

## Original Research Article

### Assessment of determinants for choosing medical sciences as a career path amongst students of University of Port-Harcourt

#### ABSTRACT

**Background and Aim:** Presently, medical students form a vital group of aspiring health professionals that are trained in order to assist in promoting healthcare worldwide. However, there is need to understand how these students derive motivation based on various determinants that enable them in choosing to study related disciplines in medical sciences – hence the aim of this present study.

**Materials and Methods:** Using a multi-staged sampling method, this cross-sectional study comprising of two hundred (200) pre-medical and medical students (98 males and 102 females) between the ages of 16 to 25 years were randomly selected from the University of Port Harcourt and issued a semi-structured questionnaire containing two sections: socio- demographic variables and the determinants influencing career choice in medical sciences. Using the Statistical Package for Social Sciences (SPSS version 26.0) software, a chi-square test was done to show associations between these determinants, age and gender.

**Results:** The majority of respondents in the age range of 16 – 19 years (accounting for a combined 88.0% of student population) did fill their study questionnaires. There were significant age and gender differences in some of the determinants such as parental and peer influence, prospects of travelling abroad to practice, and financial benefits.

**Conclusion:** The study resolved that there was a need to educate these students to have the right motivation towards aspiring to study in the medical sciences.

**Keywords:** Determinants, Medical Sciences, Career Path, Pre-medical, Medical Students

## **Introduction**

A person's career decision has a long-lasting effect on them. It influences a person's attitude, personality, and outlook by predicting and determining their future, level of income, and the type of work they will do. Therefore, the fate of an individual can be altered by one poor choice. Making a choice about a career is challenging for everyone. The economic health of a country is a larger-scale manifestation of this individual action [1].

Every individual who wants to achieve their dreams must navigate the significant road curve of choosing a career. Career choice is often a complex decision for most undergraduates since it might serve as a key determinant of the kind of profession that they pursue in life [2]. Career decisions made by students are heavily influenced by job searching, career planning, and choice-making [3]. Making career decisions can be stressful and uncertain for many undergraduates. Many of them do not make adequate research on their own career nor do they receive adequate directions from their school guidance coordinators. Most of them are not aware of what goes into career choice [4]. Many youths go into unsuitable careers due to ignorance, inexperience, peer pressure, advice from friends, parents, and teachers, or as a result of the prestige attached to certain jobs without adequate vocational guidance and career counseling [5]

According to Kerka [6], a variety of factors, such as a person's personality, interests, self-concept, cultural identity, globalization, socialization, role models, social support, and access to information and financial resources, influence a person's choice of career. According to Hewitt [7], extrinsic, intrinsic, or a combination of both elements might influence an individual's career decision. Hewitt goes on to say that the majority of people are influenced by the professions that their parents favor, while others pursue the professions that their educational choices have made available to them. Some

people decide to follow their passions regardless of how much or little money they will make, while others opt for professions that offer high salaries.

Even in the majority of low- and middle-income nations, such as Nigeria, the medical field continues to be seen as respectable [8]. In Nigeria, the government is mostly responsible for funding medical education, particularly at federal and state universities. Due to the training's two phases, basic medical sciences and clinical sciences, each with comprehensive syllabuses including a wide range of specialists in many specializations, this style of education is more expensive than other university courses [8]. The expansion of the already complex syllabus due to advancements in medical science ensures that medical education will continue to progress [8]. This presents substantial difficulties for aspiring medical students who are anxious to enter the noble field. Given that there are no adequate admission slots for a large number of applicants, the government-owned medical schools are comparatively underfunded, which poses a discouragement to some students' decision to go into the medical profession. Recurrent industrial unrest that disrupts teaching and services in both the university system and the health sector is another difficulty for public medical schools. This frequently lengthens the time required for medical education. According to Narayanasamy *et al.* [9], the medical profession is honorable and offers the chance to give health services while also being seen as a way to have a secure and lucrative career. The decision to pursue a profession in medicine is made for a variety of reasons [10,11] even in the face of some discouraging factors.

