

# Analysis of Factors Associated with Success Journey of Newly Entered Medical Students in a Rural Medical College of Haryana

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## ABSTRACT

**Introduction:** Competition for admission to medical college in India is intense as the number of applicants for national eligibility cum entrance test (NEET) always exceeds the available seats. The choice of a career in the medical field is a complex personal decision influenced by a multitude of factors. Current study was done with the objectives to study socio-demographic profile of newly selected medical students, to assess reasons of choosing medical stream as a career and to determine the association of socio-demographic and other factors with number of attempts taken by the medical students for selection.

**Material and methods:** This was a cross-sectional study carried out among 96 newly entered medical students of Maharaja Agrasen Medical College, Agroha (Dist. Hisar), Haryana. Appropriate statistical tests like chi-square ( $\chi^2$ ) test and Fisher's exact test were applied and mean, mode, percentages were also measured.

**Result:** Out of total 39 students (40.6%) belonged to family where one or more member was in medical profession. However 86 students (89.6%) choose the medical profession by their own choice. Most of students (72.9%) were attending regular classes during 11<sup>th</sup> & 12<sup>th</sup> in their schools. Maximum number of students (46.9%) cleared the NEET in their 2<sup>nd</sup> attempt. Maximum selection was in students who spent 9-12 hours for study for preparation. Out of total 60.4% students spent 5-7 hours for sleep during preparation period. Out of total 91.7% students were joined coaching for preparation purpose. Majority of students (67.7%) migrated from their native place for study purpose.

**Conclusion:** In our study maximum students have chosen medical profession because of their personal interest. In present study maximum newly entered medical students were those who have attended schools regularly in 11<sup>th</sup> and 12<sup>th</sup> classes. Adequate sleep hours for students play constructive role in favorable outcome.

**Keywords:** NEET, Newly Entered, Medical Students, Coaching, Migration, Attending/Non- Attending.

world.<sup>2,3</sup>

Medical career is unique as it is perceived to be very noble providing an opportunity to serve human beings more than any other career.<sup>4</sup> The choice of a career in the medical field is a complex personal decision influenced by a multitude of factors including gender, residential area, family background, parent's socio-economic status & their occupation, personal interest, peer pressure, self-motivation, profession in family, financial reasons, better quality of life etc.<sup>5</sup>

Competition for admission to medical college in India is intense as the number of applicants for national eligibility cum entrance test (NEET) always exceeds the available seats. Total number of applicants for NEET 2019 was around 15 lacks against 65000-70000 (government & private combined) MBBS seats. Students are living under stress for their selection.

Majority of students, both males and females develop eating disorders during their exam preparation like anorexia, bulimia. People may also suffer from other mental health issues because of a focus on "constant testing".<sup>6</sup> Also many students develop eye problem, backache, headache due to long seating hours for studies.

It has always been said 'Knowledge is Power' and that knowledge is gained through education. It is an idea as old as humanity.<sup>7</sup> Education equips one with real skills to secure a bright career, so everyone is quite serious about educating themselves. Knowledge acquisition is a slow, gradual and dynamic process. However, the notion that education can be had easily by joining coaching classes merely is quite mistaken. The craze of joining coaching centres is becoming

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quite widespread. One must always remember there is no substitute for self-study.

Hard work is the only key to his success that is the reason whenever the examination results come out we see how some students even despite not even having sufficient books manage to get the higher ranks however some students who spend much more money on coaching classes and other facilities do not get that much marks. Once we explain the student the importance of a concept or education they themselves will study hard and achieve the success they deserve.

Instead of part of rat race, education is a need for growing economically and socially so that one can develop oneself successful in life.

There is very little data regarding different factors and reason for choosing medical profession as a career by the students and their success journey. Hence, this study was planned & conducted among newly entered medical students with the objectives to study socio-demographic profile of newly selected medical students, to assess reasons of choosing medical stream as a career and to determine the association of socio-demographic and other factors with number of attempts taken by the medical students for selection.

