



Surgery as a Career Choice among Medical Undergraduates in a Developing Country

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Authors' contributions

This work was carried out in collaboration between all authors. Authors BAE and BAO designed the study, wrote the protocol and wrote the first draft of the manuscript. Authors ICE, GOS and WTY managed the literature searches. Authors CS, EOU and VIU performed the statistical analysis. Authors WTY and PA read through for corrections. All authors read and approved the final manuscript.

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ABSTRACT

The distribution of medical manpower among various specialties should be of interest to government, health administrators and medical educators of any nation. The medical specialties chosen by medical undergraduates as their career choice are an important determinant of this. This survey of 114 students using an objective semi structured questionnaire explores factors influencing specialty choices of medical students at Benue State University, College of Health Sciences, Makurdi, Nigeria with special focus on Surgery. The four most popular specialties were Surgery (35%) Internal Medicine (25%), Pediatrics, Obstetrics and Gynecology (14%) each. Others include Pathology and Community Medicine (5%) each and Family Medicine (2%). These are

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determined by factors like natural interest (40%), job-satisfaction and personal convenience (12%) each, role model (3%), gender-issue, personal aptitude and no specific reason (1%) each. Factors like quality of teaching, expected financial reward, religion and family influence have no influence on choice of specialties in the studied population. While majority of the students (91%) considered surgery as important and interesting, 52.6% will want more time allocated to bedside teaching and 17.5% will want improvement in quality of lectures and teaching to help them in better understanding of the specialty. Insight into the reasons underlying the choice of medical career in a country can improve medical career planning. This should guide government's health administrators and educators as they may be responsible for mal-distribution of medical manpower across the various specialties.

Keywords: Surgery; medical undergraduate; medical specialties; medical career; choice.

1. INTRODUCTION

The medical specialties chosen by medical graduates is an important determinant of the future supply of doctors in different specialties and it is important for the planning of the workforce of health care services [1]. This distribution should be of interest to the government, health care planners and medical educators of any country.

To the medical undergraduate, he will be faced with the question of what specialty he is interested in the moment he enters medical school [2]. The determination of the specific area of medicine in which to practice is the most important step in a medical career. All medical students in their fourth, fifth and sixth years in Nigeria go through clinical rotations which essentially provide snapshots of various areas of medicine and provide the opportunity to cultivate their interest and start narrating their specialty choices in preparation for applying to residency training programme.

The medical manpower distribution has been a subject of considerable debate and interest as the government, health care planners, physicians and medical students have a stake in the issue of specialty choice [3,4]. Many factors influence the specialty choice of medical students and medical practitioners. These factors range from individual character such as age, gender, elements of influence and role models, to the characters of the specialty itself such as types of practices and the people encountered and served in the practice and the anticipation of specialty related income [5,6,7,8,9,10,11].

Several reports of studies within and outside Nigeria are available on the specialty preference of various categories of medical undergraduates [1,12,13]. These reports have shown a relatively

high preference for obstetrics and gynecology, pediatric, surgery and internal medicine as the four most important choices of specialty. A survey of fellowship programme carried out in 1986 showed that these four major specialties were the frequently chosen [13]. The studies in Nigeria were predominantly based in the southern part of Nigeria. We are not aware of any documented studies in the northern part of Nigeria [11,12,13,14,15,16,17].

With these in view, this study aims to examine the influence of undergraduate medical education on medical students' specialty choice with particular reference to surgery and its subspecialty, in northern Nigeria, a region with distinct socio-economic values from the southern Nigeria. It also aimed at determining the factors that tend to influence the choice of specialty with the hope that information obtained might be useful in improving any imbalance in the teaching of surgery in our medical schools.

2. SUBJECTS AND METHODS

One hundred and fourteen (114) medical students of Benue State University College of Medicine, Makurdi, Nigeria participated in the study. They had all undergone at least a posting in all the medical subspecialties.

An objective semi-structured questionnaire was given to each student to complete. The first part of the questionnaire detailed the demographic characteristic of the students. The second part asked questions relating to their impressions about surgery as a specialty. The improvement they will like to see in its teaching, the specialty they would like to take up after graduating in order of preference and the reasons for the selection.

