

Anatomy

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“PREADMISSION PROFILE AND ACADEMIC PERFORMANCE: ARE WE SELECTING THE BEST STUDENTS FOR MEDICINE?”



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OF PURE MEDICAL RESEARCH**ABSTRACT**

India has the largest number of medical colleges in the world. Selection process for entry in these colleges is through entrance examination only. The present study was an attempt to reflect on selection process and explore such factors in pre admission profile of students that can predict the academic performance of the students. The study was carried out on 149 students who appeared for the university examination for first year MBBS of AIIMS Bhopal. A prevalidated, pretested, structured questionnaire was used to collect information from the students regarding their socio demographic and academic profile. Relationship between the study parameters and academic performance of students was explored statistically. Majority of the study participants belonged to English medium, urban private schools. Almost 85% hailed from higher socioeconomic strata. Study parameters like performance of students in class X and XII, were positively statistically significantly correlated, while number of attempts taken to clear the entrance was negatively correlated to academic performance. Parameters like socioeconomic status, language, proficiency, place of stay and type of school did not show any relation with the academic performance. The entrance examination was found to be skewed towards students from one particular school board, urban, English medium students from higher socioeconomic strata. Possibility of adding scores of class XII and limiting the number of attempts in entrance examination needs to be considered. A level playing field needs to be provided for students across all school boards and across all the socioeconomic, linguistic and geographic backgrounds.

INTRODUCTION

Selection of appropriate candidates for medical education is a challenging task. There is a continuous search for appropriate factors that are valid, reliable, cost effective and less time consuming. The most important being, what criterion if applied, can select the best candidates as future doctors[1]. Many studies across the world have tried to explore various cognitive and non-cognitive predictors which influence academic performance of medical students[1-4].

In Indian medical education scenario, admission to Medical colleges across India is being conducted by a single entrance test called National Entrance cum Eligibility Test (NEET) from the year 2020. Prior to this the following three entrance exams were being conducted nationally: i) All India Institute of Medical Sciences (AIIMS) entrance for admission AIIMS (conducted by AIIMS New Delhi), ii) Jawaharlal Nehru Institute of Medical Sciences (JIPMER) Pondicherry entrance for admission to (conducted by the same institute) and iii) National eligibility cum entrance test (NEET) for admission to around 450 medical colleges across India

conducted by Central board of Secondary Education (CBSE). All these examinations prescribe syllabi that do not conform to any particular school board and utilize the sole criteria (score in entrance test) for admissions to medical colleges. There has been no research or experimentation regarding the ability of these entrance examinations to choose appropriate candidates who shall achieve the competencies of all domains (that is cognitive, psychomotor and affective) and shall serve the community at large.

The present study was aimed at exploring various cognitive and non-cognitive variables that can predict performance of medical students studying in AIIMS Bhopal. The institute draws students by a national eligibility cum entrance test conducted by AIIMS New Delhi. These admissions are considered very coveted as around 4 lac students compete for small number of seats every year[5]. These students had cleared AIIMS entrance to secure admission to the institute.

The study was aimed at exploring such criterion which may have sufficient predictive strength so as to consider them for intake of medical students, or may show a window of opportunity in predicting potential under achievers so as to initiate a counselling or intervention programme early. It is expected that the findings shall have important bearings and lessons for NEET entrance as well.

METHODOLOGY

The study was carried out on students who appeared for the university examination for first year MBBS at AIIMS Bhopal. 147 students participated in the study. The study was granted permission by institutional ethical committee and informed consent was obtained from the study participants. A prevalidated, pretested, structured questionnaire was used to collect information from the students (Annexure I). The questionnaire contained questions seeking information on predictor variables (preadmission factors) that may be related to academic performance of the MBBS students.

The questionnaire also enquired about the dependent variables that were the percentile of marks scored in university examination of first year MBBS. The responses of the study participants to the entire questionnaire were recorded. Socioeconomic status of student's family was assessed by modified Kuppuswamy scale [6] based on parent's occupation, income and number of family members.