## MATERIAL AND METHODS

This was a cross-sectional, questionnaire based, observational study carried out during the month of September 2019 among newly entered medical students of Maharaja Agrasen Medical College, Agroha (Dist. Hisar), Haryana. A total of 100 students were given pre-designed and pre-validated questionnaire, out of which 4 were not taken into consideration due to incompletely filled questionnaire. Confidentiality was assured to all the students who participated. Students who participated were given a brief

description about the study and its objectives. Verbal consent of each student was taken. A self-administered questionnaire was used to conduct the study. The questionnaire included information regarding age, sex, caste, place of residence, occupation of father and mother, schooling & coaching. Information also collected regarding number of attempts to get selection through NEET, time spent in study, recreational activities, sleep and use of mobile/laptop.

The collected data were coded, entered in MS Excel. Analysis was done using the Statistical Package for Social Sciences (SPSS) version 20.0. Appropriate statistical tests like chi-square ( $\chi^2$ ) test and Fisher's exact test were applied and mean, mode, percentages were also measured. Statistical significance was set at  $p \leq 0.05$ .

## RESULTS

The present cross-sectional study was carried out in Maharaja Agrasen Medical College, Agroha (Dist. Hisar), Haryana. The study was conducted on 96 newly entrant MBBS students.

Out of total (96) students, 53 (55.2%) were male and 43 (44.8%) were female. Mean age of participants was 18.77 years (ranges 17-23 years) and mostly students (37.5%) belonged to 19 years of age. Table 1 shows demographic profile of study subjects like their age group, sex, Residential areas, father's & mother's occupation and family member in medical profession.

Out of total 39 students (40.6%) belonged to family where one or more member was in medical profession. However 86 students (89.6%) choose the medical profession by their own choice only 10 students choose the profession due to family or peer pressure. Interestingly the association of number of attempts and medical professional in family was found to be significant ( $p=0.02$ ).

Variables	Number of Attempts			Total	p value
	1	2	>3		
Age Group in years(%)					
17-19	25 (32.1)	43(55.1)	10 (12.8)	78 (100)	0.00
20-23	0 (0)	2 (11.1)	16 (88.9)	18 (100)	
Sex (%)					
Male	12 (22.6)	25 (47.2)	16 (30.2)	53 (100)	0.62
Female	13 (30.2)	20 (46.5)	10 (23.3)	43 (100)	
Residential area (%)					
Rural	4(14.3)	13 (46.4)	11 (39.3)	28 (100)	0.12
Urban	21 (30.9)	32 (47.1)	15 (22.1)	68 (100)	
Father's occupation (%)					
Farmer	2(14.3)	7(50.0)	5(35.7)	14 (100)	0.08
Govt. job	9(18.4)	25 (51)	15(30.6)	49 (100)	
Business	8 (33.3)	11(45.8)	5(20.8)	24 (100)	
Private job	6 (66.7)	2 (22.2)	1 (11.1)	9 (100)	
Mother's occupation (%)					
House wife	17 (22.1)	37 (48.1)	23 (29.9)	77 (100)	0.17
working	8 (42.1)	8 (42.1)	3 (15.8)	19 (100)	
Professional in family (%)					
Yes	14 (35.9)	20 (51.3)	5 (12.8)	39 (100)	0.02
No	11 (19.3)	25 (43.9)	21 (36.8)	57 (100)	

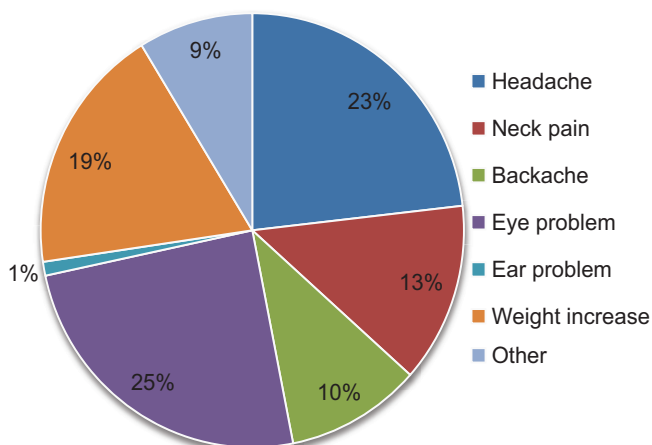
**Table-1:** Demographic profile of study subjects