The answers were then collected and analyzed using simple statistical methods like means,

percentages and presented with table and pie charts.

3. RESULTS

Out of the 120 students who obtained the questionnaire, 114 (95%) completed the questionnaire. The average age of the students was 29.3 years with 98(86%) males and 16(14%) females, given male to female ratio of 6:1.

The four most popular specialties were Surgery (35%), Internal Medicine (25%), with Pediatrics and Obstetrics and Gynecology having 14% each (Fig. 1). Others were, Pathology (5%), Community-Medicine (5%) and Family Medicine (2%). These are determined by factors like natural interest (40%), job satisfaction and personal convenience (12%) each, role model (3%), gender issue, personal aptitude and non-specific reason (1%) each. Factors like quality of teaching, expected financial reward, religion, family influence, have no influence on the studied population choice of medical specialty (Fig. 2).

The majority of students (35%) will select surgery as a specialty choice and this is reflected in (surgery) being considered as interesting and important by 91% of the respondents. Majority of the students (53%) would want more time allocated to bedside teaching to help in

improving their understanding of the subject (Table 1).

Table 1. Answers to the question-what do you think of surgery as a specialty?

Important & interesting	91%
Interesting but not important	1.8%
Boring	5.3%
Difficult to understand	1.8%
Total	100%

4. DISCUSSION

Medical students begin as undifferentiated students and postgraduate training ends with most doctors specialized in a specific area of practice [1]. Specialty is the transition from the relatively undifferentiated, “stem doctors” [18], potentially capable of entering any specialty, to the final, fully differentiated specialist who is almost restricted to one specialized area of medical work.

Our study shows that surgery, internal medicine, pediatrics and obstetrics and gynecology are the four main popular specialties of choice among our studied group. These followed a similar work by Bojuwoye et al. [15] and are similar to a large extent to findings in Ibadan [11] and Ogun State University [13]. All these mentioned studies were carried out in the southern Nigeria. In our report,

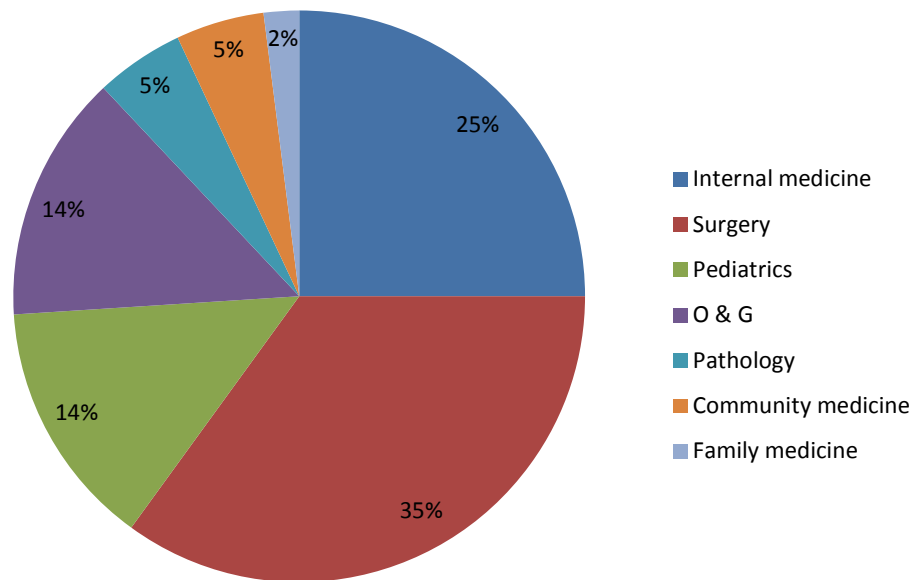


Fig. 1. Pie chart showing specialty choice among medical students of College of Health Sciences, Benue State University, Makurdi, Nigeria