Statistical analysis was performed using statistical package SPSS 20. Standard tests for descriptive statistics were applied.

The relationship of study variables (predictor variables) with that of academic performance (dependent variables) was studied as follows:

- i) variables whose responses were on continuous scale, were analysed by Pearson's correlation followed by regression analysis.
- ii) variables whose responses were categorised in two groups were analysed by Independent sample T test

iii) for variables with responses distributed in three or more groups, one way ANOVA was applied.

For predictor variables where the data was not normally distributed (as assessed by Levene's test) and in groups where the group size was disproportionate, non-parametric test- Mann =Whitney test was applied to compare means. Value of less than 0.05 was considered to be statistically significant.

RESULTS

Frequency distribution of various study variables is shown in Table I. of the 147 study participants, about two thirds were male. About two thirds were more than 18 yrs of age at the time of their entry into the medical college. Two third students were selected in first attempt in entrance examination. While two thirds of the students studied in Central Board of Secondary Education (CBSE) in their tenth standard, this proportion increased to three fourth in twelfth standard. The increase was at the cost of decline in students choosing to study Indian Certificate of Secondary Education (ICSE) board in favour of CBSE. Majority of the students hailed from schools with English as medium of instruction. This proportion increased from primary to higher secondary schools. Majority of the students belonged to urban areas. A gradual shift of students from rural to urban settings was observed as they progressed from primary, secondary and higher secondary schooling. Majority of the students studied in private schools. Almost 85 percent students hailed from upper or upper middle class socioeconomically. The All India ranks of students in AllMS entrance examination ranged from 58- 8829 (median of rank 486.5). Of the study participants 54.4% were selected via general category and remaining were selected from reserved category for socially backwards; Other Backward Classes (OBC)- 31.3%, Scheduled Caste (SC) -10.2% & Scheduled Tribe (ST)- 4.1. The mean marks scored by students in X standard were 90.84% ±7.057 and in XII standard marks scored were 90.36%±6.88.

About 2/3 students had entered the medical profession by their own choice. Almost all students attended coaching for entrance examination for at least one year besides their routine schooling. Eighty three per cent students attended regular school and 16.2% attended a dummy school. (A dummy school is a term used for such schools which though are registered as regular schools but permit absenteeism to facilitate the student to attend coaching/ study for entrance examination).

Table I-Showing Frequency of distribution of various study parameters.

S.no	Parameters	Groups	Frequency	Valid Percentage
1	Sex	1-Female 2-Male	101 46	68.7 31.3
2	Age	1-18 years 2- >18 years	53 94	36.1 63.9
3	Attempts	1 2 3 5	97 46 03 01	66 31.3 2.0 0.7
4	10th Board	1-State 2-CBSC 3-ICSC	33 100 14	22.4 68.0 9.5
5	12 th Board	1-State 2-CBSC 3-ICSC	33 112 02	22.4 76.2 1.4
6	Reservation	1-General 2-OBC 3-SC 4 -ST	77 48 16 06	52.4 32.7 10.9 4.1
7	Medium in school(Primary)	1-English 2-Vernacular	122 25	83.0 17
8	Medium in school(Secondary)	1-English 2-Vernacular	131 16	89.1 10.9