Finding a suitable career begins with having chosen career options and knowing the route they want to go in. In the process of exploring their employment options, it's crucial to get assistance and have a plan in place. In this study, we looked at the motivations of pre-university students and the factors that affect their choice of medical education as their career path.

## **Material and Methods**

This study was done at the University of Port Harcourt, among pre-graduate and first-year medical students. Students between the designated age of 16 years to 25 years were consented to and selected. The respondents were randomly sampled using multi-stage sampling techniques and the cross-sectional study involved two hundred (200) students from the university.

A semi-structured questionnaire was administered to respondents to gather information on sociodemographic variables and the determinants influencing academic career paths in Medical Sciences. Afterward, the questionnaires were retrieved from the students and the data were subjected to statistical analysis using Statistical Package for Social Sciences (SPSS version 26.0). The chi-square test was used as an inferential statistic, probability less than 0.05 ( $p < 0.05$ ) was considered significant and results were presented with frequency and percentage.

## Results

As shown in Table 1, the study shows the total population was two hundred students (n=200), ninety-eight males (98) and one hundred and two (102) females, within the age of 16 years to 25 years. The age was categorized into intervals, it was revealed that within the class interval of 16-17 years has the highest frequency of response (59.5%), followed by the age interval of 18-19 years (28.5%). The age interval of 20-21 years and 22-23 years has 9% and 3% respectively, the least frequency is was observed within the age interval of 24-25 years (1%).

Also from Table 1, the study further evaluated if the level of parental education is an influential determinant on the students career choice. It was observed that over 74% and 73% of both mother and father's respectively has obtained their degrees in the tertiary institution. Though, the least population had obtained secondary school certificate as the peak of the educational level.

In table 2 shows that the age of the students towards the determinant influencing career pathway was significant with age that parents influenced the career choice and solely believe to be successful afterwards though the study divulge that across the age interval, the career pathway was not a peer group influence rather at every age strongly insist their willingness to stay at home until they got admitted into medical course. It was statistically significant across the age interval that studying medical related course gives better chance of traveling over sea, they further expressed that family status has influence the choice career.

Results from Table 3 depict the determinants influencing the path way of career choice among university students. The study reviewed that either the student males or females strongly disagreed that the choice of a career in medical science is not influenced because it is well respected in the community, 51% and 52.9% of males and female respectively revealed that choice of career was not influence by the parents, though a minimal population of the male expressed their opinion they can be successful only when they study medical related courses, 31.6% of males agrees that studying

medical related course gives a better chance of travelling abroad for a greener pasture. 47,1% of the female population strongly disagree that studying a medical related course can only make them successful and strongly disagree that a choice of career was not influenced because of its opportunity to travel over sea.

The study explored that over 54.1% and 40.2% of male and female population agree that choice of career was influenced by so much opportunities it brings, only few of both populations expressed that the career choice was determined due to family status. 68% and 55,1% of male and female population disagree that the choice of career was not due to passion of saving lives in the health sector rather average of the students (41.8% and 29.4) of male and female respectively was influence due to passion for medical course (table 2)

## **Discussions**

A fundamental principle that guides the perception of life by any individual is choice. Career choice is heavily influenced by a combination of both socio-cultural and economic factors [12]. A host of other variables such as state of affairs of life, and scholarly accomplishments have been shown to determine students' career choices [13]. In a typical Nigerian society, most students are advised by their parents or guardians to choose choice of disciplines in medical sciences, such as Medicine and Surgery, Anatomy, Physiology, Medical Laboratory Sciences and others.

Every prospective student vying to study in the medical sciences do possess a certain level of motivation towards aspiring for a successful medical career even in the midst of turbulent academic encounters [14]. In the current age of secondary education in most middle- and top-income countries, emphases on the gradual drop in the curiosity of secondary school students in science-related subjects have been noted and as a result, such students have in turn lost their desire towards attaining scientific education, especially in aspects of medical sciences [15,16,17].

