

## INTEREST IN FAMILY MEDICINE SPECIALIZATION AMONG MEDICAL UNDERGRADUATES OF THE UNIVERSITY OF IBADAN, NIGERIA

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### ABSTRACT

**Background:** One of the strategies adopted to improve interest in family medicine (FM) by many regions was the introduction of undergraduate family medicine training into the Medical School Curriculum. However, medical students' interest in FM has been reportedly low ranging from 3 – 29%.

**Objectives:** This study described the pattern of medical students' specialty choices and assessed factors associated with interest in FM specialization among them.

**Methods:** Using a cross-sectional study design, total sampling of fourth to sixth-year medical students undergoing family medicine rotation as of November 2017 (N=412) was done. The response rate was 75% (N=309). A pre-validated semi-structured, self-administered questionnaire was utilized to assess factors associated with respondents' interest in 12 medical specialties including FM.

**Results:** The respondents were predominantly male (67.3%), with a mean age of 23 ( $\pm$  7.9) years. Most (83.4%) of them had at least one parent with tertiary school education. Fifteen (4.9%) of the respondents indicated a current interest in specializing in FM while 112 (36.2%) would consider FM in the future. A higher proportion of those with family members with FM specialization (28.6%) expressed current interest in FM while the female gender was associated with future consideration of FM.

**Conclusion:** There is a low interest in FM specialization among medical students and this may be attributable to the fact that FM undergraduate training is relatively new in Nigeria. Further research on the role of mentorship and preceptorship on specialty choices of medical students needs to be carried out.

**Keywords:** Family medicine, Medical students, Medical specialties, Nigeria.

### INTRODUCTION

Family Medicine (FM) as a specialty was born out of the need for holistic contextual patient care. The training in FM confers unique attributes that position the physician to offer health care at an affordable cost while maintaining high standards of care to all patients irrespective of age, sex, and gender.<sup>1</sup> Increasing the workforce size providing primary medical care has become important especially in developing countries with limited resources.<sup>2,3</sup> Undergraduate medical training is an effective strategy to meet this need and ensure equitable distribution of quality healthcare through primary care physicians.<sup>2,4,5</sup> One of the strategies adopted to improve interest in family medicine by many regions was the introduction of undergraduate FM training into the medical school curriculum.<sup>6</sup> A component of this training is the clinical clerkship in which the students have hands-on training and experience in patient care under the tutelage and supervision of family physicians.<sup>7</sup> Family Medicine was introduced into Nigeria's undergraduate medical education in 2008,<sup>3</sup> to address the unmet need for

primary care physicians.<sup>5</sup> Study findings on the effect of clinical clerkship in stimulating interest in FM specialization have been equivocal.<sup>8-11</sup> This study hypothesized that interest in the specialty would improve with increased exposure through clerkship. Numerous undergraduate medical programmes have reported low medical student interest in FM specialization (3 – 29%).<sup>6,11,12</sup> With undergraduate FM still at its infancy in Nigeria, there are limited studies exploring the factors that influence medical students' interest in the specialty. If strategies are to be implemented to improve career options in FM, more research has to be conducted targeted at young medical graduates, to understand their choices.

As such this study aims to describe the pattern of specialty choices and identify factors associated with current interest and future consideration of FM specialization among medical students in a Nigerian medical school.

## METHODS

This was a cross-sectional study carried out at the University of Ibadan (UI), Nigeria. At UI, 4<sup>th</sup>-year medical undergraduates receive didactic FM lectures while students in the 5<sup>th</sup> and 6<sup>th</sup> years undertake two blocks of FM clinical rotation/clerkship each lasting four weeks along with didactic sessions. Consenting 4<sup>th</sup>-6<sup>th</sup>-year students enrolled in the 2017 academic year were recruited for the study. Total sampling was carried out with a 75% response rate (309 of 412 students participated). Data was collected using a structured self-administered questionnaire that detailed respondent's socio-demographic and family information, medical educational history, and questions exploring the student's specialty interests. These questions were derived from pre-validated questionnaires from two similar studies<sup>6,13</sup> and the current undergraduate FM curriculum at the university. Data analysis was performed using the Statistical Package for Social Sciences (SPSS) Version 20.0 and statistical significance was set at < 0.05. Data were represented in tables and charts using frequencies and proportions. Bivariate analysis using Chi-square, and Fischer's exact tests, were used to determine the association between the independent variables

(sociodemographic data and clerkship year) and the dependent variables (current and future interest in FM). Approval of the Ethical Review Committee of the University of Ibadan/University College Hospital Ibadan Institutional Review Board (UI/UCH IRB) was obtained. Participation in the study was voluntary and informed consent was obtained before administration of the data collection tool. Privacy and confidentiality of the respondents was guaranteed by anonymizing the questionnaire. The respondents were not harmed in the course of the study and though there were no direct benefits to them at the time, the study findings will add to the body of knowledge on undergraduate family medicine education.

