

# Choice of Specialization of Final Year Medical Students in Ile-Ife, Nigeria

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## ABSTRACT

**Introduction:** The specialty preferences of medical undergraduates may reflect the pattern of distribution of specialist workforce in the health-care system of a country in the future. These choices may also have implications in the maintenance of balance in the availability and demand for specialists in the health care system of the country in the future. Furthermore, the information may also assist in curriculum development and reviews as well as in medical education planning.

**Objectives:** The aim of the study is to determine the likely area of specialization of final year medical students in Obafemi Awolowo University, Ile-Ife, Nigeria, and the likely factors influencing the choice of area of specialization.

**Methods:** This was a cross sectional study involving final year medical students of Obafemi Awolowo University, Ile-Ife who were willing to participate in the study. Online questionnaire was administered to students. Information obtained included demography, intention to undergo postgraduate training, specialty choice and factors influencing the choice. Data was analyzed using IBMSPSS version 20

**Results:** Eighty-six out of 105 responders completed the questionnaires adequately. M: F ratio of approximately 2:1. Their age range was aged 22-40 years with a median age of 25 years. Eighty four percent of the respondents would like to do postgraduate specialization. Most of them preferred clinical specialty. Surgery (33.7%) and internal medicine (20.9%) were their most likely specialty area. About 77.9% of our responders were influenced by personal interests.

**Conclusion:** Eighty-four percent of the final year medical students preferred to specialize. Surgery was their most likely specialty and personal interest was the most important factor influencing this choice.

**Keyword:** Postgraduate training, Specialization, medical students, cross sectional survey, surgery, mentorship

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## INTRODUCTION

Medical training is one of the core components of the health system of any country<sup>1</sup>. During undergraduate training medical students are exposed to diverse specialties such that after graduation they may decide to specialize in any of those specialties. Specialty choice of medical undergraduates is of interest to both medical educators and health services providers<sup>2</sup>. The specialty preferences of medical

undergraduates may reflect the pattern of distribution of specialist work-force in the health-care system of a country in the future<sup>3,4</sup>. These choices may also have implications in the maintenance of balance in the availability and demand for specialists in the health care system of the country<sup>3,4</sup>. This information may be useful in planning, setting priorities and provision of appropriate specialty mix within the medical workforce. Furthermore, the information may also assist in

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curriculum development and reviews as well as in medical education planning.

A study from Delhi showed that 99.2% of students wanted to pursue postgraduation training (5). The study further showed that the choice of specialization was limited to a few specialties such as surgery, internal medicine, obstetrics and gynaecology<sup>5</sup>. Similar findings were reported among medical students at Jordan University of Science and Technology<sup>3</sup>. A national survey on career choices of medical students in France reported that surgical and medical specialties were the two specialties selected most frequently by students while public health was the least preferred choice<sup>6</sup>. Globally, the choice of area of specialization seems to be surgery for men and obstetrics and gynecology and internal medicine for women<sup>7</sup>.

There is paucity of reports on specialty preferences among medical undergraduates in Nigeria. A study among medical students and interns in two universities in southwestern Nigeria reported that obstetrics and Gynecology and Surgical specialties were the most preferred career choices by the medical students, while surgical and medical specialties were most preferred by the interns. Only a few respondents chose General practice (family medicine)<sup>8</sup>. A similar study in Enugu, southeastern Nigeria reported that surgery and internal medicine were the most preferred choice of specialty while public health was the least preferred<sup>1</sup>. There is still a paucity of information on this subject, and we believe that this study will add more information to the existing body of knowledge as regards the subject matter. The result of the study may also serve as a basis for making policies that will ensure adequate training slots for doctors applying for postgraduate training placements. This will ensure that more postgraduate training slots are created for specialty areas with higher interest among the undergraduate students. Furthermore, for specialties with low grades, also creating a curriculum that will stimulate their interest in those specialties with low interest. This will in turn ensure equitable distribution of specialists doctors in the country, Our aim is to determine the likely area of specialization of final year medical students in Obafemi Awolowo University, Ile-Ife, Nigeria and the likely factors influencing the choice of area of specialization.

