

## Short Report

### Why does an undergraduate student choose medicine as a career

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#### ABSTRACT

**Background.** There are more than 44 000 seats in over 350 medical colleges in India for pursuing the MBBS course. This is not enough as we have only 1 doctor for as many as 1953 persons in India. Yet, medicine is not among the top vocations in most career advisories and the best school students do not aspire to be doctors.

**Methods.** This cross-sectional study was done at a tertiary care, teaching hospital in March 2010. Medical students in their second semester were asked to fill an indigenously designed, structured questionnaire, looking at their reasons for joining the course, interpersonal relationships, satisfaction with the curriculum and future prospects following graduation.

**Results.** The mean (SD) age of the students was 19.2 (0.85) years. Of the 100 students of second semester, 41 had been influenced by a family member in choosing their career. Twelve felt that medicine would give them a chance to serve the society. Forty-six students felt that the expectations they had from the course before joining were not being fulfilled. Nearly one-third of the students (31) stated that they would not choose medicine as a career if given another chance. Further, 19 said that they would still choose a different profession after completing their graduation. Non-fulfilment of expectations from the course was associated with the belief that they would not opt for this course if given a second chance (likelihood ratio 7.12,  $p=0.008$ ). Students felt that teaching should lay stress on problem-based learning including workshops on stress and time management.

**Conclusion.** We find that several students do not have a defined career plan and opt for a career in medicine because they are influenced by family members. Some students were dissatisfied with the curriculum and expressed that they would not like to pursue the course if given a second chance.

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#### INTRODUCTION

It is commonly believed that a career in medicine, which once was a preferred choice for every school leaver, has lost its sheen. The best students in school are no longer opting for the medical profession.

Although there are more than 44 000 seats in over 350 medical colleges in India recognized by the Medical Council of India (MCI) for pursuing the MBBS course, we have a low doctor to patient ratio with only 1 doctor for as many as 1953 persons—much lower than the recommendations of WHO and of a high-level expert group of the Planning Commission of India.<sup>1–5</sup> Yet, in several career guidance advisories the medical profession has been ranked lower than other professions such as chartered accountancy, business administration, software, mechanical, chemical, electronic engineering, airline crew or even health service management.<sup>6,7</sup> *Forbes* magazine does not include the medical profession among its list of top career options for 2013.<sup>8</sup>

Several researchers have been intrigued by why students opt for careers in healthcare. Fluctuating number of applicants to medical schools over the past few decades have been poorly understood.<sup>9</sup> Worried by a shortage of nurses, authors have studied why school students would opt for nursing as a career.<sup>10–16</sup> Similar studies are available which focus on why students choose dentistry.<sup>17,18</sup> There is no literature from India trying to address this issue and enable policy-makers to make the healthcare profession more appealing to school students. Students have a romantic notion about the medical profession and enter medical college with a complex combination of attributes, abilities, strengths and expectations. Core competencies of the profession are not explained to them. It has been shown that introducing career information and inclusion of work experience in middle or secondary school is instrumental in providing them with information about careers so that they can make informed decisions while making choices later.<sup>10,16</sup>

We felt it would be interesting to study why present-day medical students choose to take up medicine as a career. We did a cross-sectional survey across 11 medical colleges in India to understand the reasons for their choice of career, to study their current level of satisfaction with the course and comprehend how they view their own future. We report here the analysis of responses from students at University College of Medical Sciences, Delhi only.

#### METHODS

This cross-sectional survey was conducted in March 2010 at the University College of Medical Sciences, Delhi, a tertiary care, teaching hospital. Medical students are admitted to the college based on the rank obtained in a national-level entrance test (15% of students) and a state-level entrance test (85% of students). The study was cleared by the Ethics Committee of the college.

After obtaining their consent to participate, medical students of the second semester were asked to anonymously answer a pre-designed questionnaire including questions related to their reasons for joining the course, interpersonal relationships, satisfaction with the curriculum and future prospects following graduation. The questionnaire was distributed among the students during their classes and in their hostels. They were given adequate time to complete the questionnaire and encouraged to submit it at the earliest after completion. To maintain confidentiality, the study

was conducted in a single-blind manner. The forms were distributed and collected by a fellow student, without revealing the identity of the responder, were analysed by another student and only the results were accessible to the principal investigator.

The data analysis was done using SPSS 15.0. The data were analysed to look at individual frequency distribution of qualitative questions. We also assessed the association between different variables, namely student expectations before joining medical college and their current state of mind, including their own perception of their future prospects.

## RESULTS

A response rate of 90.9% was obtained as 100 of the 110 students returned the completed questionnaire. The mean (SD) age of respondents who completed the survey was 19.2 (0.85) years. Of the 100 respondents in their second semester, 41 had been influenced by a family member in choosing their career. Twelve students felt that medicine would give them a chance to serve the society. Fifty-four students said that their expectations before joining the course were being met; 69 said that, given a second chance, they would again opt for a career in medicine; but 19 said that they would go for a different stream after completing MBBS. Those who felt that their expectations were not being fulfilled were more likely to change their career following completion of MBBS (likelihood ratio 7.12,  $p=0.008$ ).

