

Original Research Article

## Factors affecting medical students in formulating their career and specialty preferences from northern India

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**Abstract:** What drives a student to prefer a particular specialty over other can also provide an insight into what may be required or needed to deal the existing situation about manpower availability in various specialties? This study was planned with an objective to study factors affecting medical students in formulating their career and specialty preferences. The present cross-sectional study was executed by the Department of Forensic Medicine of a tertiary care teaching institution. In this study, all the medical undergraduate students currently studying in the medical college were included. A self-administered semi-structured questionnaire served as study tool. Students were contacted at the end of theory and practical classes. The questionnaire consisted of 35 items and contained following sections: sociodemographic variables, choice of specialty, reasons for preference and apprehensions in their mind if any. Overall, the most preferred specialties were Orthopaedics (116), surgery (97) followed by internal medicine (77). The least preferred choices were anatomy, physiology (2 each), biochemistry (4), forensic medicine and microbiology (7 each). Three top factors that influenced the student's decisions to opt for a particular specialty included High income potential (average Likert scale 4.6), Employment scope in the future (4.5), Focus on community service to serve the sick and society (3.9). No fear was expressed by 62 (32.6%) of the students, whereas, 68 (35.8%) feared ragging. Fifty students (26.3%) were apprehensive about the long period of study course. Some specialties such as anatomy, physiology, biochemistry, forensic medicine and microbiology are not favoured and there is a need to improve student's interest in these areas. There is a need to provide some sort of an orientation and counselling at the time of entry into medical college.

**Keywords:** Factors, Medical Students, India, Career, Specialty, Preferences

### INTRODUCTION

Medical profession is one of the highly rated professions among the students across the globe because it offers financial security as well as a socially satisfying career. The career interests of medical students are important; as today's medical student is tomorrow's healthcare professional/provider [1]. Their interests would determine the availability of manpower in each specialty. The paucity of qualified health workers in rural areas is a critical challenge for India's health sector [2]. In India, there are deficiencies of certain specialists as well as of non-specialist graduate doctors to manage primary healthcare centres [3, 4].

To enter into this profession, a student is required to clear a tough competitive examination. Those who clear the entrance examination, are then required to undergo a rigorous five year training in a medical school followed by an year of internship before they earn their degree [5]. The recent trend towards specialization has made the study period even longer. Hence decision to choose medicine as professional career is really tough and challenging. What motivates/drives a student to prefer a particular specialty over other can also provide an insight into what may be required or needed to deal the existing

situation about manpower availability in various specialties? Studies in developed countries have shown that student education loans and lifestyle factors are important in choosing some specialties [6].

Therefore it is very essential to understand and explore the apprehensions in their mind when they join medical school, reasons for joining medical profession and factors affecting medical students in formulating their career. Relative paucity of literature also warrants this study. Therefore this study was planned with an objective to study factors affecting medical students in formulating their career and specialty preferences.

**MATERIALS AND METHODS**

The present study was planned and executed by the Department of Forensic Medicine in collaboration and consultation with the Medical Education Department of a tertiary care teaching institution of northern India. In this cross-sectional study, all the medical undergraduate students currently studying in the medical college were included.

A self-administered semi-structured questionnaire served as study tool. Undergraduate medical students (MBBS) were contacted at the end of theory and practical classes. Those students who could not be retrieved even after the third visit to classes were excluded from the study. Students were explained about the nature and purpose of study and requested to fill the questionnaires which were distributed by authors in the classrooms just after the completion of classes. The students were informed that their participation in the study voluntary. Anonymity of the students was maintained. The study adhered to the tenets of the

Declaration of Helsinki for research in humans. Informed consent was obtained. Ethical committee approved the study.

The questionnaire consisted of 35 items and contained following sections: sociodemographic variables, choice of specialty, reasons for preference and apprehensions in their mind if any. The reasons for preference were scored on a 5-point Likert scale with 1 indicating that the factor had the least influence and 5 the strongest influence on their choice. Thirty minutes time was given to each student to fill up the proforma. All the questionnaires were manually checked and edited for completeness and were then coded for computer entry. After compilation of collected data, analysis was done using Statistical Package for Social Sciences (SPSS), version 20 (IBM, Chicago, USA). The results were expressed using appropriate statistical methods.

**RESULTS**

Data of 190 students was included in this study. Almost ninety five percent of students (n=180, 94.7%) wish to pursue postgraduate studies. Overall, the most preferred specialties were Orthopaedics (116), surgery (97) followed by internal medicine (77). The least preferred choices were anatomy, physiology (2 each), biochemistry (4), forensic medicine and microbiology (7 each). (Table 1) The most popular specialties among men were orthopaedics, surgery followed by radiology and internal medicine, while for women these were, Obstetrics and gynaecology, paediatrics, and internal medicine and dermatology.

