

Future Choice of Specialty among Students in a Caribbean Medical School

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Abstract

Background: The medical specialities chosen by medical students for their careers play an important part in the development of health care services. The study was designed to examine the perception of medical students to clinical specialty while in the preclinical school.

Methodology: A cross-sectional study was done among all the preclinical students using a structured questionnaire. The questions explored the demographic data, generic factors considered as important in their specialty choice as well as factors that influence the students' attractiveness to various medical specialities.

The study was conducted among medical students of Spartan Health Sciences University, St. Lucia

Results: Out of 90 questionnaires, 76 were correctly filled, producing response rate of 93.4%. The ages of respondents were between 19 to 43, with mean age of 25.3. 59.2% male and 39.5% female.

Internal medicine was the most attractive specialty with attractive factor with mean of 1.2 and SD of 0.46. The aspects of medicine that interest the students most is diagnosis and treatment of diseases; 50 (65.8%), followed by interpersonal interaction with patients; 44 (57.9%) while the least attractive aspect is research; 11 (23.7%).

Conclusion: Our study showed that few students are interested in basic biomedical research; hence need to address this apathy in the medical curriculum.

Keywords: Future, Choice, Specialty, Students, Saint Lucia, Caribbean

Date accepted for publication 12th June 2008

Nig J Med 2008; 261 - 264

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Introduction

The medical specialities chosen by medical students for their careers play an important part in the development of health care services.¹ Recent studies have shown how specialities are perceived and factors that eventually affect such choices.^{2, 3, 4} Literature reports have also shown that multiple factors appear to influence specialty choice of medical students, factors such as individual personality. Study done in London revealed that those with realistic personality prefer surgery while the artistic were inclined to psychiatry.⁴

Multiple factors that appear to influence specialty choice among medical students include gender and residency conditions, family backgrounds, prestige, strong early interest, local market forces, influence of a faculty adviser.^{5, 6} A study done in Australia showed that locations affect students' choice of specialty, where a significant number of graduates who have had long placements in rural areas preferred general practice and returned to a rural location to practice.⁷

Spartan Health Sciences University, School of Medicine is a private independent medical institution established on January 7, 1980.⁸ The University is listed in the World Directory of Medical Schools. The school of medicine offers a four- year (36 calendar months) academic program leading to the Doctor of Medicine degree (M.D.) and is taught on a trimester (4 months) schedule, with the initial 4 trimesters (16 months) of basic sciences in St Lucia and the remaining 20 months of clinical sciences in US hospitals. The preclinical campus is located in Vieux Fort in the southern part of the island. Presently, most of the students are from US and Canada, with few from Africa.

In order to determine how medical education is orientated, it is important to understand how undergraduates entering medical education perceive their future in terms of specialties which are of interest to them.²

The aim of this study is to examine the perception of medical students to clinical specialty while in the preclinical school. To our knowledge, no such work has been published in St. Lucia.

Methods

A cross-sectional study was conducted among all the preclinical students at the Spartan Health Sciences University. Participants were assessed from all the trimester classes without restriction on participation.

Previously published survey questions used by Feifel⁹ were refined by the authors through discussion and common agreement. The questionnaires were voluntarily filled by consented students after explaining the aim of the study to them in groups based on their trimester classes.

The questions explored the demographic data (marital status, ethnicity, country of origin, entrance qualifications), generic factors considered as important in their specialty choice as well as factors that influence the students' attractiveness to various medical specialties with regards to the following aspects: financial rewards, lifestyle, interest in medicine, intellectually challenging, job satisfaction, prestige within medical community, prestige within general public, degree to which patients are helped, bright future for the field, parental influence, extended family influence and friends. Survey also included the degree to which each of the three aspects of medicine including research, the diagnosis and treatment of disease and interpersonal interaction with patients interested the students.

Majority of the questions were rated based on the 5-point Likert scale format. Data was analysed using the Statistical Package for Social Sciences version 12.0 (SPSS Inc, Chicago, IL, USA). The ANOVA was used to measure the significance of the values.

The Human Research Ethics Committee of Spartan Health Sciences University examined and approved the protocol of our study in accordance to Helsinki Declaration (Edinburgh 2000) on ethical principles for medical research involving human subjects.

Results

Out of 90 questionnaires, 76 were correctly filled; producing a response rate of 93.4%. The ages of the respondents were between 19 to 43 years. The mean age was 25.3, the standard deviation +/- 3.8. 45 (59.2%) were male and 30 (39.5%) female; one person did not indicate gender. It was indicated that 64(84.2 %) of the respondents were single, 6 (7.9%) married, 2 (2.6%) divorced and 4 (5.3%) were engaged to be married.

Ethnicity-7 (9.2%) were whites, 25 (32.9%) blacks, 24 (31.6%) Asians, 8 (10.5%) Hispanics and 9 (11.8%) others. Nationality-60% were US citizens, 30% Canadians, 5% Africans and 5% Caribbeans.

Table I shows: Entrance qualification of many of the students was a graduate degree 49 (64.5%) followed by premed degree 16 (21.1%), Advanced level 5 (6.6%), High School Certificate ordinary level 3 (3.9%), masters degree 2 (2.6%) and doctorate degree 1(1.3%).

