

Relationship Between Entrance Ranks and MBBS Results in Medical Colleges of Kerala

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ABSTRACT

Background: A proper selection of students is needed to ensure standards in the medical practice. Experiments conducted in India on the methods of selection are scanty.

Methodology: The entrance attempt, rank scores and MBBS marks of 314 medical graduates from Government Medical Colleges of Kerala were collected. According to their rank in entrance examination, the respondents were grouped as high, medium and low rank groups. They were categorized based on marks received in first and final MBBS examinations as excellent, above average, average and failed.

Results: The first attempters, repeaters (two attempts) and repeated repeaters (three or more attempts) were present in all the three categories of rank groups. There was no statistical difference between them. All the groups except 'high rank' had representation in all the four MBBS mark based categories. None from the high rank group failed in first MBBS. There was significant relationship between entrance rank and marks in first MBBS. From first MBBS to final MBBS, the overall trend for marks was a shift towards the above average, including a fall in the excellent. Only in the low rank group, the positive shift extended up to the excellent category.

Conclusion: The attempts of entrance examination didn't influence the rank when they qualified. The entrance rank

correlated with the first MBBS results. From first MBBS to final MBBS, the students showed improvement in performance which was more noticeable among the low rank group. The low rank group included those who enjoyed community based reservations. Rather than the selection criteria, it might be the curriculum and teachers which positively influenced the overall outcome of MBBS students of Government colleges of Kerala.

Key words: Medical Education, MBBS, Selection Procedure, Reservation, Entrance Rank, Results.

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INTRODUCTION

It is opined that the present day medical schools worldwide are preparing physicians under the strong pressure of a rising number of applicants, demands from the society and the resource curbing by the governments.¹ Subject knowledge, treatment skills and compassionate caring are desired from a doctor. A good medical student should have interest in the subject, instinct to explore and readiness to follow ethical principles. In Kerala, the best academic layer of students enters the Government Medical Colleges through the system of competitive entrance examinations. But the skill in securing marks in Multiple Choice Questions alone was found to be the determining factor for securing admission for medical course rather than the knowledge and skill received during the study period of qualifying course up to Plus 2 level.² The validity of this selection process for admissions to Medical Colleges was never verified so far in India.

The present study was undertaken to examine the relationship between the student's performance in Competitive Entrance Examination and the MBBS examinations in Kerala. The study objective was to find out the relationship of the students' scholastic performance in the premedical entrance test with the results of first MBBS and final MBBS examinations.

METHODS

The Medical graduates attending Continuing Medical Education program for PG entrance applicants, organized by the Alumni Association at Govt. Medical College, Thrissur formed the universe of the study. Data collection was limited to alumnae of Government Medical Colleges of the state. The study started after getting approval from the Institutional ethics committee of Government Medical College, Thrissur, Kerala, India.

Only those who gave consent were recruited for the study. The data collection started on July 15th August 2010 and ended on August 31st, 2010.

The required information gathered using a pre-prepared Questionnaire. It included details of the students, +2 marks, number of attempts in entrance examination, entrance rank in the attempt which enabled them admission and percentage of marks scored in first MBBS and final MBBS examinations.

For the purpose of analysis, the students were grouped into three; based on the entrance ranks, as those with ranks 1-150 (Entrance

High Ranks Group- EHRG), with ranks 151-500 (Entrance Medium Ranks Group- EMRG) and with ranks above 500 (Entrance Low Ranks Group- ELRG). Based on the marks scored in the MBBS examination they were categorised again as Excellent (marks 75 % or above), Above Average (marks between 65% and 74%), Average (marks between 50%and 64%) and Failed (marks 49 % or below) categories. Marks were calculated separately for 1st MBBS and Final MBBS examinations.

The significance calculated using Chi square test and results presented in tables.

Table 1: Number of attempts made in entrance and the rank when secured admission.

No. of attempts	Total	Entrance		
		High Rank Group	Medium Rank Group	Low Rank Group
First (1)	97	14	45	38
Repeater (2)	203	35	104	64
Repeated repeater (3 or more)	14	2	4	8
All	314	51	153	110

Chi square 5.0313; p=0.284098; NS

Table 2: Relationship between entrance rank groups and First MBBS marks.

Entrance Rank Group	Excellent Marks	Above Average Marks	Average Marks	Failed
High	7	18	26	0
Medium	11	52	84	6
Low	2	23	62	23

Chi square is 38.2329; p<0.00001; Significance at <0.05

Table 3: Relationship between First MBBS and Final MBBS marks of all students.

MBBS marks category	First MBBS marks	Final MBBS marks	Difference
Excellent	20	18	-2
Above average	95	135	+40
Average	172	151	-21
Failed	29	10	-19

Chi square 17.6773; p= 0.000513; significant at < 0.05

Table 4: Relationship between First MBBS and Final MBBS marks, category wise.

