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EVALUATING MEDICAL UNDERGRADUATES PERCEPTION REGARDING NEW TEACHING LEARNING METHODS IN MEDICAL PROFESSION

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ABSTRACT

INTRODUCTION- The Competency-Based Medical Education (CBME) curriculum was introduced in India to produce Indian Medical Graduate (IMG) which are first level primary physician. This study involves perception of medical students for change in CBME and teaching methodologies for areas of improvement. The study aims to assess MBBS students on their feedback for current teaching methodologies, challenges faced and their liking and disliking for the current guidelines and integration strategies.

METHODS- A cross-sectional questionnaire-based study was conducted among second professional MBBS students (100) of our institute via online platform and evaluation on the basis of scales was done to identify preferences for teaching learning methods and whether changes in CBME is encouraged or discouraged by them. Verbal consent was obtained.

RESULTS- An analysis of questionnaire on student responses revealed that small group discussions, self-directed learning was rated good (78%) were as clinical case-based lecture was rated excellent (90%) by students. Integration and alignment pattern were also preferred by students although few rated it as poor (10%). Lecture mode was rated poor (25%). Early clinical exposure practices and medical ethics was encouraged while mentor mentee interaction and family adoption were slightly discouraged.

DISCUSSION- Medical education reforms are needed to enhance student engagement, ensure competency-driven assessments. A shift towards interactive, practical and clinical teaching methodologies is recommended for better learning outcomes.

KEYWORDS- CBME, Integration and alignment, SGD, Early Clinical Exposure

INTRODUCTION

The National Medical Commission (NMC) of India produced the new competency-based medical education (CBME) curriculum for the MBBS course which is implemented nationwide from 2019 batch. The current goal of CBME is to produce Indian Medical Graduate (IMG) by which is an outcome-based approach designed for assessment of medical graduates.[1] The CBME curriculum included components such as alignment and integration module; foundation course (FC); skill modules; elective modules; Attitude, Ethics, and Communication (AETCOM) module; early clinical exposure (ECE); and family adoption early.[2,3,4] This change in curriculum is to make and produce student as physician of first contact and primary healer to the society. To reforms their skill development by multifaceted approach and to reinforce them as a primary care giver. CBME faces number of challenges, ranging from the content and changes made by it in implementation and practical applicability.[5] Teachers must adopt a continuous assessment methodology that should reflect the dynamic nature of competency changes and their acquisition in routine adaptation and medical teaching patterns. Traditional educational methods are being discouraged in favour of an ongoing, dynamic evaluation process instead of discrete evaluations. [6] This awareness pushes educators to take on a role and responsibility that goes beyond of becoming teachers; they should now act as growth facilitators, assisting students in the pursuit of mastery through small advancements. This educational approach forces teachers to concentrate on how students' knowledge, abilities, and attitudes are harmoniously integrated into real-world contexts rather than how they exist in isolation. It is a challenging task for medical students to adapt to this curriculum as well as for the faculty members to assess the performance of students. The curriculum also faced criticism initially but was finally accepted. Initially many colleges faced difficulty.[7,8] But its implementation is now beneficial for the undergraduates knowledge.

We plan this study among our MBBS second professional students to assess their perception regarding components of new CBME curriculum. To identify the challenges faced by medical students in adapting to CBME curriculum.

METHODS

A cross-sectional study was conducted among undergraduate medical students of second professional MBBS between July and August 2025 (2 months). All the participating students were informed about the study. Students willing to participate and given their verbal consent were taken. A pre-validated questionnaire was circulated using Google Forms maintaining the anonymities of the study participants. The key components in the questionnaire were students' perceptions regarding various components of CBME such as FC, AETCOM, ECE, integration, and assessment methods along with challenges faced by the students while adapting to the new curriculum. Various methods of teaching and learning. Total of 100 students batch was included for the study and questions were circulated via the google form. **Verbal consent was obtained for this study from all participating students.**

Data Analysis

The data were exported in MS Excel, and rates and proportions were calculated. Descriptive statistics were used for summarizing the data using means and standard deviations, and inferential statistics were utilized to draw conclusions from data to account for random variation. Data were analyzed using MS Excel.

RESULTS

Figure 1 depicts the percentage of overall change in CBME curriculum . The pie-chart distribution shows 53% rated as good, 38% as excellent, fair 8% and poor 1%. Maximum of students appreciated the change in teaching and learning methods.

