

## A cross sectional study of the perceptions of first year medical students regarding Post graduate preferences

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### Abstract

**Introduction:** Growing appreciation of issues related to post graduate preferences among undergraduate medical students in recent years assumes great importance in health care delivery of the country. This study was carried out to determine the factors affecting the career choices of medical students.

**Aims and Objectives:** The present study was conducted to find out the preferences of students regarding the choice of post-graduation and factors affecting their choice.

**Materials and Method:** A cross sectional questionnaire based study was conducted among 130 medical students belonging to 2015-16 batch.

**Results:** The data compiled revealed 57.14% of male students preferring surgery and allied sciences followed by 42.85% of males preferring medicine and allied subjects as their choice. 60% of the female respondents prefer medicine and allied subjects as their choice followed by 31.66% preferring surgery and allied subjects and 8.33% preferred pre or para-clinical subjects as their career preference. The major factors influencing the choice of specialty were interest/ aptitude, ease of job availability, family and role models followed by challenging nature of specialty.

**Conclusion:** Post graduation preferences among undergraduate students and factors affecting their choice needs to be considered in order to address the inequality of specialists especially in Pre and Para clinical courses is nullified.

**Keywords:** Medical, Post-graduation.

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### Introduction

In India medical education programme requires the undergraduate medical students to study the course in three phases which includes pre-clinical, para-clinical and clinical subjects. Though the MBBS course begins undifferentiated the system changes during post graduate years that the doctors train in a particular field of medicine and turn into fully differentiated specialists.<sup>(1)</sup>

The general assumptions that the medical students do not have any career preferences regarding a particular specialty till they graduate is wrong. However the students of medicine and also some medical school applicants have strong preferences over the specialty of practice.<sup>(2)</sup>

Data generated regarding students preferred choice of specialist training will be useful in planning the medical education programmes and to identify specialties with low preference and introduce programmes to make these specialties more attractive for the stake holders.

Various factors are thought to influence the students in choice of specialty they prefer which include economical constraints, societal prestige, flexibility of working hours and role models. Apart from the above mentioned causes family, friends and personal life experiences may influence students in choice of their future specialty.

Various other studies done in different countries have shown there are multiple factors which influence student's choice of specialty. A study done in United States of America shows that no single factor determines the choice of specialty but various factors like prestige, income, hospital based practice influence the choice of the students.<sup>(3)</sup>

In another study done in Australia work culture, personal experience and the working environment during early years were reported as the important factors affecting their choice.<sup>(4)</sup>

Among the Chinese undergraduate medical students the preference of specialty is based on personal intelligence and career opportunities.<sup>(5)</sup>

In a survey reported from Jordan the specialties preferred were internal medicine, pediatrics and obstetrics and gynecology and the choice of these specialties was based on income, intellectual content of the specialty and individuals competency.<sup>(6)</sup>

Prestige, money and personal development were reported as important factors among Turkish undergraduate medical students.<sup>(7)</sup>

Due to the discrepancy in the number of post graduate and under graduate seats which are available in our country there is intense competition for the limited number of post graduate seats available both in government and private sector.

In the last few years according to the data available there are very few takers for post-graduation in basic sciences which includes Anatomy, Physiology and Biochemistry has led to shortage of faculty members in medical colleges.

In India the dearth of doctors which exists has made the policy makers to setup more government and private medical colleges to overcome the disparity in doctor patient ratio might possibly lead to severe shortage of medical college faculty especially in pre-clinical and para clinical specialty. Sri Siddhartha Medical College a constant college of Sri Siddhartha Academy of Higher Education a deemed university offers post graduate courses in all specialties for students from all parts of India. Knowing the preference of students for future specialties with this data generated will help to set priorities, apply corrective measures and generate the interest in students who are reluctant to specialize in basic sciences which are academically relevant by making these courses attractive to the stake holders.

This study was taken up with the following objectives.

1. To find out the preferences of students for different specialties.
2. To find out various factors affecting the choice of specialties.

### Materials and Method

A cross sectional study was carried out among first year undergraduate medical students of Sri Siddhartha Medical College. After obtaining the approval of institutional Ethical Committee. Before the conduction of this questionnaire based survey the nature and the purpose was explained to all the students and informed consent was taken from all the members of the study group. Confidentiality was maintained during the entire process of this survey. All the 130 medical students belonging to 2015-16 batch were included in the study irrespective of their demographic profile.

