing countries - Africa. *Ethn Dis* 2009;19 1 Suppl 1:S1-60-4.

How to cite this article: ???

Source of Support: Nil. **Conflict of Interest:** None declared.