Before taking the University Tertiary Matriculation Examinations (UTME), eligible candidates must have passed either the Advanced Secondary Qualification Examination (in form of either SSCE or GCE) as part of their admission requirements [18]. These candidates are usually confronted with the tedious tasks of preparing for these examinations mentally and physically, thereby confronting some of them with the harsh truth of falling out of love for their desired career choices, especially in the medical sciences. Hence, the present study was done to quantitatively understand the factors that influence the academic career path in pre-medical and first-year medical students of the University of Port Harcourt.

The majority of respondents in the age range of 16 – 19 years (accounting for a combined 88.0% of student population) did fill out their study questionnaires. In addition, this study also showed that a good

proportion of their parents had attained the highest or tertiary level of education (74% of females and 73% of males). In line with a related study, it was postulated that the educational standards of parentages are capable of enlightening how well their children accomplish in school [19].

It was shown in this present study that there was higher percentage of male and female respondents who disproved the notion that a career in medical sciences was well respected in student's families, although that did not differ significantly between both genders. Also, there was no association between respondent's age and the notion that most of their families do not respect the medical profession.

Furthermore, there were significant associations between the age of respondents and the beliefs that it was their parents' wishes that they study Medicine and Surgery or any other related medical discipline in the university, as well as being successful upon venturing into the medical profession. However, these notions did not reflect or suggest a possible association with gender. In concordance with a recent Pakistani study as reported by Shahid *et al.* [20], it revealed that majority (56.6%) of students designated the medical profession because of "high status and prestige.

The study also showed that majority of the students in both sexes disapproved the idea of their friends having an influence in them choosing to study in the medical sciences. This notion varied significantly in genders, however an insignificant association was perceived between the notion and the respondents' age.

Additionally, despite showing a significant association with age and not with gender, at least half of the respondent population in both sexes either disagreed or strongly disagreed with the notion that they would be willing to wait at home for years until admitted to study in the Medical Sciences. It is evident enough that there are critical challenges in university admissions that are experienced by prospective Nigerian undergraduate students almost on a yearly basis partly due to the ever-increasing population of

youths and children who keep vying to study in limited medical universities. As such, most of these affected youths are always open-minded to try out other non-medical disciplines if they are denied admission opportunities in those within the medical field.

Significantly, the students' response towards choosing to study in the medical sciences to better their chances of travelling abroad for greener pastures associated with age and gender. It is no strange news to medical students as reported by the several researches on the increase in the outflow of doctors and other medical experts abroad due to the failing healthcare system of Nigeria [21,22]. For this reason also, a little more than 50% each of gender-specific respondents answered the questionnaire that they did not choose to study in the medical sciences because they wanted to save lives in the health sector.

More than half of the respondents for both genders rejected of the notion that they choose to study professional fields in the medical sciences because of their poor family background – which strongly associated with between age and gender. Parental desires, respected professions and economic incentives, respect in society, high social status, and service to the sick were the main reasons students in low-income countries chose medicine [23], however, this present study has so far contradicted some of these reasons.

## **Conclusions**

In relation to both age and gender in more than two-thirds of the respondent population, this study showed significant associations between the determinants of career choice in medical sciences such as the desire to travel abroad for greener pastures and not choosing the discipline due to their poor family backgrounds. However, the study results categorically portray that Nigerian medical and pre-medical students need to be re-enlightened on the need to seek motivation and personal development in order to

promote the growth of sound medical practitioners that will contribute positively in the Nigerian health sector.