## METHODOLOGY

This was a cross-sectional survey of final year medical students. A structured questionnaire was administered to consenting final year clinical students at the College of health science, Obafemi Awolowo University Ile-Ife, Osun state, Nigeria during the final semester of the 2021/2022 academic session.

The questionnaire contained three sections: sociodemographic variables, choice of specialty and factors responsible for the choice. The questionnaire was designed on

Microsoft Word version 2010 (Microsoft Seattle, WA, USA) and transcribed to Google Form, after which it was pretested to ensure clear understanding of the questions that were asked.

The forms were circulated to the predetermined group of students through online chat rooms which were kept open for a period of 2 weeks. Daily reminders were sent to the students during the period. Informed consent was obtained from each of the study participants through an online consent form which was made a prerequisite for filling the questionnaire. A total of 105 medical students were included in the survey, but 86 students responded by filling in the form. Filled questionnaires were submitted online through the Google Docs platform. The data were retrieved online and analyzed using the Statistical Package for the Social Sciences (SPSS) version 22.0 (SPSS Inc. Chicago, IL, USA). Means and standard deviations were computed for continuous variables, while discrete variables were recorded in percentages. Statistical significance was set at  $p < 0.05$ .

Ethical approval was obtained from the ethics and research committee of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria.

## RESULTS

Out of the eligible 105 students, 86 students responded giving a response rate of 82%. The age of the respondents ranged from 22 to 40 years with a median age of 25 years. There were 55 (64%) male and 31 (36%) females. The median age of the males and females were 26 years and 25 years respectively. Ninety nine percent (85) of the respondents were Nigerians while 1 (1%) respondent was a foreigner from Guinea.

**Table 1: Preferred Area of Specialisation among participants**

Preferred Area of Specialization	Frequency (Percentage)
Surgery	29(33.7%)
Internal medicine	18(20.9%)
Paediatrics	6(7.0%)
Radiology	6(7.0%)
Obstetrics and Gynaecology	5(5.8%)
Public health	4(4.7%)
Psychiatry	2(2.1%)
Chemical pathology	1(1.2%)
Genetics	1(1.2%)
No intention to specialize	14(16.2%)
<b>Total</b>	<b>86(100%)</b>

Eighty four percent (72) of the respondents intended to pursue a specialty training program after their undergraduate training while 16% (14) did not wish to. Most of them preferred clinical specialty as the area of specialization with Surgery being the most likely area of specialization followed by internal medicine and paediatrics (Table 1). Personal interest was the most important factor that influenced the choice of area of specialization (Table 2). There was no statistically

significant difference between sex and intention to go for specialty training program after graduation and choice of specialization.

**Table 2: Reasons for choice of area of specialization**

Reasons	Frequency (Percentage)
Personal interest	67(77.9%)
Personal competence	29(33.7%)
Prestige of specialty	17(19.8%)
Research opportunity	17(19.8%)
Effect of role model	16(18.6%)
Career prospect	16(18.6%)
Good clerkship	10(11.6)
Low work hour	13(15.1)
Anticipated income	12(14 %)
Diversity of patients	10(11.6%)
Short duration of training	8(9.0%)
Less competitive field	4(4.0%)

## DISCUSSION

Preferred areas of specialization of final year medical students may give an insight into the likely pattern of distribution of medical specialist work force in the health care system. Our study was aimed at identifying the preferred area of specialization of the students and the factors guiding these choices. Eighty four percent of the respondent preferred to specialize after graduation, previous studies in Nigeria reported that 89.5% and 94.2% of respondents preferred to specialize after graduation<sup>1</sup>. This may be because of the increasing awareness of patients on the need to be seen by a specialist for their health problems. This appears to be the trend globally, for instance a study in Ghana reported that 86.7% of their medical student preferred to specialize after graduation<sup>10</sup>, while a South African study reported that 93% of their final year medical students planned to specialize after graduation<sup>11</sup>. A national survey in France reported that 87.4% of their final year medical students already know their preferred medical specialty<sup>6</sup>, while in India, about 83.5% of the students opted to specialize after graduation<sup>5</sup>. This was also the trend in Iran where a study in reported that 89.8% of their medical students preferred to specialize<sup>12</sup>.