9	Medium in school(Higher Secondary)	1-English 2-Vernacular	136 11	92.5 7.5
10	Place of stay (Primary)	1-Metro 2-District 3-Tehsil 4-Village	17 62 22 46	11.6 42.2 15.0 31.3
11	Place of stay(Secondary)	1-Metro 2-District 3-Tehsil 4-Village	20 73 17 37	13.6 49.7 11.6 25.2
12	Place of stay(Higher Secondary)	1-Metro 2-District 3-Tehsil 4-Village	21 85 13 28	14.3 57.8 8.8 19
13	Schooling (Primary)	1-Government NonResidential 2-Government Residential 3-Private Non Residential 4-Private Residential	32 0 109 06	21.8 00 74.1 4.1
14	Schooling (Secondary)	1-Government Non Residential 2-Government Residential 3-Private Non Residential 4-Private Residential	31 9 99 08	21.1 6.1 67.3 5.4
15	Schooling (Higher Secondary)	1-Government Non Residential 2-Government Residential 3-Private Non Residential 4-Private Residential	36 7 86 8	24.5 4.8 58.5 12.2
16	Kuppuswamy Scale *4.1% of students did not mention the household income, hence could not calculate.	1-Upper class 2-Upper middle class 3-Lower middle class 4-Upper lower	61 63 16 0.1	41.5 42.9 10.9 0.7
17	Duration of coaching	1-None 2-One year 3-One and half year 4-Two years 5-Three years 6-Four years	03 52 02 68 18 04	2.0 35.4 1.4 46.3 12.2 2.7
18	Sports and extracurricular	1-Basic level 2-Advance level 3-Not attempted	54 79 14	9.5 53.7 36.7
19	Joining of profession	1-Own choice 2-Others choice 3-Mixed choice	96 04 47	65.3 2.7 32.0

Table II shows correlation of study parameters on continuous scale with that of academic performance of students. Significant positive correlation was observed between marks obtained in tenth and twelfth standard with academic performance. The strength of correlation was more with class XII marks. However significant negative correlation was observed with number of attempts taken to succeed in entrance examination. The performance of students did not significantly correlate with their respective ranks in entrance

examination and duration of coaching.

Table II- Showing correlation of study parameters on continuous scale with that of academic performance of students.

		Total Theory Percentile	Total Practical Percentile
Rank	Pearson Correlation Sig.(2 tailed) N	-.116 .195 126	-.136 .132 124
Attempts	Pearson Correlation Sig.(2 tailed) N	-.330 .000* 129	-.294 .001* 127
Marks (Tenth)	Pearson Correlation Sig.(2 tailed) N	.351 .000* 129	.335 .000* 127
Marks(Twelfth)	Pearson Correlation Sig.(2 tailed) N	.438 .000* 129	.403 .000* 127
Duration of coaching	Pearson Correlation Sig.(2 tailed) N	-.015 .864 129	-.213 .016 127

*Statistically significant

Table III & IV show multiple linear regression analysis of predictor variables (on continuous scale) with respect to dependent variable i.e. theory and practical percentile.

Table III Showing multiple linear regressions of predictor variables with respect to dependent variable for total theory percentile

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance.
	B	Standard Error	Beta		
(Constant)	-76.143	38.475		-1.979	.050
Rank	.000	.001	-.026	-.327	.744
Attempts	-7.326	3.965	-.163	-1.847	.067
Tenth	.257	.372	.068	.691	.490
Twelfth	1.208	.461	.307	2.619	.010*
Duration of coaching	1.980	2.645	.058	.748	.455
@12E	.021	.226	.010	.094	.925

Table IV Showing multiple linear regressions of predictor variables with respect to dependent variable for total practical percentile

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance.
	B	Standard Error	Beta		
(Constant)	-54.403	34.315		-1.585	.115
Rank	-.001	.001	-.053	-.666	.506
Attempts	-6.335	3.537	-.160	-1.791	.075
Tenth	.198	.332	.059	.596	.552
Twelfth	1.074	.411	.309	2.611	.010*
Duration of coaching	3.664	2.359	.122	1.553	.123
@12E	-.086	.202	-.044	-.428	.669

*Statistically significant

Relationship between predictor variables with academic performance was analyzed by independent sample T Test for the variables which showed normal distribution in two groups (Table V,VI).