## RESULTS

### Participant Characteristics

The participants were predominantly male (67.3%) and single (93.2%). The majority (86.4%) of them grew up in urban areas and their mean age was 23.0 ± 7.9 years. While 83.4% had at least one parent having tertiary education, only a few had a family member practicing as a medical doctor (25.2%) and 8.9% had a family member specializing in FM (Table 1).

**Table 1:** Characteristics of respondents

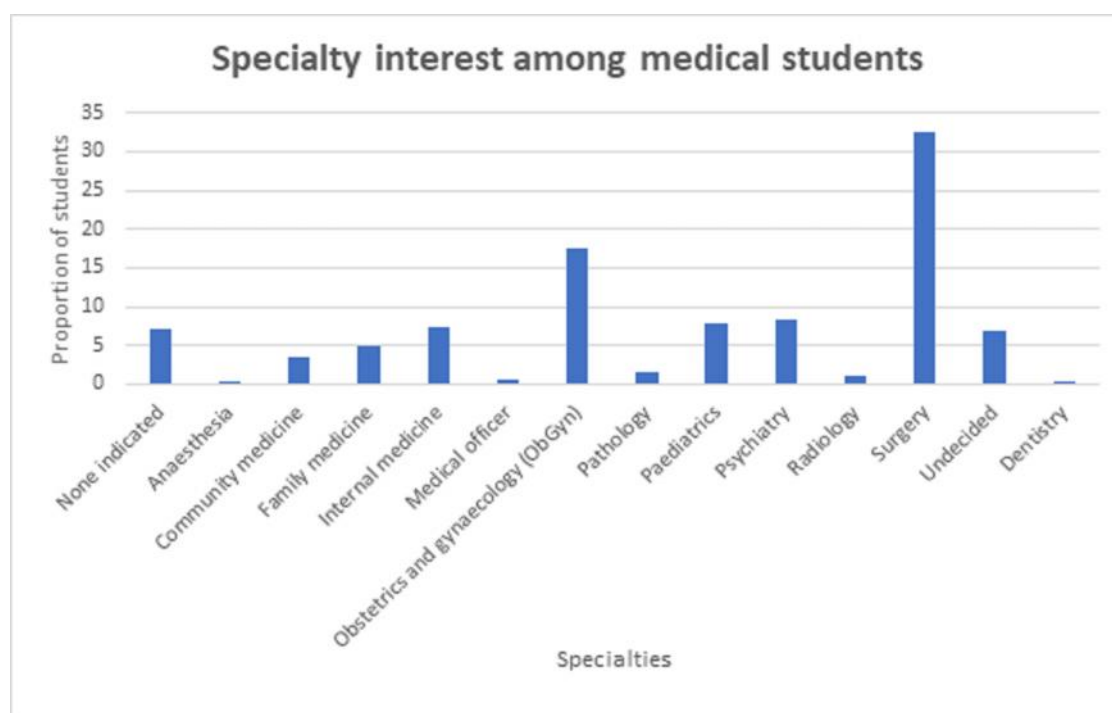
Variable	Characteristics	Frequency (%)
<b>Year/Level (N= 309)</b>	4	105 (34.0)
	5	85 (27.5)
	6	119 (38.5)
<b>Age (Years) (N= 306)*</b>	< 25	272 (88.9)
	> 25	34 (11.1)
<b>Gender (N= 309)</b>	Male	208 (67.3)
	Female	101 (32.7)
<b>Relationship Status (N= 309)</b>	Single	306 (99.0)
	Married	3(1.0)
<b>Monthly Stipend in Nigerian Naira (N= 307)*</b>	<20,000	124 (40.3)
	≥20,000	183 (59.7)
<b>Father's Occupation (N= 304)*</b>	Doctor	20 (6.6)
	Non-Doctor	284 (93.4)
	None	3 (1.0)
<b>Father's Level of Education (N= 305)*</b>	Primary	10 (3.3)
	Secondary	24 (7.9)
	Tertiary	268 (87.9)
<b>Mother's Occupation (N= 307)*</b>	Doctor	8 (2.6)
	Non-Doctor	299 (97.4)
	None	5 (1.6)
<b>Mother's Level of Education (N= 308)*</b>	Primary	13 (4.2)
	Secondary	33 (10.7)
	Tertiary	257 (83.4)
<b>Is there a Family Member who is a Medical Doctor? (N= 309)</b>	No	231 (74.8)
	Yes	78 (25.2)
<b>Specialty of Family Member who is a Doctor (N= 309)</b>	Family Medicine	7 (8.9)
	Others	302 (91.1)
<b>Settlement of Upbringing (N= 309)</b>	Rural	42 (13.6)
	Urban	267(86.4)