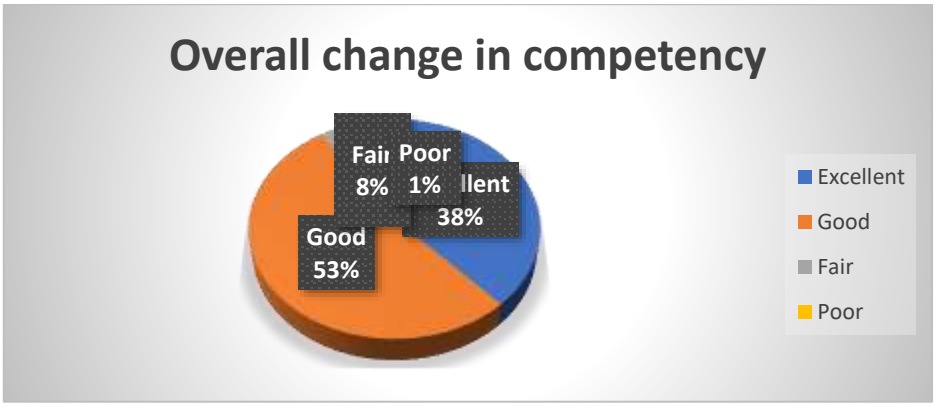

Figure 1: Shows overall change in teaching learning methods preference by the students

Table 1 shows distribution of various teaching learning methods rating. Lecture mode was rated good by 56% of students, excellent 40% by students, fair by 3% students and 1% rated it as poor. Small group discussion rated as 55% good, 37% excellent, 8% fair and no one rated it as poor. Clinical lectures 53% rated it as excellent, 43% rated it as good, 4% as fair and no one rated it as poor. Self directed learning 49% rated it as good, 30% rated it as excellent, 17% rated it as fair and 4% rated it as poor. Integration and alignment method 60% rated it as good, 31% rated it as excellent, 6% as fair and 3% as poor.

	Excellent	Good	Fair	Poor
Lecture	**40**	**56**	**3**	**1**
Small group discussion	**37**	**55**	**8**	**0**
Clinical lectures	**53**	**43**	**4**	**0**
Self directed learning	**30**	**49**	**17**	**4**
Integration and alignment	**31**	**60**	**6**	**3**

Table 1: Shows distribution of % of ratings of various teaching and learning methods

Figure 2 shows introduction of new concept in CBME curriculum whether encouraged or discouraged by the MBBS students. Mentor-mentee relationship 70% encouraged it and 30% discouraged it. Pandemic module 96% encouraged and 4%. Discouraged it. Introduction of medical ethics was 100% encouraged. Early clinical exposure 90% encouraged and 10% discouraged. Family adoption 93% encouraged and 7% discouraged.