Table V – Showing relationship between study variables (which showed normal distribution in two groups) and total theory

percentile as assessed by independent sample t test

Factors	Groups		Mean Marks and Standard deviation	T test of equality of means	df value	95 % Confidence level	P value
.Sex	1-Male 2-Female	101 46	47.56+28.05 58.74+22.67	-2.37	145	-20.49 to -1.86	.019
Age	1- 18 yrs 2- > 18 yrs	53 94	51.98+27.21 50.54+26.88	.310	145	-7.72 to 10.60	.757
Type of school attended	1-Regular 2- Dummy	124 23	51.05+26.63 51.07+29.01	-.002	145	-12.13 to 12.10	.998
4.Coaching institute attended	1-Yes 2- No 3-Not responded	142 03 02	51.87+ - 26.42 4.02 + - 2.92	3.126	143	17.59 to 78.11	0.002*
5.Sports and extracurricular activity	1-Basic 2- Advance 3- Not responded	79 54 14	49.80 + - 27.57 53.97 + - 24.40	-.896	131	-13.36 to 5.03	.372
6.Medium in school (Primary)	1 – English 2- Vernacular	122 25	52.78 + - 26.24 42.66 + - 29.08	1.724	145	-1.48 to 21.71	.087
7. Medium in school (Secondary)	1 – English 2 Vernacular	131 16	52.09 + - 26.48 42.62 + - 29.80	1.331	145	-4.58 to 23.51	.185
8. Medium in school (Higher Secondary)	1 – English 2- Vernacular	137 10	52.56+ - 26.54 30.47 + - 24.47	2.552	145	4.97 to 39.18	0.12*

*Statistically significant

Table VI – Showing relationship between study variables (which showed normal distribution in two groups) and total practical percentile as assessed by independent sample t test.

Factors	Groups		Mean Marks and Standard deviation	T test of equality of means	df value	95 % Confidence level	P value
1.Sex	1-Male 2-Female	101 46	47.72+25.61 56.82+19.54	-2.14	145	-17.50 to -.700	.034
2.Age	1- 18 yrs 2- > 18 yrs	53 94	52.94 + - 25.09 49.23 + 23.69	.892	145	-4.50 to 11.92	.374
3.Type of school attended	1-Regular 2- Dummy	124 23	51.18 + - 24.21 47.26 + - 24.32	.712	145	-6.95 to 14.79	.477
4.Coaching institute attended	1-Yes 2- No 3-Not responded	142 03 02	51.22+ - 23.59 5.90 + - 4.65	3.315	143	18.30 to 72.35	0.001*

5.Sports and extracurricular activity	1- Basic 2- Advance 3- Not responded	79 54 14	49.11 +- 24.77 56.61 +- 22.35	-1.328	131	-13.69 to 2.69	.186
6. Medium in school (Primary)	1 – English 2- Vernacular	122 25	50.83 +- 23.46 49.29 +- 27.95	.288	145	-8.99 to 12.06	.773
7. Medium in school (Secondary)	1 – English 2- Vernacular	131 16	50.50 +- 23.32 51.11 +- 31.29	-.094	145	-13.31 to 12.09	.925
8. Medium in school (Higher Secondary)	1 – English 2- Vernacular	137 10	51.40 +- 24.13 39.10 +- 23.13	1.561	145	-3.27 to 27.89	.121*

*Statistically significant

For predictor variable where the data was not normally distributed (as assessed by Levene's test) and in groups where the group size was disproportionate, non-parametric test- Mann Whitney test was applied to compare means. The variables did not show any significant relationship with academic scores of the students except in one group as shown in table VII.