**Questionnaire:** A structured questionnaire was constructed after review of literature and feedback from both students and faculty members was taken to check for appropriateness of the questionnaire and was restructured based on the feedback received.

**Statistical analysis:** Data was tabulated using Microsoft office excel sheet and the response were expressed in percentages. Data was analyzed using EPI INFO (Version 7).

### Results

Table 1 shows the mean age of the students who participated in this questionnaire based study and was found to be 18.07. Males constituted 53.8% and female formed 46.2% of the study group.

Table 2 shows the specialty preference of females. According to this data around 35% of the female preferred Dermatology as their choice of specialty followed by Obstetrics and Gynecology (OBG)

18.33%, Pediatrics 16.66%, Medicine 8.33%, Ophthalmology 8.33% and around 8.33% of females respondents preferred Pre clinical or Para clinical courses as their choice of specialty. 5% females preferred Masters in ENT as their specialty of choice.

The Table 3 shows the specialty preference of males. According to this data around 30% of the male preferred Orthopedics as their choice of specialty followed by Surgery 14.28%, Medicine 12.85%, Pediatrics 11.42%, Radiology 11.42%, Ophthalmology 10%, Dermatology 7.14% and around 2.85% of male respondents preferred Masters in ENT as their specialty of choice. None of the male respondents preferred Pre clinical or Para clinical and OBG as their choice of future specialty.

Table 4 reveals that the choice of specialty among all respondents was Medicine and allied subjects 50.77%, Surgery and allied subjects 45.38% and only 3.85% of students preferred Pre and Para clinical as their choice of future specialty. The data compiled in our study reveals that 60% of female respondents preferred Medicine and allied subjects as their choice of future specialty followed by 31.66% of female students preferring Surgery and allied subjects as their future choice. In the present study 8.33% of female students preferred Pre or Para clinical subjects as their career preference. Among male students 57.14% preferred Surgery and allied sciences followed by 42.85% of males preferring Medicine and allied subjects as their choice. None of the 70 male respondents preferred Pre and Para clinical subjects and OBG as their career option.

Table 5 reveals that major factors influencing the choice of specialty in our study are primary interest/aptitude of subject 76.9%, ease of job availability 76.9%, advice from peers, family and role models 69.2% followed by challenging nature of specialty 63.1%. The other factors which influence their future choice of specialty are reputation of the specialty, financial rewards and intellectual content of specialty. The data also reveals scope of research was not a factor which influence their future choice of specialty. All the 130 respondents agreed that their future specialty choice influenced their learning pattern.

**Table 1: Age & gender distribution**

	Mean	Standard deviation
Age of the subject	18.07	0.62
Sex	Frequency	Percentage
Female	60	46.20
Male	70	53.80

**Table 2: Specialty preferences in females**

Subject preference	Frequency	Percentage
Dermatology	21	35
ENT	3	5
Medicine	5	8.33
OBG	11	18.33
Ophthalmology	5	8.33
Orthopaedics	0	0
Paediatrics	10	16.66
Pre/Para	5	8.33
Radiology	0	0
Surgery	0	0
Total	60	

**Table 3: Specialty preferences in males**

Subject preference	Frequency	Percentage
Dermatology	5	7.14
ENT	2	2.85
Medicine	9	12.85
OBG	0	0
Ophthalmology	7	10
Orthopaedics	21	30
Paediatrics	8	11.42
Pre/Para	0	0
Radiology	8	11.42
Surgery	10	14.28
Total	70	

**Table 4: Specialty preference in the males/ females**

Subject Preference	Frequency	Percentage
Dermatology	26	20.00%
ENT	5	3.85%
Medicine	14	10.77%
OBG	11	8.46%
Ophthalmology	12	9.23%
Orthopaedics	21	16.15%
Paediatrics	18	13.85%
PRE/PARA	5	3.85%
Radiology	8	6.15%
Surgery	10	7.69%
Total	130	100.00%