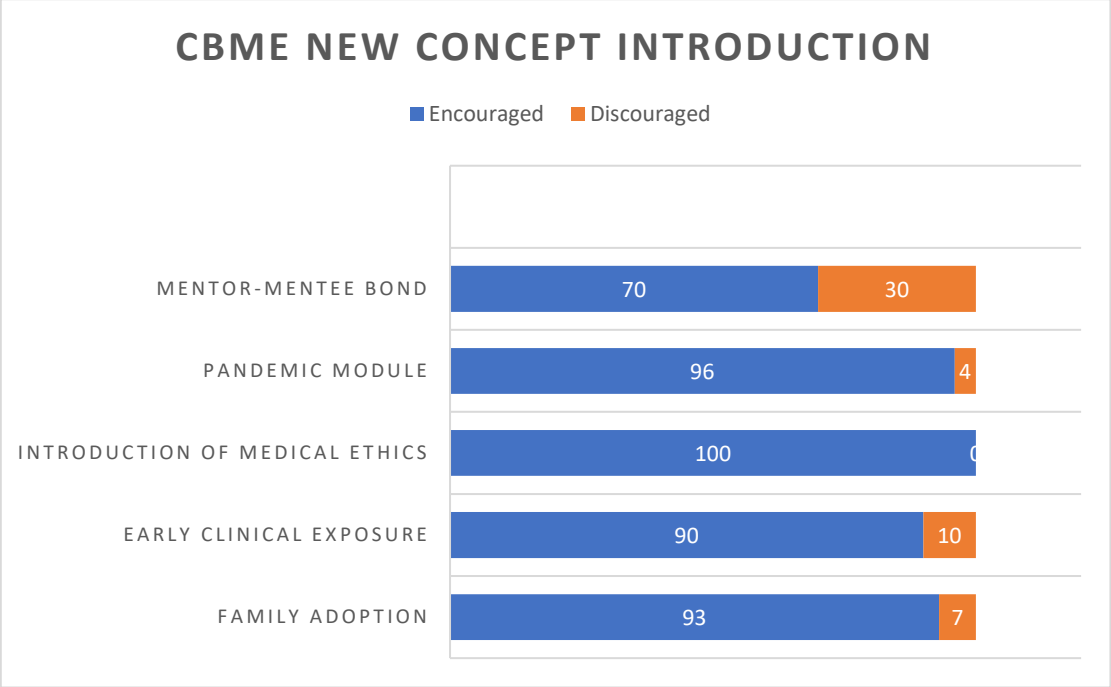

Figure 2: Shows percentage distribution of new changes in cbme as encouraged or discouraged by students

Figure 3 depicts the current method or approach of training of MBBS students through changed curriculum whether liked or disliked by the students. Large number of competencies 78% liked it and 22% disliked it. Assessment using OSCEs 70% liked it and 30% disliked it. Theory based approach 65% liked it and 35% dislike it while practical skill based approach 82% liked it and 18% disliked it.

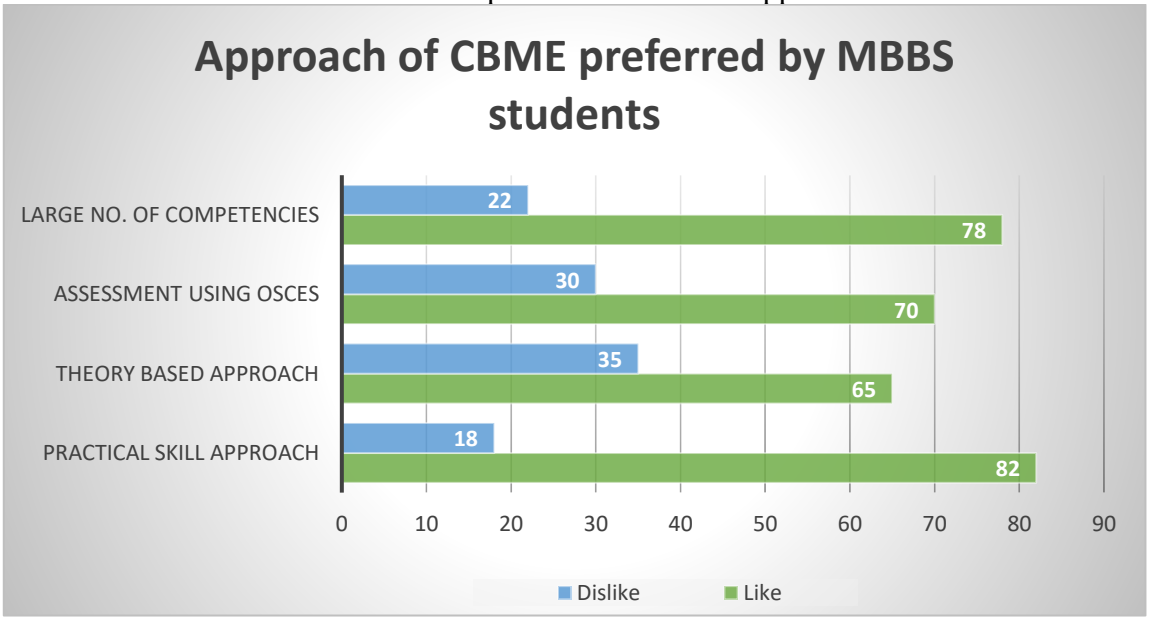

Figure 3: Shows approach of teaching methods scale whether liked or disliked by the students.

DISCUSSION

This study was conducted to understand the perception of students about the CBME curriculum. Responses were obtained from students of second year professional batch of 100 students. Almost

100 of the students gave their responses. AETCOM was introduced by NMC for inculcating values of empathy, ethics, and importance of verbal and nonverbal communication.

The present study reported that the majority of the respondents students believed it was necessary to include AETCOM from 1st year itself and most of them thought it was necessary to develop doctor–patient relationship from the beginning of the course itself.[9] In our study we found that medical ethics introduction was 100% encouraged by the MBBS students as seen in study done by Sharma et al, highlighted the importance of knowledge about medical ethics.[10] Hugar *et al*. in their study found that most of the participants welcomed the introduction of AETCOM module in curriculum.[11] similar to our study.

Figure 1 shows that overall changes in CBME and introduction of new concepts in teaching and learning methods were preferred by MBBS students. Maximum rated it as good, few as excellent, 8% rated it as fair and only 1% rated it as poor. This shows that current teaching learning methods are preferred by MBBS students. The changes are made to produce physician of primary contact and healer too along with a doctorate degree.