Table VII- Shows relationship between predictor variables and theory and practical performance as assessed by Mann Whitney's test

Parameters	Groups		Total Theory Percentile	Total Practical Percentile
Sex	1-Male 2-Female	101 46	0.14	0.38
Coaching institute attended	1-Yes 2-N0	142 03	0.15	0.010**
Medium in school (Primary)	1-English 2- Vernacular	122 25	.114	.718
Medium in school (Secondary)	1-English 2- Vernacular	131 16	.210	.958
Medium in school (Higher Secondary)	1-English 2- Vernacular	137 10	.024	.159
Type of school attended	1-Regular 2-Dummy	124 23	.970	.488

**Statistically very significant

To explore relationship of predictor variables grouped in more than two categories, one way ANNOVA was applied. The results showed that these variables did not have any significant relationship with academic scores of students except with type of school attended in Higher Secondary (Table VIII, IX).

Table VIII Showing relationship between study variables (distributed in more than two groups) and total theory percentile as assessed by one way ANNOVA test.

		Sum of Square s	DF	Mean Square	F	Significance
Board X	Between Groups	28.628	90	.318	1.119	.328
	Within Groups	15.917	56	.284		
	Total	44.544	146			
Board XII	Between Groups	16.329	90	.181	.837	.776
	Within Groups	12.133	56	.217		
	Total	28.463	146			

Reservation	Between Groups	69.467	90	.772	1.385	.095
	Within Groups	31.200	56	.557		
	Total	100.667	146			
Place of stay (Primary)	Between Groups	101.877	90	1.132	1.110	.341
	Within Groups	57.117	56	1.020		
	Total	158.993	146			
Place of stay (Secondary)	Between Groups	89.991	90	1.000	.922	.639
	Within Groups	60.717	56	1.084		
	Total	150.707	146			
Place of stay Higher (Secondary)	Between Groups	78.610	90	.873	.946	.599
	Within Groups	51.717	56	.924		
	Total	130.327	146			
Schooling (Primary)	Between Groups	67.366	90	.749	.958	.578
	Within Groups	43.750	56	.781		
	Total	111.116	146			
Schooling (Secondary)	Between Groups	67.333	90	.748	.898	.680
	Within Groups	46.667	56	.833		
	Total	114.000	146			
Schooling (Higher Secondary)	Between Groups	76.304	90	.848	.705	.931
	Within Groups	67.383	56	1.203		
	Total	143.687	146			
Joining of Profession	Between Groups	71.800	90	.798	.814	.809
	Within Groups	54.867	56	.980		
	Total	126.667	146			

Table IX-Showing relationship between study variables (distributed in more than two groups) and total practical percentile as assessed by one way ANNOVA test.

		Sum of Squares	DF	Mean Square	F	Significance
Board X	Between Groups	24.344	86	.283	.841	.772
	Within Groups	20.200	60	.337		
	Total	44.544	146			
Board XII	Between Groups	18.163	86	.211	1.230	.198
	Within Groups	10.300	60	.172		
	Total	28.463	146			
Reservation	Between Groups	64.917	86	.755	1.267	.166
	Within Groups	35.750	60	.596		
	Total	100.667	146			
Place of stay (Primary)	Between Groups	84.327	86	.981	.788	.846
	Within Groups	74.667	60	1.244		
	Total	158.993	146			
Place of stay (Secondary)	Between Groups	80.207	86	.933	.794	.838
	Within Groups	70.500	60	1.175		
	Total	150.707	146			
Place of stay (Higher Secondary)	Between Groups	74.627	86	.868	.935	.617
	Within Groups	55.700	60	.928		
	Total	130.327	146			
Schooling (Primary)	Between Groups	69.899	86	.813	1.183	.246
	Within Groups	41.217	60	.687		
	Total	111.116	146			
Schooling (Secondary)	Between Groups	69.117	86	.804	1.074	.388
	Within Groups	44.883	60	.748		
	Total	114.000	146			
Schooling (Higher Secondary)	Between Groups	105.137	86	1.223	1.903	.005
	Within Groups	38.550	60	.643		
	Total	143.687	146			
Joining of Profession	Between Groups	73.133	86	.850	.953	.585
	Within Groups	53.533	60	.892		
	Total	126.667	146			

DISCUSSION

Academic performance in medical schools may be influenced by large number of factors. The present study chose to explore the relationship of preadmission factors like socio-demography, prior

academic performance, schooling and related issues with the performance of students in Medical college. There is a debate worldwide, whether or not preadmission factors affect student's performance [7-9]. Also there is an on-going debate as to what might be the best method to select best talents for medical training [10, 11].

