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Impact of new MBBS curriculum on the 1st year students and burden on teaching faculty: Are we making the balance?

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ABSTRACT

Objectives: The Medical Council of India has introduced competency based medical education (CBME) for all the undergraduate medical students across the country. We conducted this study to assess the impact of new curriculum on students' performance and the differential time utilization of the teaching faculty.

Materials and Methods: It is a cross-sectional study conducted at ESIC Medical College and PGIMSR, Bengaluru during January to March 2020. The college has an intake of 100 under-graduate students for an academic year. The sources of data included internal marks of the students and a semi-structured questionnaire for teaching faculty.

Results: The mean (range) marks obtained by the students of 2018-19 and 2019-20 batch were found to be (a) theory: 48.75 (7 to 83) and 50.71 (10 to 78) (b) practical's: 64.88 (38 to 90) and 69.70 (30 to 93). The man hours per week-faculty for different teaching activities during 2018-19 and 2019-20 were as follows: (a) theory teaching: 6 (16%) (b) practical teaching: 12 (32%) (c) research activities: 6 (16%) (d) planning activities: 8 (21%) (e) administrative activities: 6 (16%).

Conclusion: The newer MBBS curriculum is found to be promising for the medical students but it is taking a huge toll on the teaching faculty. Measures to promote research and faculty strength in the existing medical colleges should be prioritized by policy makers.

Key words: MBBS curriculum, competency based medical education (CBME), medical college, India.

INTRODUCTION

The medical profession involves a person-centric application of science to effectively manage the health of the individuals and community at large. The field of medicine is dynamic and perhaps is the result of the cumulative experience and results of research over the centuries. It intends to decrease the morbidities among individuals and thereby enhances the quality of life among people.

The knowledge of medical sciences and skills of patient management are bestowed on medical students at medical colleges. The process essentially includes integration of science, technology, behavioural sciences and various components of education. The training of medical students at the medical colleges is not uniform across the globe and this has led to a situation where a student trained in one country shall not be able to practice in another country without fulfilling the criteria of host country requirements. It becomes difficult for the countries to balance the training patterns and the assessment pattern of the medical students.

In India, the art and science of medicine is dated since time immemorial. With the advent Europeans into Indian subcontinent, allopathic medicine entered India. In 1835, first medical college was started in Kolkata.[1] In 1933, Medical Council of India was established so as to regulate the standards in medical colleges.[2] Currently in 2020, the country has nearly 542 medical colleges training up to 80,055 students.[3]

The country, over a period of time, to achieve and sustain excellence in the field, has done significant changes in the training methodology, syllabus and assessment patterns for medical students. The recent changes were made during august 2019 which emphasised on a competency-based curriculum and it was profoundly introduced after a long hiatus of 21 years. The new syllabus is focused on early clinical exposure, integrated teaching, attitude, ethics and communication (AETCOM), self-directed learning, problem-based learning and opting for electives. The edge is on having cognitive, psychomotor and affective domains when compared to the cognitive domain of previous curriculum.[4] There has been a paradigm shift from classroom-centred and exam-oriented approach to student-centred approach. Much insight is given into providing early clinical exposure which is aimed at bringing a conceptual change in understanding and developing skills from student's perspective.

At present, the herculean task for the policy makers is to ensure whether the changes are making any dent in the students' learning process and to assess the change it has made on the students' learning. The effects on the investment of medical teacher's time and energy in executing the newer teaching methods should also be assessed. Hence, we conducted this study to compare before (2018) and after (2019) implementation of new curriculum (a) the student's performance in first internal assessment and (b) to compare the differential time utilisation between 2018 and 2019 periods by the teaching faculty.

MATERIALS AND METHODS

It is a comparative study conducted at the Department of Physiology, ESIC Medical College and PGIMSR, Bengaluru, Karnataka, during January 2020–March 2020. The medical college is located in the central part of the city; it has an intake of 100 undergraduate students per year and has 500-bedded hospital. The MBBS course was started in the college during 2012. The department has six teaching faculty and the college works for 7 h in a day.