**Table 5: Factors affecting specialty preference**

Questions	Frequency	Percentage
<b>Primary interest / aptitude for the specialty</b>		
Agree	30	23.10%
Strongly agree/ not applicable	100	76.90%
<b>Presence of role models</b>		
Agree	90	69.20%
Strongly agree/ not applicable	40	30.80%
<b>Reputation of the specialty</b>		

Agree	60	46.20%
Strongly agree/ not applicable	70	53.80%
<b>Working hours</b>		
Disagree	70	53.80%
Strongly agree/ not applicable	60	46.20%
<b>Financial rewards / salary</b>		
Disagree	18	13.80%
Agree	75	57.70%
Strongly agree/ not applicable	37	28.50%
<b>Scope for research</b>		
Strongly disagree	18	13.80%
Disagree	72	55.40%
Undecided	40	30.80%
<b>Advice from other sources – peers, family, teachers</b>		
Agree	90	69.20%
Strongly agree/ not applicable	40	30.80%
<b>Challenging nature of the specialty</b>		
Disagree	18	13.80%
Undecided	30	23.10%
Agree	82	63.10%
<b>Potential for patient interaction</b>		
Disagree	18	13.80%
Agree	82	63.10%
Strongly agree/ not applicable	30	23.10%
<b>Potential for community interaction</b>		
Disagree	48	36.90%
Agree	82	63.10%
<b>Experience in the particular specialty</b>		
Disagree	65	50.00%
Undecided	30	23.10%
Agree	35	26.90%
<b>Intellectual content of specialty</b>		
Disagree	35	26.90%
Agree	65	50.00%
Strongly agree/ not applicable	30	23.10%
<b>Length/ difficulty of residency</b>		
Disagree	77	59.20%
Agree	35	26.90%
Strongly agree/ not applicable	18	13.80%
<b>Ease of job availability</b>		
Agree	100	76.90%
Strongly agree/ not applicable	30	23.10%
<b>Does your specialty choice influence your learning pattern</b>		
Strongly agree/ not applicable	130	100.00%
Total	130	100.00%

## Discussion

The future specialty preferences made by the undergraduate medical student assume great importance to set priorities and apply corrective measures when there is discrepancy in the demand and supply of specialists. In India the dearth of doctors which exists has made the policy makers to setup more government and private medical colleges to overcome the disparity in doctor patient ratio might possibly lead to severe shortage of medical college faculty especially in pre clinical and para clinical specialty.

The present reveals that the choice of specialty among all respondents was Medicine and allied subjects 50.77%, Surgery and allied subjects 45.38% and only 3.85% of students preferred Pre and Para clinical as their choice of future specialty.

The data compiled in our study reveals that 60% of female respondents preferred Medicine and allied subjects as their choice of future specialty followed by 31.66% of female students preferring Surgery and allied subjects as their future choice. In the present study 8.33% of female students preferred Pre or Para clinical subjects as their career preference.

Among male students 57.14% preferred Surgery and allied sciences followed by 42.85% of males preferring Medicine and allied subjects as their choice. None of the 70 male respondents preferred Pre and Para clinical subjects and OBG as their career option.

In a study done at a medical school in Saudi Arabia the top specialty choices among females were General surgery 23%, Pediatrics 18%, Dermatology 15%. Among the male students in the same study the top choices were General surgery 54%, Medicine 23%.<sup>(8)</sup>

In another study in Jordan the most preferred specialty expressed by male students was Surgery followed by Internal medicine and Orthopedics while the specialty preferred by female students was OBG followed by Pediatrics and Surgery.<sup>(9)</sup>

In a similar study done among final year students in Kenya Internal medicine, Surgery, Orthopedics were the major choices of students and the study also shows academic medicine and basic sciences were poorly selected as a career preference despite this profession providing the core of teaching in Medical education system.<sup>(10)</sup>

The major factors influencing the choice of specialty in our study are primary interest/aptitude of subject 76.9%, ease of job availability 76.9%, advice from peers, family and role models 69.2% followed by challenging nature of specialty 63.1%. The other factors which influence their future choice of specialty are reputation of the specialty, financial rewards and intellectual content of specialty. The data also reveals scope of research was not a factor which influence their future choice of specialty. All the 130 respondents agreed that their future specialty choice influenced their learning pattern.