**Table 1: Order of preference for various specialties as elicited by medical students**

Specialty choice	Preferences		
	1 <sup>st</sup> (%)	2 <sup>nd</sup> (%)	3 <sup>rd</sup> (%)
Orthopaedics	65 (34.2)	26 (13.7)	25 (13.2)
Surgery	46 (24.2)	28 (14.7)	23 (12.1)
Internal medicine	25 (13.2)	28 (14.7)	24 (12.6)
Radiology	18 (9.5)	16 (8.4)	15 (7.9)
Paediatrics	14 (7.3)	18 (9.5)	17 (8.9)
Obstetrics and gynaecology	12 (6.3)	14 (7.3)	20 (10.5)
Dermatology	7 (3.7)	7 (3.7)	16 (8.4)
Ophthalmology	7 (3.7)	6 (3.2)	12 (6.3)
Chest and TB (Pulmonology)	5 (2.6)	5 (2.6)	12 (6.3)
ENT (Otorhinolaryngology)	5 (2.6)	4 (2.1)	11 (5.8)
Anaesthesiology	5 (2.6)	4 (2.1)	11 (5.8)
Community medicine	5 (2.6)	5 (2.6)	10 (5.3)
Psychiatry	3 (1.6)	2 (1.1)	8 (4.2)
Pathology	3 (1.6)	5 (2.6)	5 (2.6)
Pharmacology	2 (1.1)	3 (1.6)	4 (2.1)
Microbiology	1 (0.5)	3 (1.6)	3 (1.6)
Forensic medicine	0	3 (1.6)	4 (2.1)
Biochemistry	0	2 (1.1)	2 (1.1)
Physiology	0	1 (0.5)	1 (0.5)
Anatomy	0	1 (0.5)	1 (0.5)

Three top factors that influenced the student’s decisions to opt for a particular specialty included High income potential (average Likert scale 4.6), Employment scope in the future (4.5), Focus on community service to serve the sick and society (3.9).

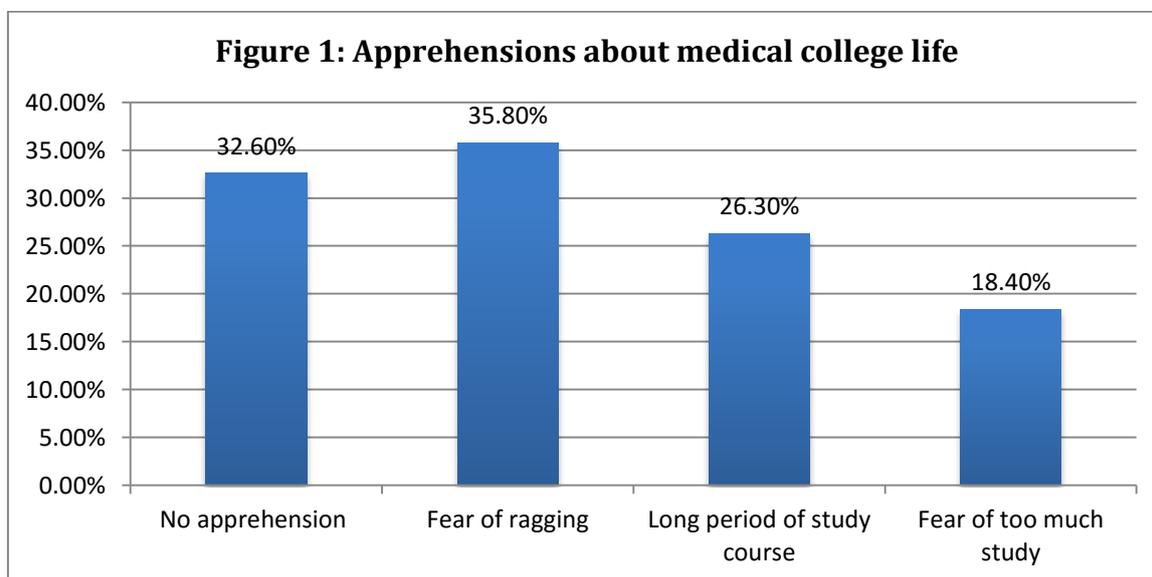
Interest in specialty, Focus on non-urgent care (non-emergency services) and would be able to spare enough time for family were another significant factors (3.8). (Table 2)