Surgery was the most preferred area of specialty (33.7%) followed by internal medicine (20.9%), paediatrics (7%) and radiology (7%). There was no statistically significant difference between their sex and preferred area of specialization. Other studies done in Nigeria also reported that surgery was the most preferred specialty among medical students<sup>1,8,9,13</sup>. Similar result was found in Jordan<sup>4</sup>, India<sup>5</sup>, Ghana<sup>10</sup>, Saudi Arabia, Pakistan, and Canada<sup>14,15,16</sup>, however in South Africa, internal medicine was the most preferred specialty, followed by surgery<sup>11</sup>.

Generally, most of the students preferred clinical specialties and this could be because they are more exposed to the core clinical specialties (Surgery, Medicine, Obstetrics and

Gynaecology, Paediatrics) compared to the other specialties during their training. This may imply that there will likely be inadequate specialist in other specialties, for example Onyeka et al. reported a diminishing trend in number of specialist anaesthetist due to lack of interest in anaesthesia, they attributed the lack of interest in anaesthesia to lack of adequate exposure to anaesthesia in the undergraduate medical curriculum<sup>17</sup>.

Personal interest was the most important reason influencing the choice of specialty in our study, other factors rated as influential were personal competence, prestige of specialty, research opportunity and effect of role model. Our findings corroborated with earlier reports by Onyemaechi et al., Eze et al. both in Southeastern Nigeria<sup>1,18</sup> and Bittaye et al.<sup>19</sup> in Gambia. This was not so in South Africa where the top three factors that influenced the choice of specialty were plans to have a family, acceptable hours of practice and intellectual challenge<sup>11</sup>. A study in Jordan reported intellectual content, individual competence, reputation of specialty and anticipated income as important factors<sup>3</sup>.

It is important to note that anticipated income did not feature prominently among the reasons for choice of specialty despite the poor remuneration of doctors in Nigeria. This finding was also documented by a previous study in Nigeria<sup>1</sup>. This contrasts with studies carried out outside Nigeria which reported that economic factors and future income were very important considerations for medical students in selecting a specialty<sup>20,21,22</sup>.

A report in Southeastern Nigeria noted that gender was an important factor that influenced specialty choices among medical students<sup>1</sup>. This trend was observed in India<sup>5</sup> and Jordan<sup>3</sup>. Onyemechi et al. opined that since the male students are the future bread winners of their homes, anticipated higher income from some specialties such as surgery may have accounted for the gender differences<sup>1</sup>. However, we think that with the recent campaign for gender equality, most females may simply pursue their careers based on their personal interest thus eliminating gender bias in choosing specialty areas.

Mentorship appears not to be a very important reason that influenced the choice of specialty area in our study. A previous study in southwestern Nigeria also reported similar finding<sup>8</sup>. Bhantnagar et al. cited the important role of mentorship in a medical student's journey in medical school and concluded that perceived scarcity of mentorship opportunities among medical students, especially among those pursuing non-primary care specialties may have negative consequences especially for students who seek to match into a competitive specialty<sup>23</sup>. Unfortunately, organized mentorship in undergraduate medicine is not well established in Africa, unlike America and Europe<sup>24,25</sup>. This may explain why mentorship is not a very important factor in choosing a specialty in our study. Our study showed that about 16% of

our respondents did not plan to specialize. This group of students may need mentorship to guide them in making decisions with regards to their carrier. Our opinion is that a well-structured mentorship program should be incorporated into the medical student's curriculum. The major limitations of the study were a small sample size because it was a single center study. We could not also conduct a robust statistical analysis on the relationship between sex and choice of specialization because of the small sample size.

## CONCLUSION

Our study shows that surgery, internal medicine, and paediatrics are the most preferred area of specialization and personal interest, personal competence, prestige of specialty were the most important factors influencing this choice. We recommend a nationwide survey of medical students to evaluate these findings on a large scale and to also explore other possible factors that may influence these choices. We recommend a structured mentoring program in general for undergraduate medical students that will guide career path and introduce them to other specialties in medicine aside the core clinical areas.

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