In a study done by Yousef K et al. found that intellectual content of the specialty (84%) followed by the reputation of the specialty(59%), anticipated income (58%) and focus on urgent care (55%) were the major factors in deciding their future choice of specialty.<sup>(9)</sup>

A similar study done regarding specialty preferences in King Khalid University, Saudi Arabia emphasized factors like less competitive field, shortage of specialists, diversity of patients were the major factors among males in their choice of future specialty while prestige of specialty and teaching opportunities were the reasons in female students.<sup>(11)</sup>

The present study reveals that the undergraduate medical students wants to perceive post graduate education with the perception MBBS doctors have less status in the society and they believe that MBBS degree does not sufficiently qualify for them to practice medicine. Majority of the respondents irrespective of gender want to specialize in clinical subjects with majority of females preferring Medicine and allied subjects and males have greater inclination towards Surgical specialties as their future career option. Pre and Para clinical specialties are least preferred among the medical students with gender alike.

## Conclusion

Medicine and allied subjects were the most preferred specialties in females and Surgical specialties were cited as future career preference among males. The important factors influencing the choice were interest/aptitude of subject, ease of job availability, advice from peers, family and role models followed by challenging nature of specialty. Post graduation preferences among undergraduate students and factors affecting their choice needs to be considered in order to address the inequality of specialists especially in Pre and Para clinical courses is nullified.

## Limitations and Recommendations

It is planned to follow up with the same set of students over their course of undergraduate study and see whether they have any change in choice. It is recommended that an awareness is created among medical students regarding the importance of less preferred specialties of basic sciences so that quality work force is available to train undergraduate medical students.

## References

1. Chew YW, Rajakrishnan S, Low CA, Jayapalan PK, Sreeramreddy CT. Medical students' choice of specialty and factors determining their choice: a cross-sectional questionnaire survey in MelakaManipal Medical College, Malaysia. *Biosci Trends* 2011; 5: 69-76.
2. McManus IC, Lefford F, Furnham AF, Shahidi S, Pincus T. Career preference and personality differences in medical school applicants. *Psychology, Health and Medicine* 1996;1:235-248.

3. Gorenflo DW, Ruffin MT 4th, Sheets KJ. A multivariate model for specialty preference by medical students. *J Fam Pract.* 1994; 39:570-576.
4. Harris MG, Gavel PH, Young JR. Factors influencing the choice of specialty of Australian medical graduates. *Med J Aust.* 2005; 183:295-300.
5. Chang PY, Hung CY, Wang KI, Huang YH, Chang KJ. Factors influencing medical students' choice of specialty. *J Formos Med Assoc.* 2006; 105:489-496.
6. Dikici MF, Yaris F, Topsever P, Tuncay Muge F, Gurel FS, Cubukcu M, Gorpelioglu S. Factors affecting medical students in formulating their specialty preferences in Jordan. *BMC Med Educ.* 2008; 8:32
7. Dikici MF, Yaris F, Topsever P, Tuncay Muge F, Gurel FS, Cubukcu M, Gorpelioglu S. Factors affecting choice of specialty among first-year medical students of four universities in different regions of Turkey. *Croat Med J.* 2008; 49:415-420.
8. Kaliyadan F, Amin TT, Qureshi H, Al Wadani F. Specialty preferences of 1<sup>st</sup> year medical students in a Saudi Medical School - Factors affecting these choices and the influence of gender. *Avicenna J Med* 2015;5:134-9.
9. Khader Y, Al-Zoubi D, Amarin Z, Alkafagei A, Khasawneh M, Burgan S, El Salem K, Omari M: Factors affecting medical students in formulating their specialty preferences in Jordan. *BMC Med Educ.* 2008, 8: 32-10.1186/1472-6920-8-32.
10. Dossajee H, Obonyo N, Ahmed SM. Career preferences of final year medical students at a medical school in Kenya—A cross sectional study. *BMC Medical Education.* 2016;16:5. doi:10.1186/s12909-016-0528-1.
11. Mehmood, S.I., Kumar, A., Al-Binali, A. and Borleffs, J.C.C. (2012) Specialty Preferences: Trends and Perceptions among Saudi Undergraduate Medical Students. *Medical Teacher*, 34, S51-S60.