We compared the performance on first internal assessment marks of the 1st MBBS students of 2018–2019 and 2019–2020. The internal assessment marks including theory and practical marks were obtained from the departmental records. A questionnaire was designed and piloted to extract the information on the average weekly man-hours spent on different components of activities by the teachers. The variables collected included number of hours spent on practical classes, theory classes, research activities, preparation for classroom teaching and administrative work. All the faculties completed their questionnaire after verifying their teaching hours in the registers.

All the data were electronically entered into Microsoft Excel sheet and the data were analysed using freely available OpenEpi software. The data were analysed for proportions and Chi-square test was calculated. $P < 0.05$ was considered statistically significant.

RESULTS

A total of 100 students were included in the study. The mean (range) marks obtained by the students of 2018–2019 and 2019–2020 batch were found to be (a) theory: 48.75 (7–83) and 50.71 (10–78) and (b) practical's: 64.88 (38–90) and 69.70 (30–93). The difference between the two groups was found to be statistically insignificant.

	Theory marks (mean)	Practical marks (mean)
2018–2019	48.75	64.88
2019–2020	50.71	69.70
P value	Not significant	Not significant

A total of six teaching faculty were involved in the teaching processes during both the years. The man-hours per week faculty for different teaching activities during 2018–2019 and 2019–2020 were as follows: (a) Theory teaching: 6 (16%), (b) practical teaching: 12 (32%), (c) research activities: 6 (16%), (d) planning activities: 8 (21%) and (e) administrative activities: 6 (16%). There was increase in student contact (theory and practical) in 2019–2020 compared to 2018–2019. There was a large drop in time dedicated for research activity from 16% to 4%. There was a slight increase in time utilised for administrative and planning activities.

	Theory (%)	Practical (%)	Research (%)	Planning (%)	Administration (%)
2018–2019	6 (16)	12 (32)	6 (16)	8 (21)	6 (16)
2019–2020	10 (21)	16 (33)	2 (4)	12 (25)	8 (17)

DISCUSSION

To the best of our knowledge, we presume that it is one of the first studies conducted in the country to assess the performance of medical students before and after implementation of new 2019 curriculum and its effects on teaching faculty in the medical college. Our study findings suggest that there is minor increase in the mean marks obtained by the students; however, it is found to be statistically insignificant. The success of a curriculum cannot be judged based on marks alone but has to be based on the feasibility of implementation and holistic development of students and faculty. The study has also revealed that the faculty involvement in research has drastically decreased with the newer curriculum in place.

The study findings have following policy implications. First, though there was no statistically significant increase in the marks obtained by the 2019 students, we have noticed a change in the approach, thinking and behaviour of the students. This finding is subjective and may not be true for all the 1st year students in other medical colleges. There is a need to have a specific qualitative behavioural tool to measure the changes in students' AETCOM. Second, the research is considered as one of the important components for a teaching faculty as it enhances the capacity to pursue answers to the prevalent scientific questions of the time and the country's performance is dependent on the scientific progress made. However, it is detrimental to notice in our study that the time engaged by the teaching faculty has decreased thereby compromising on of the core activities of the teaching faculty. The policy-makers have to envisage the teaching faculty interest in research and career is promoted. The teaching of newer curriculum demands more teacher to student's ratio; and we recommend increasing the faculty by at least 3 times. The capacity of students is built when they spend quality time with the teachers and care should be taken that the teachers are not fatigued during the process. Also that the research activity is an integral part of teaching faculty activity, it should not be compromised in an urge to implement student-centric curriculum.

Our study has following limitations: (a) The sample size is limited to arrive at a statistical conclusion, (b) the study lacked the measure to assess the AETCOM skills of the students and (c) the findings of the study should not be generalised to the other medical colleges in the country.

CONCLUSION

The newer curriculum is found to be promising for the medical students but is taking a huge toll on the teaching faculty. Measures to promote research and faculty strength in the existing medical colleges should be prioritised by policy makers. Further, well-designed qualitative research may be conducted to assess the enablers and barriers among students and faculty towards implementation of new curriculum.

Declaration of patient consent

Patient's consent not required as patients identity is not disclosed or compromised.

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Conflicts of interest

There are no conflicts of interest.

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