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**Table 1: Social demographic evaluation of respondents**

	<b>Frequency (N=200)</b>	<b>Percentage (100%)</b>
<b>Gender</b>		
Male	98	49.0
Female	102	51.0
<b>Age</b>		
16-17	117	59.5
18-19	57	28.5
20-21	18	9.0
22-23	6	3.0
24-25	2	1.0
<b>Mother's educational level</b>		
None	3	1.5
Primary	12	6.0
Secondary	37	18.5
Tertiary	148	74.0
<b>Father's educational level</b>		
None	3	1.5
Primary	6	3.0
Secondary	45	22.5
Tertiary	146	73

**Table 2: Association between age and determinants influencing Academic Career Choices in Medical Sciences**

<b>Variables</b>	<b>X<sup>2</sup></b>	<b>p-value</b>	<b>Inference</b>
A career in medical sciences is well respected in my family or community	4.80	0.77	NS
My parent(s) wishes that I study Medicine and Surgery or any other related medical discipline in the university	22.067	0.005	S
I believe that I can be successful in life only when I study Medicine and Surgery or any other related medical discipline in the university	21.66	0.006	S
My friends influenced my decision to study in the Medical Sciences	11.84	0.159	NS
I am willing to stay at home for years until I am admitted to study in the Medical Sciences	24.33	0.002	S
I have a better chance of travelling abroad for greener pastures if I study in	19.26	0.014	S

the Medical Sciences			
It has always been my dream to save lives in the health sector	14.662	0.06	NS
I choose the Medical Sciences because of my poor family background	15.44	0.05	S
A career in the Medical Sciences will bring so much opportunities to me in the future	13.16	0.11	NS

Where “NS” denote insignificant and “S,” significant (p<0.05)

**Table 3: Association between Gender and Determinants influencing Academic Career Choices in Medical Sciences**

Variables	Gender	A	D	SD	X <sup>2</sup>	p-value	Inference
A career in medical sciences is well respected in my family or community	Male	31(31.6%)	7(7.1%)	60(61.2%)	0.16	0.92	NS
	Female	35(34.3%)	7(6.9%)	60(58.8%)			
My parent(s) wishes that I study Medicine and Surgery or any other related medical discipline in the university	Male	29(29.6%)	19(19.4%)	50(51.0%)	1.22	0.54	NS
	Female	34(33.3%)	14(13.7%)	54(52.9%)			

I believe that I can be successful in life only when I study Medicine and Surgery or any other related medical discipline in the university	Male	23(23.5%)	36(36.7%)	39(39.8)	1.07	0.58	NS
	Female	21(20.6%)	33(32.4%)	48(47.1%)			
My friends influenced my decision to study in the Medical Sciences	Male	0(0%)	70(71.4%)	28(28.6%)	11.43	0.003	S
	Female	7(6.9%)	54(52.9%)	41(40.2%)			
I am willing to stay at home for years until I am admitted to study in the Medical Sciences	Male	20(20.4%)	39(39.8%)	39(39.8%)	2.88	0.22	NS
	Female	30(29.4%)	41(40.2%)	31(30.4%)			
I have a better chance of travelling abroad for greener pastures if I study in the Medical Sciences	Male	31(31.6%)	21(21.4%)	33(32.4%)	10.16	0.006	S
	Female	55(53.9%)	14(13.7%)	46(32.4%)			
It has always been my dream to save lives in the health sector	Male	41(41.8%)	3(3.1%)	70(68.6%)	3.89	0.143	NS
	Female	30(29.4%)	2(2.0%)	54(55.1%)			
I choose the Medical Sciences because of my poor family background	Male	17(17.3%)	46(46.9%)	35(35.7%)	5.67	0.05	S
	Female	7(6.9%)	49(48.0%)	46(45.1%)			
A career in the Medical Sciences will bring so much opportunities to	Male	53(54.1%)	1(1.0%)	44(44.9%)	10.17	0.006	S
	Female	41(40.2%)	11(10.8%)	50(49%)			

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A = Agree, D = Disagree, SD = Strongly disagree, NS = insignificant, S = significant (at  $p < 0.05$ )

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