Prior Academic Performance

There are many studies which endorse that the prior academic performance of the student strongly and positively influences the performance in universities [2, 12-17]. Some studies however claim that no such relationship exists [18]. The present study found significant positive correlation between academic scores of students in class X and XII. Stronger correlation was observed with scores obtained in class XII. Authors are of the opinion that scores of class XII should be given weightage for admission to medical institutes. This would avoid overemphasis on a single entrance examination, as is now the case, and shall also reinforce the importance of well-established school examination system. This would also check the coaching institutes which have become informal parallel teaching machinery, with no checks and balances, created just to crack an entrance examination. The challenge in doing this is to equate scores of different school boards, across the country.

Socio Economic Status

Many studies report a strong influence of socioeconomic status of parents on educational outcomes of students. It is a common belief that low social economic status negatively affects academic achievement because low social economic status prevents access to vital resources [19-21]. Considine and Zappala state that, in families where the parents are advantaged socially, educationally and economically foster a higher level of achievement in their children [22]. They also found that these parents provide higher levels of psychological support for their children through environments that encourage the development of skills necessary for success at school. On the contrary Pedrosa et al. and Mohammad et al. in their study on educational and socio economic background, found that students coming from disadvantaged socioeconomic and educational homes perform relatively better than those coming from higher socioeconomic and educational strata [23,24]. Lumb and Vali and Mohammad et al. have also reported no relationship of students performance in medical course to socioeconomic status [2, 24].

Interestingly the descriptive statistics revealed that almost 85% students came from high socioeconomic strata (upper and upper middle class). In the present study the performance of students did not show any relationship with the socioeconomic status as calculated by Kuppuswamy scale. This may be because the college provides an equal opportunity for learning to all students which create an insulated facilitatory environment for all students equally. However, the entrance examination is highly skewed in favour of students from high socioeconomic status.

The socially backward

Government of India reserves up to 50% (recently increased to 60% to include economically backwards also) of the total seats in state run Medical colleges for socially backward class (scheduled class, scheduled tribes and other backward classes) [25]. This is a form of affirmative action that attempts to compensate for the social inequality once prevalent in the form of caste system in India. However as was observed in the study, the performance of socially backward students selected utilizing the facility of reservation, generally on scores lower than the unreserved group, did not affect the academic performance in medical college. Ironically almost 85% students from the reserved category (socially backward as per Government guidelines) came from higher socioeconomic status (upper and upper middle class) as per Kuppuswamy scale. This contradiction indicates that the facility of reservation is availed more often by the better offs in their respective category than the real needy ones.

Rural Urban Divide

Most of the studies conducted around the world confirm that students coming from rural background underperform compared to their urban counterparts. This is primarily because of lack of instructional resources [26-28]. However a counterview is that it does not make any difference [29]. The present study observed that though the entrance test was very heavily skewed towards students from urban areas, there was no relationship between the residence of students and their academic performance in Medical College, meaning thereby that students from both backgrounds performed equally. As per the census of India 2011, the rural-urban proportion of population is 68.84% & 31.16% [30]. It is indeed appalling to note that the entrance examination leaves out a large section of population as 'not fit' to be doctors.