\* Missing data

**Table 2:** Factors associated with a current interest in medical specialties

Variable (N)	Presently interested in Family Medicine		p-value
	Yes (%)	No (%)	
<b>Age (years)</b>			
< 25 (271)	13 (4.8)	258 (95.2)	0.68
> 25 (34)	2 (5.9)	32 (94.1)	
<b>Gender</b>			
Male (208)	8 (3.8)	200 (96.2)	0.26
Female (101)	7 (7)	93 (93)	
<b>Relationship Status</b>			
Single (305)	15 (4.9)	290 (95.1)	1.00
Married (3)	0	3 (100)	
<b>Monthly stipend in Nigerian Naira</b>			
< 20,000 (124)	4 (3.2)	120 (96.8)	0.30
≥20,000 (183)	11 (6)	172 (94)	
<b>Father's occupation</b>			
Medical doctor (20)	1 (5)	19 (95)	1.00
Non-medical doctor (283)	14 (4.9)	269 (95.1)	
<b>Mother's occupation</b>			
Medical doctor (8)	0	8 (100)	1.00
Non-medical doctor (298)	15 (5)	283 (95)	
<b>Specialty of Family Member who is a Doctor</b>			
Family Medicine (7)	2 (28.6)	5 (71.4)	0.06
Others (72)	3 (4.2)	69 (95.8)	
<b>Year / Level</b>			
4 (105)	6 (5.7)	99 (94.3)	0.79*
5 (84)	3 (3.6)	81 (96.4)	
6 (119)	6 (5.1)	113 (94.9)	

\* *Chisquare test*



**Figure 1:** Specialty interest among medical students

**Table 3:** Future consideration of family medicine specialization

Variable	Would you consider family medicine as a choice of specialization		$\chi^2$	p-value
	Yes N (%)	No N (%)		
<b>Gender</b>				
Male	62 (29.8)	146 (70.2)	11.415	.001
Female	50 (49.5)	51 (50.5)		
<b>Year / Level</b>				
4	43 (41.0)	62 (59.0)	1.574	.455
5	28 (32.9)	57 (67.1)		
6	41 (34.5)	78 (65.5)		

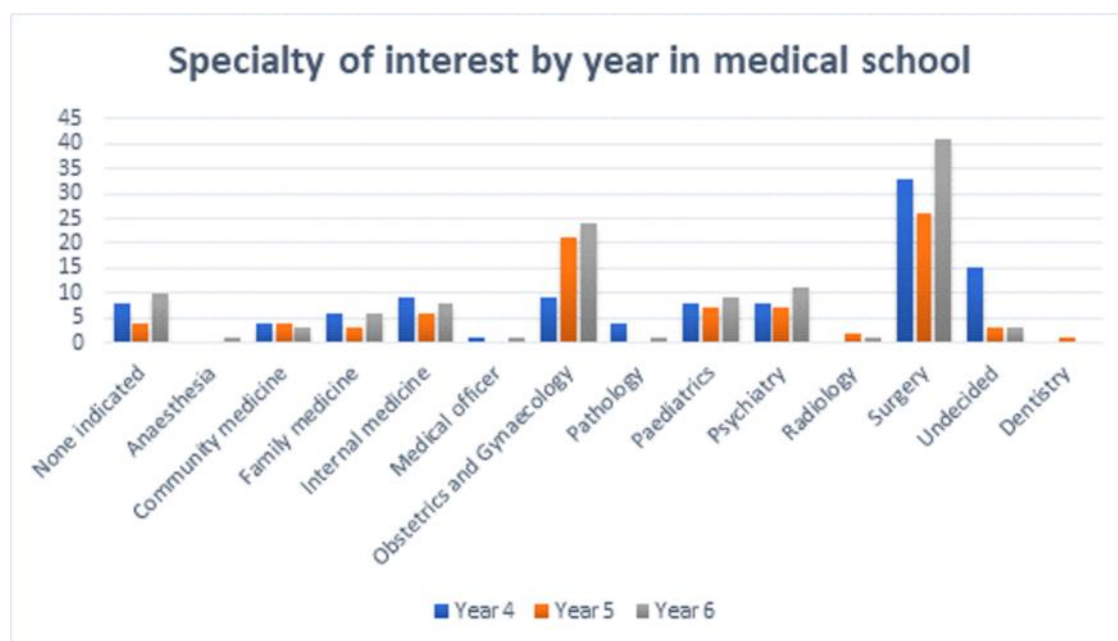
### Specialty Interest among Medical Students