Table I

Entrance Qualifications	Frequency	Percentage
High School Certificate (Ordinary level or Other)	3	3.9%
High School Certificate (Advanced)	5	6.6%
Premedical School Degree / Associate's Degree	16	21.1%
Graduate (B.Sc, B.A., Other)	49	64.5%
Postgraduate (M.S., Other)	2	2.6%
Postgraduate (Doctorate, Other)	1	1.3%

Table II

Career Aspect	All Respondents	
	Mean	SD
Financial Reward	2.27	1.264
Lifestyle	2.12	1.158
Interest in Medicine	1.15	0.459
Intellectually Challenging	1.54	0.762
Job Satisfaction	1.42	0.722
Prestige within Medical Community	1.86	0.97
Prestige within General Public	1.93	1.011
Degree to which patients are helped effectively	1.28	0.609
Rapidly Advancing Understanding and Treatments	1.53	0.667
Overall Bright and Interesting Future for the Field	1.46	0.797
Based upon reliable scientific foundation	1.88	0.821
Enjoyable Work	1.51	0.726
Parental Influence	2.61	1.333
Extended Family Influence	3.03	1.355
Friends	3.26	1.171

1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree

Figure 1

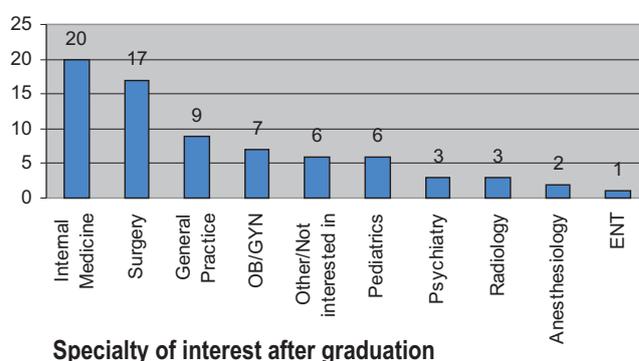
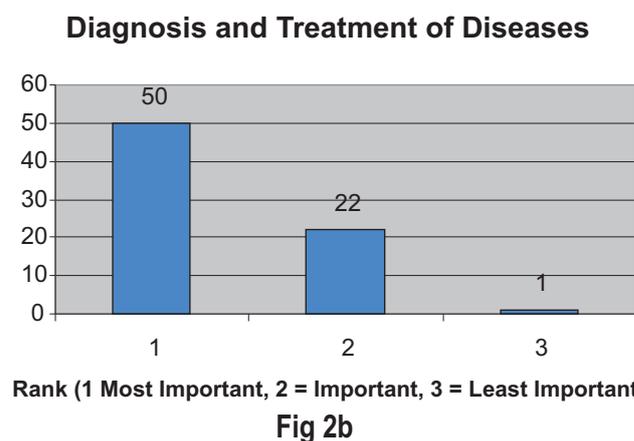
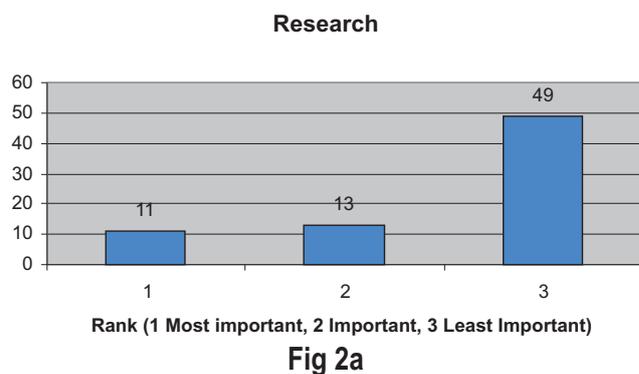