Twenty-two of the 46 students (47.8%) whose expectations from the course were not being met responded that, if given another chance, they would not like to opt for the course, while 9 of the 54 students (16.6%) whose expectations from the course were being met responded similarly. Of the 31 students not willing to take up MBBS again, 12 (38.7%) said that they would take a different stream after completing MBBS, while 7 (10.1%) of the 69 students wishing to take up MBBS if a second opportunity was provided had decided to opt for a different stream at the end of the course.

Seventeen students said that they had taken up medicine because of their parents' wishes. Of them, 10 reported dissatisfaction and that they would not choose MBBS as a career if given a second chance.

Twenty-eight students felt that teaching should lay stress on problem-based learning and 12 said that workshops on stress and time management should be included in the medical curriculum.

## DISCUSSION

Our cross-sectional survey among the second semester medical students at the University College of Medical Sciences in Delhi indicates that over a third of the respondents (41) chose to be doctors as they were influenced by a family member. One-fifth felt that they would not choose medicine as a career if given a second chance.

The career choices of students and reasons for joining medical school have not been systematically evaluated. In 1967, Riches in British Columbia had reflected on the changes in the choice of medicine as a career option among premedical students.<sup>19</sup> Kozar *et al.* studied preclinical students in Texas regarding factors influencing their career choice and found that students interested in surgery made their choices during premedical school days and this was related to their happiness in relation to family life.<sup>20</sup> In 1984, Sade *et al.* studied students of 13 undergraduate colleges in South Carolina and found that premedical students were excessively competitive, overspecialized, overachieving, more highly motivated, self-disciplined, goal-oriented and proud as compared

to non-medical students and described these as attributes of the 'premedical syndrome'.<sup>21</sup> Cooter *et al.* studied 1464 students in Philadelphia and found that the family income of students affected their choice of career after graduation.<sup>22</sup> They found that those in high-income groups were more likely to opt for surgical branches. Neittaanmaki *et al.* studied 2632 Finnish junior physicians born on odd numbered days by a postal questionnaire focusing on their life situation, career choice and future plans.<sup>23</sup> With a 66% response rate, they found that the respondents had a father who was an upper level white collar worker reflecting a similar composition in the families of these doctors. While women attributed a lifelong calling, success at school and interest in helping people, men felt that a doctor was highly paid in this high status profession.

Degazon and Shaw, in the USA, while trying to study why a career in nursing was not preferred found that students choose careers with more power, positive evaluation and lesser activity than was involved in nursing. Respondents preferred jobs with security, the ability to take decisions independently and higher emoluments.<sup>11</sup> Law and Arthur studied 1246 students from six schools in Hong Kong.<sup>13</sup> They found that gender, previous academic achievement, inclusion of biology as a subject pursued and even mother's occupation influenced the choice for nursing as a career. Further, they found that students' intention to study nursing was significantly affected by social influence from parents, teachers and friends. In another interesting study, Neilson and McNally have elucidated the role of parents, teachers, guardians and career advisors calling them 'significant others' in negatively influencing students' choices towards nursing as a career choice.<sup>15</sup>

The ethnic, social and cultural environment in India is different from other countries. Students in India exercise their choice of career at a much younger age (17 years), where generally parents and family members have a bigger influence on their decisions. In countries such as the USA, students are required to complete a few years of premedical course and they are more independent by the time they make their choices. Harth *et al.* compared mature age entrants to medical school with normal age entrants in Queensland.<sup>24</sup> While it may be expected that older entrants would have exercised more mature and considered choices while choosing the medical career, it is interesting that the authors found that motivations to study medicine included family influences and parental expectations though these were more so in normal age entrants. In our study, we find that family influenced a large number of students in determining their choice of career.

Our study has attempted to explore discontent, if any, among medical students and tried to understand their problems. Our study is limited since we have not taken into account responses to similar questions from students in other professional courses such as engineering or management. The present results are representative of the views of students of one institution, but we believe that the results in other institutions in similar settings will not be very different and we would follow this up with a larger study across different colleges to validate our results.

## Conclusions

A large subset of students who participated in our study opted for a career in medicine because they were influenced by their family members. Some students appeared dissatisfied with the curriculum and expressed that they would not like to pursue the course if given a second chance. However, it is difficult to conclude at this stage the magnitude of the problem as it requires a more detailed analysis. It is time that reasons for choices of premedical students

are understood in larger studies across medical colleges in India to help policy-makers make the course more attractive to premedical students. It is only logical to presume that adequate career guidance and work experience during school would help students to make informed career choices and probably reduce the level of dissatisfaction during formative years of medical college.

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