Language Barrier

India being a multi-cultural society has many regional languages and no particular language is considered as National language. While at the school level students have an option of studying in different vernacular languages whereas the admission test for admission to AIIMS is conducted in only two languages i.e. English and Hindi. As per census of India 2011, there are only 0.02% citizens speaking English as their first language and 12.18% as second or third language.³¹ The medical education in India is primarily in English language, might be as a vestige of British colonial rule. A study by Moulsey et al. observed that English language competence has a significant correlation with academic performance in Saudi Arabia, as the professional course is taught in English language [32]. Where as Mohammad et al. did not find any correlation in medical students of UAE [24]. Similar observation was reported from Gautam et al. in a study of Medical students at Nepal [1]. The present study found no relationship between the performance of students in medical college vis a vis their language of instruction during schooling. This implies that the students from any vernacular medium cope reasonably to instructions in English and that it does not affect their performance. The reason might be that in a professional course there is less emphasis on correctness of language than the technical component. However as is evident from the descriptive statistics of the students, the entrance exam seems to favour students from English medium as compared to vernacular background.

Background of School

Different types of schooling systems operate in India. These include government run schools, which are mostly poorly equipped and financed but the education is subsidized. Another group is private run schools which are believed to impart better education at higher costs and hence are preferred by socioeconomically well off sections of society.

These schools operate under different school boards namely Central Board of Secondary Education (CBSE), Indian Certificate of Secondary Education (ICSE), and boards of different states of India (e.g. Maharashtra state board, Tamil Nadu state board). The norms of CBSE and ICSE are more stringent and hence only better financed and better equipped schools can affiliate to them [33-34]. Most other schools affiliate with respective state boards. These boards have different curricula and assessment patterns and hence equating scores of different boards is debatable. Although lakhs of students take entrance examination from different schools and boards, majority of the selected candidates, as is evident from descriptive statistics, come from CBSE board. This is also evident from shift of students from ICSE board and vernacular boards to CBSE board during higher secondary.

Also the number of students selected from private schools is disproportionately more.

While many studies claim that type of schools attended did not affect the performance of students [12, 35, 36] while other's claim the contrary [2]. The present study did not show any relationship between school boards and academic performance. The significant values as obtained between schooling in Higher Secondary and

performance in practical examination is to be taken with caution due to chances of error due to small numbers in different groups.

The Best Predictor

In pursuit of selecting the best talent for medical course many universities use multiple predictors. There is overwhelming evidence that use of combination of predictors is better indicator of student's performance in medical school/ university.

In a socio-demographically unequal, culturally diverse country with gross educational inequality like India, it is indeed challenging to pick such predictors which are significant, practical, uniform and objective at the same time and are representative of the society at large. Authors feel that overreliance on one entrance examination, which seems to be primarily choosing urban, English speaking students from CBSE board belonging to high socioeconomic backgrounds, should be avoided.

The entrance test should be tailored to have representation of larger population of the country. This is partly addressed by reservation policy for socially backwards; however very large representation of socioeconomically high strata in this category also seems to be defeating the purpose.

CONCLUSION

- The entrance examination was found to be highly skewed towards urban, english medium students, coming from high socioeconomic strata studying in CBSE board schools, although these factors did not show any relationship to academic performance in medical college.
- An admission index/score can be prepared which takes into account class XII scores and attempts taken to clear entrance examination. As these factors have significant relationship with academic performance.
- Policy makers need to seriously consider to make the entrance examination more inclusive for students of various linguistic backgrounds, different socioeconomic strata, and different geographic backgrounds and across all school boards.

Limitation:

The study was conducted on a small group of students considering their academic performance in first year MBBS only. A larger cohort across different medical colleges and consideration of academic performance throughout the course is the logical conclusions considering the important points that this study has highlighted.

Although AIIMS examinations have been merged with NEET .The present study is an eye opener and should pave way for similar study to be conducted on NEET examination.

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Abbreviations:

AIIMS - All India institute of medical sciences
 JIMPER - Jawaharlal Nehru Institute of Medical sciences Pondicherry
 NEET - National eligibility cum entrance test
 CBSE - Central board of Secondary Education
 OBC - Other Backward classes
 SC - Scheduled caste
 ST - Scheduled tribe
 ICSE - Indian Certificate of Secondary Education

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