Table 1 shows various methods of teaching and learning where clinical lectures, small group discussions and integration and alignment concept were most preferred by MBBS students and maximum of them rated it as excellent. Integrated teaching was introduced to understand all aspects of a topic at one place and reduce the redundancy of the topic. It was aimed to provide a system-wise approach to a topic so that a complete understanding for the topic develops both clinically and theoretically. The majority of participants in our study agreed that integration helps in building concepts, they also welcomed the concept of horizontal and vertical integration. The topics of clinical importance and few diseases are easy to learn up via integration and alignment system. It helps in keeping the connectivity of the topic and developing interest in it thereby easy to retain for longer time.

Angadi *et al*., in their study, highlighted the importance of vertical and horizontal integration, in which the students expressed that alignment and integration help to understand the topic in depth.[12] In a study by Kate *et al*., integrated teaching showed improvement in the cognitive and psychomotor domains of students along with better clinicopathological correlation.[13]Therefore, these studies point that integration of subjects helps students to understand the concepts in a better way which resonates with the findings of our study.

Regarding the assessment methods, view of students was varied; most of them were neutral when asked about their understanding of methods of assessment, but the introduction of OSCE in practical examinations was welcomed by them.

Figure 2 shows the % of new concepts like early clinical exposure, family adoption and pandemic module like changes were mostly encouraged by MBBS students in our study as shown in result section. This finding was in consistent with other study done. With the shift to CBME curriculum, students were going through the transition from traditional theory based to skill-based teaching and may not be completely adapted to this transition. The students perceived the shift to CBME curriculum to be a good step and believed that the curriculum would help them become a competent doctor. In the present study, students agreed that the different curricular elements in CBME help them to achieve better academic performance. ECE was found to be the most important element followed by integrated teaching and AETCOM. The elements such as small group discussions (SGDs), self-directed learning (SDLs), and elective postings were acknowledged by only a few students. In a study by Ramanathan *et al*., the majority of the students found ECE to be the more relevant curricular element as it strengthens skill acquisition; horizontal integration was more appreciated compared to vertical integration. SDL was not much appreciated by the students.[14]

ECE was introduced with the intention to provide early exposure to students by taking them to wards and hospital laboratories which would help them retain the topics effectively. The majority of the students in our study viewed ECE positively and thought it helps them create interest in the subject and helps remember the facts more easily. It also encourages students to learn practical skills instead of following a theory-based approach for the sole purpose of clearing examinations.

In a study by Rawekar *et al*., ECE was rated by students to be extremely helpful. It would also develop interest in them to regularly attend their clinical postings.[15] In a study by Tayade *et al*., most of the students expressed that ECE develops an interest in learning, helps in better retention of the topics.[16] In another study by Shalini Kumar, students highlighted the importance of ECE module.[17] All these studies were in line with our study, in which students found ECE to be a useful component. Integrated teaching was introduced to understand all aspects of a topic at one place and reduce the burden of the topic and develop interest in it. It was aimed to provide a system-wise approach to a topic so that a complete understanding for the topic develops.

Figure 3 shows the current approach of CBME teaching patterns whether they were liked or disliked by the students. The graph depicts that practical skill based approach were more liked by students as compared to theory based. Similarly clinical and observable activities were more preferred as compared to simple lecture based classes. The reason for dislike which was few in number may be due shift in CBME curriculum, students were going through the transition from traditional theory based to skill-based teaching and may not be completely adapted to this transition.
Many studies on undergraduate students also analyzed CBME curriculum and gave a positive insight regarding the curriculum.[18,19] Our study also opens a wide field of area where further research can be done; every component and element of CBME can be studied in detail and its impact will be determined on a medical student during the course.

CONCLUSION

There has been a significant shift in the medical education in India. In the present study, the new curricular elements are well appreciated by the students. Early Clinical Exposure followed by integrated teaching and soft skills such as AETCOM are found to be the most important components to achieve better academic performance. To achieve CBME standards, there is a need to formulate strategies which will boost motivation and help in time and stress management. These factors will ultimately improve the learning process. Feedback studies are important to be done to assess students nature towards changes made in teaching and learning methods. More research and questionnaire based study can be done to motivate students towards this change in CBME curriculum.

LIMITATION OF STUDY

Our research has only focused on students' perspectives, but for comprehensive assessment of CBME curriculum, there is a need to study faculties' point of view also. More comprehensive questionnaire can be designed for the study.

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