As shown in figure 1, the students were most interested in surgical specialties compared to non-surgical ones. This was irrespective of their level as shown in figure 2. Compared with 15 (4.9%) of respondents with low interest in family medicine, 112 (36.2%), will consider the specialty in the future.

### DISCUSSION

Undergraduate FM programmes are new and characterized by brief periods of exposure in West Africa.<sup>3</sup> A generally low level of interest in FM was recorded among the respondents, much lower than what has been reported in the US, Canada, and South Africa.<sup>5,8,9,14</sup> but higher than reported in Ghana.<sup>1</sup> Similar to Ghana, surgically-oriented specialties (Surgery and Obstetrics and Gynaecology) were the most preferred areas of specialization across all levels of medical students<sup>1</sup>; probably due to the perceived prospective higher income and prestige among surgeons compared to other specialties.<sup>15-17</sup> However, in this study, a higher proportion of students will consider FM in the future, signifying an opportunity to make FM more attractive.

This study highlighted some sociodemographic and economic correlates of medical specialization among medical students in Nigeria. A higher proportion of females reported current interest in FM and future consideration of the specialty, which is supported by



**Figure 2:** Specialty of interest by year in medical school

### Factors associated with Interest in FM

Irrespective of their socio-demographic, family and educational characteristics, the majority of the respondents were not interested in FM, as shown in table 2. A higher proportion of females, those with a higher stipend, those whose mothers were not doctors, and those with a family member in FM, expressed current interest in FM. As shown in Table 3, the female gender was the only factor significantly associated with future consideration of the specialty ( $p=0.001$ ). The clerkship year was not significantly associated with either current or future consideration of FM.

other researches that show females are more likely to choose FM.<sup>1,14</sup> Perception that FM allows more quality family time may explain this finding. It is worthy of note that Nigeria's male medical students would generally pursue surgical specialties.<sup>19</sup> The proportion of those who were interested in FM was also higher among those with a family member in FM compared to those who had a family member in another specialty. This suggests that close relationships such as may be found in good mentorship may influence specialty choice.<sup>20</sup>

Though not statistically significant, it is important to note that a higher proportion of students interested in FM was observed among respondents with a higher monthly stipend. This may be due to the need, among students from lower socioeconomic backgrounds, to pursue specialties with a potential for higher compensation compared to family medicine.

In line with Turkeshi<sup>6</sup> and Phillips,<sup>18</sup> the authors hypothesized that the proportion of students interested in FM will increase as students move towards the year of graduation; owing to increased FM clerkship exposure. However, contrary to what has been reported in some studies, clinical clerkship was not associated with interest in FM.<sup>6,15</sup> In U.I, fifth-year students rotate through numerous specialties, some of which last beyond four weeks compared to FM rotation. This may explain the deviation from the expected pattern of FM interest. Also, despite about eight weeks of cumulative exposure to FM clerkship, the proportion of sixth-year students interested in FM did not differ significantly from those in the fourth and fifth years.

#### LIMITATION

The findings of this study are based on a single study site and may not be reflective of the interests of Nigerian medical students.

#### CONCLUSION

There is a low interest in FM specialization among medical students and this may be attributable to the fact that FM undergraduate training is relatively new in Nigeria. Further research on the role of mentorship and preceptorship on specialty choices of medical students needs to be carried out. This will aid targeted interventions aimed at increasing the supply of primary care physicians for improved health outcomes. Medical educators need to review the current curriculum and promote increased input from family physicians at all stages of medical education.

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