Variables	Number of Attempts				p value
	1	2	>3	Total	
Type of school attended (%)					
Government	4 (40.0)	2 (20.0)	4 (40.0)	10 (100)	0.20
Private	21 (24.4)	43 (50.0)	22 (25.6)	86 (100)	
Percentage of Marks obtained (%)					
60-80	2 (15.4)	7 (53.8)	4 (30.8)	13 (100)	0.64
81-100	23 (27.7)	38 (45.8)	22 (26.5)	83 (100)	
Attending regular school (%)					
yes	14 (20.0)	32 (45.7)	24 (34.3)	70 (100)	0.01
no	11 (42.3)	13 (50.0)	2 (7.7)	26 (100)	
Coaching classes attended (%)					
yes	20 (23.8)	42 (50.0)	22 (26.2)	84 (100)	0.24
no	5 (41.7)	3 (25.0)	4 (33.3)	12 (100)	
Classes from which coaching was started (%)					
No coaching	2 (25.0)	3 (37.5)	3 (37.5)	8 (100)	0.00
After 12 <sup>th</sup> class	1 (2.9)	21 (60.0)	13 (37.1)	35 (100)	
From 11 <sup>th</sup> class	15 (34.9)	18 (41.9)	10 (23.3)	43 (100)	
From 9 <sup>th</sup> class	7 (70.0)	3 (30.0)	0 (0.0)	10 (100)	
Migration from native place for preparation (%)					
Yes	11 (16.9)	33 (50.8)	21 (32.3)	65 (100)	0.01
No	14 (45.2)	12(38.7)	5 (16.1)	21 (100)	

**Table-2:** Academic variables of study subjects

Variables	Number of Attempts				p value
	1	2	>3	Total	
Total study duration (%)					
5-8 hrs	11 (37.9)	11 (37.9%)	7 (24.1%)	29	0.53
9-12 hrs	12 (21.4%)	28 (50.0%)	16 (28.6%)	56	
13-16 hrs	2 (18.2%)	6 (54.5%)	3 (27.3%)	11	
Total sleep duration (%)					
5-7 hrs	17 (29.3%)	27 46.6%	14 (24.1%)	58	0.59
8-12 hrs	8(21.1%)	18 (47.4%)	22 (31.6%)	38	
Mobile/laptop use duration (%)					
No use	4 (44.4%)	3 33.3%	2 (22.2%)	9	0.70
1-2 hrs	12 (23.5%)	26 (51.0%)	13 (25.5%)	51	
3-5 hrs	9 (25.0%)	16 (44.4%)	11 (30.6%)	36	

**Table-3:** Time spent by study subjects during preparatory period



**Figure-1:** Pie chart showing different health complaints of study subjects during preparation period (multiple response)

Table 2 shows that, the mean marks obtained by study subjects in 12<sup>th</sup> class were 87.73 (range from 65%- 96%). Most of students (72.9%) were attending regular classes during 11<sup>th</sup>

& 12<sup>th</sup> in their schools and only 26 students (27.1%) were followed non-attending pattern. The association between number of attempts to clear NEET and pattern of attending/ non attending was found to be significant (p=0.01). Maximum number of students (46.9%) cleared the NEET in their 2<sup>nd</sup> attempt.

Table 3 shows that, the mean duration of study during preparation period was 10.18 hours ranges from 5-16 hours. Maximum selection was in students who spent 9-12 hours for study for preparation. Mean duration of self study was 5.17 hours (ranges from 1-12 hours).

Mean duration of sleep was 7.19 hours ranges from 5-12 hours. Out of total 60.4% students spent 5-7 hours for sleep during preparation period. Otherwise 39.6% students who spent 8-12 hours in sleep were selected in 3<sup>rd</sup> or more attempts.

Mean duration of recreational activity was 1.27 hours ranges from 0-3 hours. Eighty three students (86.5%) were involved in any type of recreational activities.

Mean duration of mobile laptop use was 2.08 hours ranges from 0-5 hours out of which mostly time spent was for entertainment (mean-1.27 hours).

Out of total 88 students (91.7%) joined coaching for preparation purpose. Ten students joined coaching class from their 9<sup>th</sup> standard, 43 joined from 11<sup>th</sup> standard and 35 joined after 12<sup>th</sup> standard. Number of attempts to clear NEET and grade of joining coaching classes was found to be significant ( $p=0.00$ ).

Majority of students (67.7%) migrated from their native place for study purpose and the association was found to be significant ( $p=0.01$ ).

Study subjects suffered from different health problems during NEET preparation which is shown in figure-1.