**Table 2: Factors influencing choice of students for various specialties**

Factors influencing choice of students for specialty	Likert Scale					Average
	5	4	3	2	1	
High income potential	117	54	22	5	1	4.6
Interest in specialty	66	73	52	28	14	3.8
Wide variety of patient problems	56	54	46	25	33	3.5
Employment scope in the future	104	72	32	15	8	4.5
Job security	58	61	65	36	28	3.4
Prestige of specialty in society high status of a doctor in the society.	43	56	67	30	14	3.2
Focus on hospital care	36	13	24	15	6	3.5
Coercion by parents	61	22	28	18	8	3.7
Job satisfaction	57	52	36	15	11	3.6
Affordability of specialty (private college)	59	23	16	5	5	3.6
Focus on community service to serve the sick and society	89	53	42	23	12	3.9
Focus on non-urgent care (non-emergency services)	73	70	37	17	8	3.8
Would be able to spare enough time for family	77	62	60	38	13	3.8
Working hours	51	55	63	32	15	2.7

Regarding apprehension about medical college life, no fear was expressed by 62 (32.6%) of the students, whereas, 68 (35.8%) feared ragging. Fifty

students (26.3%) were apprehensive about the long period of study course whereas 35(18.4%) students had fear of too much study. (Figure 1)



**DISCUSSION**

In this study we observed that a major chunk of students (n=180, 94.7%) wished to pursue postgraduate studies. This is really health and encouraging sign for us. It would take care increasing need of manpower at all the levels of health care sector.

The proportion of students (95%) willing to do post-graduation is higher than the 83.5% in the study done at a government medical college in Delhi [5]. It indicates a changing trend. The difference could be due to different study setting i.e. government versus private medical college. There is a need to increase manpower in areas

such as primary care, psychiatry and ophthalmology among others in India [1, 3-5]. Understanding the factors that influence student's decisions regarding their future career would help in initiating corrective measures at an early stage and bridging the gaps. On the other hand, another study from southern India showed that almost all (>99%) students were willing to go for post-graduate studies [7]. It could be effect of role models from whom they are influenced or due to the higher social and financial status of specialists as compared to general practitioners, thus leading to an increased number of students opting for specialization every year.

In this study it was found that the most preferred specialties were Orthopaedics (116), surgery (97) followed by internal medicine (77). The result of this study is in agreement with previous study from Ziauddin Medical University, Pakistan [8]. Another study among Swiss medical students is also in concordance with our observations [9].

In this study, most popular specialties among men were orthopaedics, surgery followed by radiology and internal medicine, while for women these were Obstetrics and gynaecology, paediatrics, and internal medicine and dermatology. The most popular choices for men and women in our study were similar to the choice of students in Jordan, where the most preferred subjects among men were surgery and internal medicine and among women these were obstetrics and gynaecology and paediatrics [10]. Even the study from Swiss, more women preferred obstetrics and gynaecology and paediatrics as compared to men [9].

Three top factors that influenced the student's decisions to opt for a particular specialty included High income potential (average Likert scale 4.6), Employment scope in the future (4.5), Focus on community service to serve the sick and society (3.9). Harth from Australia and Razali from Malaysia also found similar reasons for entering medical school in their study [11, 12].

We observed that no fear was expressed by 32.6% of the students, whereas, 35.8% feared ragging. 26.3% were apprehensive about the long period of study course whereas 18.4% students had fear of too much study. Another study from Karnataka [13] also reported that the length of the course was a major reason for doubt, in the minds of fresh candidates (24.5%), regarding the choice of medicine as a right career. It could be due to the fact growing in subconscious mind that when will I start earning money. I will have to be dependent on my parents for so much long time. His friends of other streams like engineering etc make this scenario even worse. They earn the degree soon and start earning comparatively an

early stage. Another fact comes in the minds of medical students towards lengthy struggle is that my half of life will be gone in studies. This increasingly calls for a need to provide some sort of an orientation and counseling at the time of entry into medical college. There is also a need to reframe the medical curricula so as to make it less strenuous and more student's friendly, thereby reducing the fear of medicine from the minds of students.

## CONCLUSIONS

Factors that had the most influence on their choice were High income potential, Employment scope in the future and Focus on community service to serve the sick and society. Some specialties such as anatomy, physiology, biochemistry, forensic medicine and microbiology are not favoured and there is a need to improve student's interest in these areas. There is a need to provide some sort of an orientation and counseling at the time of entry into medical college. There is also a need to reframe the medical curricula so as to make it less strenuous and more student's friendly.

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