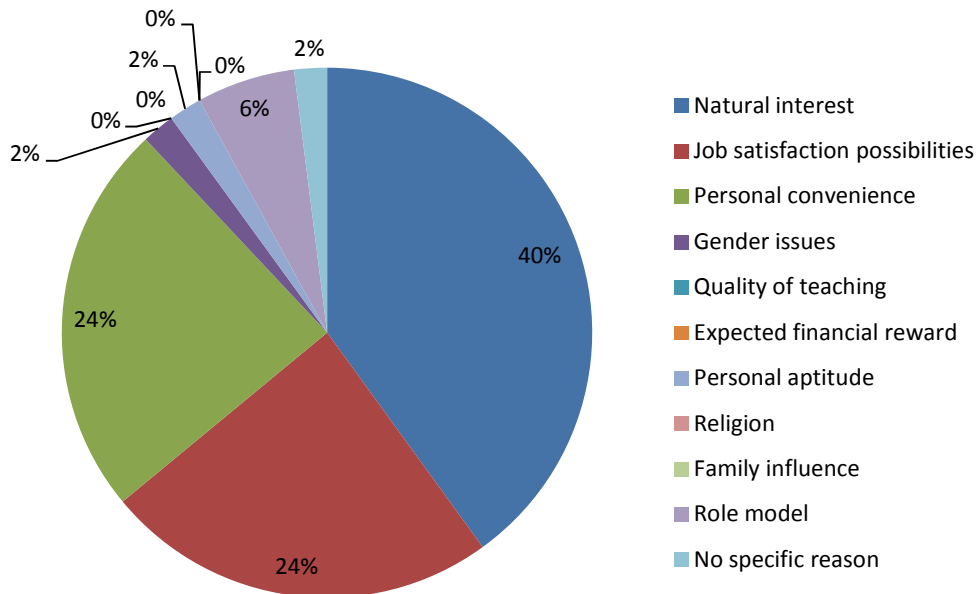


Fig. 2. Pie chart showing factors influencing preference for specialty by medical students at College of Health Sciences, Benue State University, Makurdi, Nigeria

surgery topped the list compared to Bojuwoye's obstetrics and gynecology as the most popular specialty. Possible reasons for this may be changing pattern of factors influencing preference and the socio-cultural environment of the studies. Our findings are in contrast with reports from developed countries. Studies there have shown within the last few years, an increasing decline of interest for medical students towards a surgical career [19]. A south west Germany study revealed only 8.9% of students were considering a surgical career and its similar with studies from USA, Great Britain, New Zealand and Switzerland with small proportions of medical students inclined towards a surgical career [19].

While factors like prospect for job satisfaction and personal convenience played a significant role in our study and concurred with other work in southern Nigeria [15,20] the often talked about factors like humanitarian drive, quality of teaching, expected financial reward, religion and family influence has no role in specialty choice among the studied medical undergraduates and contrast sharply with other studies [13,20] where these mentioned factors played significant roles in determining the specialty choice of medical undergraduates.

Students outside Nigeria who choose surgical specialties justify their choice in terms of; appropriate for practical procedures and operations, the effective almost immediate results, their enjoyment of emergency care, the practical application of scientific knowledge; the research opportunities; the predominance of in-hospital practice; the prestige of surgery within the medical profession; the opportunity for leadership and to exercise authority; the greater remuneration; and the greater respect enjoyed by residents in this field [10,21,22,23]. The positive influence of practical procedures and bedside teachings in surgery were also alluded to in our work.

Gender issues and financial reward has no great influence on medical career choice in this study unlike studies done elsewhere [19,23,24,25, 26,27].

In contrast to Swanson [3] who reported that only 14% of medical undergraduates had made up their minds about specialty choice at enrollment and 72% of them by the final year, virtually all our respondents seem to have made up their mind on specialty choice.

Insight into the reasons underlying the choice of medical career in a country can improve medical

career planning. This should guide government's health administrators and educators as they may be responsible for mal-distributions of medical manpower across the various specialties. Strategies must be evoked to attract medical students to such unpopular specialties like pathology. They may include the use of role models to encourage medical students, giving priorities to employment in such areas and inducement allowance for trainees and specialties in such field [20].

5. CONCLUSION

We need to improve on the process by which our medical under-graduate choose a medical specialty. Given the population of the country, health care providers and medical teachers needed to appreciate the current and future trends in specialty choice. Strategies must be evoked to attract medical students to such unpopular specialties like pathology. In Nigeria as in other developing countries, health care services have to be matched with existing health problems.

CONSENT

Consents were obtained from the participants.

ETHICAL APPROVAL

All necessary ethical approval was obtained.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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