## DISCUSSION

Out of total (96) students, 53 (55.2%) were male and 43 (44.8%) were female. Mean age of participants in this study was 18.77 years (ranges 17-23 years) and mostly students (37.5%) belonged to 19 years of age. In a study conducted by Kumar SN et al<sup>8</sup>, the mean age of the study group was 19.5 years ranges from 18 to 21 years. While study done by Ranjana Tiwari et al<sup>9</sup>, age of students ranges from 19-23 years,

In present study 17 students (17.7%) belonged to scheduled caste, 23 (24%) belonged to backward class & 58 (58.3%) belonged to other caste. In a study done by Ranjana Tiwari et al<sup>9</sup> 28.84% students belonged to SC/ST categories, 22.12% belonged to backward class and 49.04% belonged to general category.

Residence of 68 study subjects (70.8%) in this study was in urban areas while 28 students (29.2%) belonged to rural areas. Study done by Ranjana Tiwari et al<sup>9</sup> 61.54% study subjects belonged to urban area while 38.46% belonged to rural areas. This shows that there are better educational opportunities in urban areas.

This study showed that most of students (89.6%) got their education from private schools & only 10.4% studied in government schools.

By occupation fathers of majority of students (51%) were in government job, followed by business (25%), farmer (14.6%), and private job (9.4%). Similar findings were found in a study done by Ranjana Tiwari et al<sup>9</sup> where fathers of majority of students (57.69%) were in service either government or private and fathers of 25% of students were involved in business.

By occupation mothers of majority of students (80.2%) were house wives and only mothers of 19 students (19.8%) were working. Ranjana tiwari et al<sup>9</sup> found in their study, mothers of 64.43% of students were house wife and mothers of 17.28% students were working (service/buisness). Association of father's and mother's occupation with number of attempts to clear NEET was not found to be significant in present study. The aspiration and career selection of students depends on the family atmosphere that includes parents' profession. Children of doctors are more influenced by their parents in selecting the medical field. Yet, every year many students

whose parents are from other professions also enroll in medical college.<sup>8</sup> In this study 39 students (40.6%) belonged to family where one or more member was in medical profession; however 86 students (89.6%) choose the medical profession by their own choice and only 10 students choose the profession due to family or peer pressure. Interestingly the association of number of attempts and medical professional in family was found to be significant. Kumar SN et al<sup>8</sup> reported that motivation for selecting this profession seems to be parents' desire in 19.1% students. Ranjana Tiwari et al<sup>9</sup> reported, 50 students (31.44%) choose medical profession by their own choice.

Mean percentage of marks obtained by study subjects in 12<sup>th</sup> class was 87.73 (range from 65%- 96%). Most of students (72.9%) were attending regular classes during 11<sup>th</sup> & 12<sup>th</sup> in their schools and only 26 students (27.1%) were followed non-attending pattern. The association between number of attempts to clear NEET and pattern of attending/ non attending was found to be significant ( $p=0.01$ ). This may be due to direct supervision of regular students by teachers and scheduled studies.

Maximum number of students (46.9%) cleared the NEET in their 2<sup>nd</sup> attempt followed by 1<sup>st</sup> attempt (26%), 3<sup>rd</sup> attempt (20.8%) and 6.2% in their 4<sup>th</sup> or more attempts. For inclination of medical profession, the motivational level was very high as 27.1% students (26) appeared for NEET for three or more times. Ranjana tiwari et al<sup>9</sup> reported 31.73% students (33) appeared for AIPMT Exam for three times.

Jehangir Bharucha<sup>10</sup> wrote in his article on mushrooming of coaching classes, one of the main reasons for the growth of these classes can be seen as a social domino effect. Coaching classes, which were initially viewed as a last option to understanding course matter, have slowly evolved into a necessity of sorts for students. As more and more students opt for coaching classes, they also cause more and more people think that joining coaching classes is the correct option, which set off a vicious cycle.

## CONCLUSION

In our study maximum students have chosen medical profession because of their personal interest. In present study maximum newly entered medical students were those who have attended schools regularly in 11<sup>th</sup> and 12<sup>th</sup> classes. Adequate sleep hours for students play constructive role in favorable outcome. Now a day's students especially from rural background are bound to migrate for better study options. Self study and study hours play important role in success, no matter students get migrated or joined coaching.

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