Figure 2

Aspects of medicine that interest the students



Interpersonal Interaction with Patient

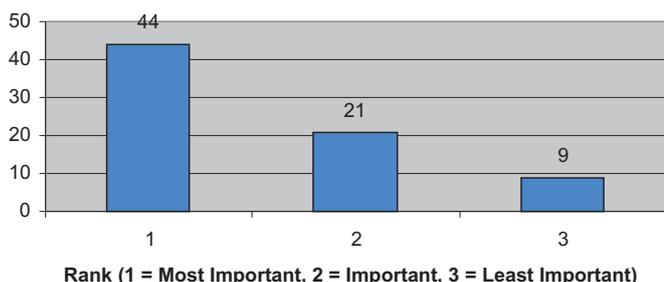


Fig 2c

Table III: Comparison of Specialities attractiveness

Career Aspect	Internal Medicine		Surgery		General Practice	
	Mean	SD	Mean	SD	Mean	SD
Financial Reward	1.95	1.15	2.47	1.18	1.86	0.90
Lifestyle	1.70	0.87	1.88	0.86	1.86	0.90
Interest in Medicine	1.10	0.31	1.06	0.24	1.14	0.38
Intellectually Challenging	1.50	0.61	1.35	0.61	1.71	0.76
Job Satisfaction	1.30	0.57	1.24	0.44	1.43	0.79
Prestige within Medical Community	1.65	0.67	1.71	0.85	1.71	0.95
Prestige within General Public	1.80	0.70	1.82	1.02	1.71	0.95
Degree to which patients are helped effectively	1.15	0.49	1.18	0.39	1.29	0.76
Rapidly Advancing Understanding and Treatments	1.35	0.67	1.47	0.62	1.29	0.49
Overall Bright and Interesting Future for the Field	1.35	0.67	1.24	0.56	1.14	0.38
Based upon reliable scientific foundation	1.90	0.85	2.12	0.86	1.57	0.79
Enjoyable Work	1.40	0.68	1.65	0.70	1.57	0.79
Parental Influence	3.15	1.39	2.76	1.15	1.86	0.90
Extended Family Influence	3.25	1.37	3.24	1.15	2.86	1.22
Friends	3.65	1.18	3.35	0.93	3.57	1.51

Figure 1 shows :Specialty of interest after graduation; 20 indicated internal medicine, surgery (17), general Practice (9), obstetrics and gynaecology (7), paediatrics (6), psychiatry(3), radiology (3), anaesthesiology (2), otorhinolaryngology (1), (6) not interested in specialization.

Table II: Factors influencing attractiveness to specialization; Interest in medicine is the most attractive factor, with mean of 1.2 and SD of 0.46, while the least attractive factor is friends with the mean of 3.3 and SD of 1.2.

Figure 2: The aspects of medicine that interest the respondents most is the diagnosis and treatment of diseases; 50 (65.8%), followed by Interpersonal interaction with patients; 44 (57.9%) while the least interesting aspect of medicine to them is research 11 (23.7%)

Discussion

Study has shown that upon entering medical school, students have strong perceptions about their future careers², hence the need for this study.

Majority of the respondents were still single 84.2%, with this high percentage of students who had not made marital decision, there is a strong indication that their choice of career will depend to a greater extent on their marital commitment such as where to do residency, when

to start family .This will eventually affect the aspect of residency the person settles for, this was seen in a study done in England.¹⁰

The major ethnic make up of the school is Black (32.9%) and Asians (31.6%). This shows that the number of non-whites medical students entering into American health sector is still high. This correlates with a study done in England with a discrepancy in the ethnic distribution of medical students, with a higher number of non-white students.¹⁰

Most of the students had a university first degree (64.5%) as shown in figure 2, followed by premedical degrees (21.1%). Most medical schools in the United States and the Caribbean require a minimum of premedical degrees to commence medical education.

On specialty choice, most of the students 20 (27.6%) chose internal medicine, followed by 17 (22.4%) who would like to be surgeons (Figure 1). It has been reported that students' initial career preference is an important predicator of what the students ultimately chooses as a career.¹¹ The percentage of students who have not decided as shown in figure 1 was probably due to the fact that they have not been exposed to clinical courses. Another reason that may probably explain this percentage is due to stressful nature of medical courses in which the students are exposed to, which may have had various psychosocial and physical hazards on them¹² hence the need for a further study to look at the stressful factors on these groups of students and how it affects their specialty choices.

The higher percentage of students indicating interest in medicine as a reason for choosing medicine and interest in a particular area of specialty indicates a higher probability that an interest in the line of work was much more important than life-style considerations at this stage of their medical education as shown in our study and other studies.^{5, 6} This finding reflects career intentions of students before exposure to clinical courses, so lifestyle and financial rewards are less important at this stage in their career, though a cohort study has shown that an individual's career preference might change over time.¹³ Studies have reported that controllable lifestyle has become a determinant in physicians' specialty selection criteria¹¹ however this is not a major factor among the respondents in this study.

Our study also showed that majority of students were interested in internal medicine as well as its subspecialty such as cardiology, endocrinology, infectious diseases. Students tend to follow the trend towards super-specialization made necessary by the

explosion of new knowledge in the field of bio-medical research and attracted by its better market value.^{14,15}

Prestige within the medical profession, social status and income have been shown to play crucial role in the decision in favour of a medical specialty.¹¹ This is a real cause of concern especially in competition-based health care system, the basic somatic and mental health care especially in the rural areas will continue to suffer shortages of medical doctors.

The aspects of the medicine that interest the students most is diagnosis and treatment of diseases followed by interpersonal interaction with patients while the least interesting is research. The lack of interest in research work may be due to lack of exposure to research activities at this stage of their medical education.

Limitations of the Study

The study was conducted in only one medical school (due to issues of access and bureaucracy) and it is conceded

that extra student numbers would lend statistical power to our findings. Though the study tried to explore reasons for a certain career preference, we did not look at reasons for not choosing a specific career, which was omitted from the questionnaire so as not to lead the respondent into a particular answer.

Conclusion

The basic medical sciences is the foundation of the medical training programmes, which involves a lot of information flow, but such level of dissemination of information makes it a bit difficult for the students to see linkage between basic medical sciences and their future choice of clinical career. Our study has shown that few students are interested in basic biomedical research as a career.

Acknowledgements

We thank the management of Spartan Health Sciences University for approval of the study and provisions of stationeries. We also acknowledge the participation of the students in the study.

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