Entrance Rank Group	Marks category	First MBBS	Final MBBS	Difference	Significance
High	Excellent	7	4	-3	Chi square 2.2911, P=0.318057, NS
	Above Average	18	25	+7	
	Average	26	22	-4	
	Failed	0	0	0	
Medium	Excellent	11	9	-2	Chi square 6.6985, P=0.82153, NS
	Above Average	52	72	+20	
	Average	84	70	-14	
	Failed	6	2	-4	
Low	Excellent	2	5	+3	Chi square 12.3067, P=0.006403, Significance < 0.05
	Above Average	23	38	+15	
	Average	62	59	-3	
	Failed	23	8	-14	

OBSERVATIONS AND RESULTS

The Alumni Association of Government Medical College, Thrissur regularly conducted three months long Continuing Medical Examination program for the aspirants of Post Graduate courses. This group usually has around 1000 MBBS graduates hailing from whole of south India. The information gathered only from those who graduated from any of the Government Medical Colleges of Kerala State as they were selected from authentic entrance test conducted by Government of Kerala. Responses were received from 314 medical graduates.

Details of respondents with respect to number of attempts and secured rank on admission are given in table 1. Out of 314 respondents 97 (30.89%) secured admission in their first attempt, 203 (64.64%) in their 2nd attempt and 14 (4.46%) in the 3rd or later attempts. First attempters, repeaters and repeated repeaters had their presence in all the three entrance rank based groups. There was no statistical difference between the groups.

Table 2 presents the relationship between entrance rank and pass percentage in first year MBBS. No one from the entrance high rank group (EHRG) failed in the first MBBS. The difference with other two groups (EMRG and ELRG) was significant. These two groups had representation in all the 4 categories of pass; namely excellent, above average, average and failed. From ELRG there were two students who scored excellent marks.

The relationship between First MBBS and Final MBBS marks of all students are shown in table 3. The overall trend was a shift towards the above average group which was statistically significant. This significance was preserved for ELRG, but absent for EHRG and EMRG. (Table 4 The number of excellent mark category decreased in high and medium rank groups, while only in the entrance low rank group, there was increase. The number of failed students showed decline in all three groups.

DISCUSSION

Present method of student selection to medical colleges by a single eligibility test is not viewed by everybody as the best. But 'the statuesque continues'.³ There is scope for experiments related to the selection methods. A proper selection will minimize failures during the beginning semesters⁴ and will ensure students' capacity to withstand the standard of training.

The Indian medical education system is one of the largest in the world. It consists of 381 medical schools; each associated with one of 620 universities⁵, producing 46055 doctors each year.⁶ The quality of these physicians has a broad global impact.⁷

The lack of any relationship between the attempt and the rank in the entrance examination needs special attention. Any student if pursues with effort can secure admission to the medical college and their entry on repetition was not having any negative effect on the marks secured in the MBBS course. But for the loss of some years in the prime period,² there are no other concerns for continuing that policy. The low rank groups did face more difficulties to cope with studies during their first MBBS.

A previous study reported that variables like 'performance in high school, the entrance examination, selection interview and personality traits assessment domain' were significant predictors of academic success during the first three years of study.¹

A different structure of students' attributes might be required for a success at different levels of MBBS and that study considered multiple criteria other than the entrance examination. Those along

with the differences in the syllabus, curriculum and cultural background could explain the variations in results of our study.

Indian culture had centuries old practice of depriving education and job to many; based on their caste. There are oppositions to the community based reservation policy, especially in higher education; on the ground of dilution in the quality.⁸ Those for reservations argued that 'merit' is an amalgam of native endowments and environmental privileges. Those kept away from environmental privileges cannot be equated with others who enjoyed it. The results from the present study supported the latter view. The low rank holders which included the reserved categories; strained in the first MBBS examinations but showed an upward trend by the time they passed final MBBS examinations. They, who came from deprived socio- cultural background, when given an opportunity, improved and caught up with the rest and even overtook others.

The Medical Council of India remarked the deficiency in quality of medical education need careful and critical analysis and improvement.⁹ However there was no evidence to prove that there is a decline in the standards of medical education. Whether it is first year or final year of MBBS, we observed that only very few students failed in the examinations. Migration of a noticeable group of Medical Graduates every year to other countries and establishing successful career also supported that argument. One third among passed out doctors leave India every year for residency training and/or practice abroad.¹⁰ The Indian doctors form a major group who clears selection procedures and enroll themselves in the profession in UK, USA or Australia.

The hidden curriculum needs attention to produce the necessary fundamental changes in the culture of undergraduate medical education. The hidden curriculum refers to the "processes, pressures and constraints which fall outside the formal curriculum, and which are often unarticulated or unexplored." It characteristically includes prolonged periods of exposure to a dominating culture. 'Six learning processes of the hidden curriculum of medical education have been identified: loss of idealism, adoption of a "ritualized" professional identity, emotional neutralization, change of ethical integrity, acceptance of hierarchy and the learning of less formal aspects of good doctoring'.¹¹ Together they achieve the enculturation of students. Rather than the selection criteria, perhaps the quality of curriculum (including the hidden curriculum) and the faculty might be influencing the overall outcome of MBBS students in Government Medical colleges of Kerala.

LIMITATIONS

Inferences from a group of students attending a CME program have only limited value for generalizations.

CONCLUSIONS

Allowing more than one chance for the aspirants to appear for the entrance test is justified as the number of attempts showed no influence on the entrance ranks. The rank order in the entrance examination significantly influenced their performance in first MBBS examinations, though low rank holders also could show excellent performance. From first MBBS to final MBBS, the students showed improvement in performance which was more noticeable among the low rank group. Rather than the selection criteria, it might be the curriculum (including hidden one) and

teachers' quality that positively influenced the overall outcome of MBBS students in Kerala Government Medical Colleges.

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CONFLICTS OF INTEREST

None Declared.

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