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Original Research Article

An audit of competency based medical education for Indian medical graduates: a facilitators' perspective

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ABSTRACT

Background: The implementation of competency-based medical education (CBME) in India represents a transformative shift in undergraduate medical training, aiming to align graduate competencies with societal health-care needs. While the framework is conceptually robust, its success depends largely on faculty engagement and institutional readiness. Objectives were to explore faculty perceptions regarding the implementation of CBME, identify perceived strengths and operational challenges, and highlight areas requiring institutional support for sustainable delivery.
Methods: A cross-sectional, questionnaire-based pilot audit was conducted among undergraduate medical faculty involved in CBME delivery. A structured tool incorporating Likert-scale items and open-ended questions was used. Quantitative data were analyzed descriptively, while qualitative responses underwent thematic analysis.
Results: Thirty-three faculty members participated. Most respondents acknowledged CBME as educationally superior to the traditional curriculum and better aligned with competency attainment. However, substantial challenges were reported, including inadequate faculty strength, excessive documentation workload, time-intensive competency mapping, and uneven faculty sensitization.
Conclusions: Although CBME is well accepted in principle, significant structural and operational barriers limit its effective implementation. Addressing faculty workload, manpower shortages, and training gaps is essential to ensure fidelity to CBME objectives.

Keywords: Competency-based medical education, Indian medical graduate, Faculty perception, Medical education audit

INTRODUCTION

The introduction of competency-based medical education (CBME) by the National Medical Commission in 2019 marked a fundamental reform in undergraduate medical education in India. This shift from a predominantly time-based curriculum to an outcome-oriented framework was envisioned to produce an Indian medical graduate (IMG) who is not only clinically competent but also ethical, communicative, and responsive to community health needs.[1-3] CBME emphasizes clearly defined competencies, early clinical exposure, integration across disciplines, workplace-based assessment, and continuous feedback.[4,5]

Internationally, CBME has been recognized as a learner-centred approach that bridges the gap between training and real-world clinical practice, thereby enhancing patient safety and professional accountability.[6] In the Indian context, however, CBME implementation requires extensive curricular restructuring, including competency mapping, formulation of specific learning objectives (SLOs), integration of teaching modules, and meticulous documentation of assessments and feedback.[7,8]

These reforms place significant demands on faculty members, who serve as the primary drivers of the curriculum delivery.

Faculty play a pivotal role as facilitators and change agents in translating CBME principles into practice. Their preparedness, motivation, and institutional support directly influence the quality and consistency of implementation. Early Indian studies have reported challenges such as faculty shortages, limited training in medical education methodologies, increased administrative workload, and varying levels of acceptance across departments.[9-11] Given the relatively recent rollout of CBME, systematic audits capturing faculty perspectives are essential to identify contextual challenges and inform targeted quality-improvement strategies.[12-14] This pilot audit was therefore undertaken to explore facilitators' experiences with CBME implementation at an institutional level.

METHODS

Study design

It was a cross-sectional, questionnaire-based pilot audit study.

Study setting and participants

Undergraduate medical faculty from both clinical and non-clinical departments actively involved in CBME teaching and assessment. The study was conducted at MVJ Medical and Research Hospital, Bengaluru from January 2025 to December 2025. Ethical clearance was obtained from the institution's ethics committee.

Sample size

Thirty-three consenting faculty members participated, reflecting the exploratory nature of this pilot audit.

Study tool

A structured questionnaire comprising demographic details (department, years of teaching experience, prior MEU training), nineteen Likert-scale statements assessing perceptions of CBME implementation and 4 open-ended questions exploring challenges, suggestions, and expectations. Responses were recorded on 5-point Likert scale ranging from strongly disagree to strongly agree.

Data analysis

Quantitative data were summarized using descriptive statistics. Likert responses were collapsed into three categories (Agree, neutral and disagree) for interpretability. Qualitative responses were analyzed thematically to identify recurring patterns.

RESULTS

Participant characteristics

A total of 33 faculty members from pre-clinical, para-clinical and clinical departments participated. Teaching experience ranged from 1 to 10 years. Most participants had undergone medical education unit (MEU) training.

Table 1: Demographic characteristics of participants.

Variables	n=33 (%)
Department	
Pre-clinical	8 (24.2)
Para-clinical	10 (30.3)
Clinical	15 (45.5)
Teaching experience	
1-5 years	12 (36.4)
6-10 years	14 (42.4)
>10 years	7 (21.2)
MEU training attended	
Yes	26 (78.8)
No	7 (21.2)

Faculty perception of CBME (Likert-scale responses)

For analytical clarity, Likert-scale responses were collapsed into 3 categories: agree (strongly agree+agree), neutral, and disagree (strongly disagree + disagree).

Table 2: Faculty perception regarding CBME implementation, (n=33).

Domain	Agre, N (%)	Neutral, N (%)	Disagree, N (%)
Need for revision of traditional curriculum	24 (72.7)	3 (9.1)	6 (18.2)
CBME better prepares IMGs	27 (81.8)	3 (9.1)	3 (9.1)
CBME allows self-paced learning	24 (72.7)	6 (18.2)	3 (9.1)
Faculty adequately trained for CBME	12 (36.4)	9 (27.3)	12 (36.4)
Training in soft skills is adequate	9 (27.3)	6 (18.2)	18 (54.5)
Faculty strength adequate for CBME	6 (18.2)	6 (18.2)	21 (63.6)
Designing SLOs and integrated modules is manageable	9 (27.3)	6 (18.2)	18 (54.5)
Documentation and assessment workload is reasonable	6 (18.2)	6 (18.2)	21 (63.6)
Institutional resources are adequate	12 (36.4)	9 (27.3)	12 (36.4)

Thematic analysis of open-ended responses

Four major themes emerged:

Manpower constraints

Recurrent emphasis on shortage of teaching and clerical staff.

Training gaps

Need for regular, structured CBME training for all faculty members.

Workload and stress

Excessive documentation, assessment load, and unequal work distribution.

Curricular concerns

Perceived overemphasis on spoon-feeding and inadequate self-directed learning among students.

DISCUSSION

This study demonstrates that faculty members largely perceive CBME as a progressive and necessary reform in undergraduate medical training. Most participants agreed that CBME better prepares the IMG and addresses limitations of the traditional curriculum. These findings are consistent with previous studies that reported broad conceptual acceptance of CBME among faculty and other stakeholders despite the concern regarding its implementation and sudden revamping change.[19,20]

Similar observations have also been reported internationally, where competency-based frameworks are considered essential for aligning medical education with patient-centred and outcome-oriented health-care systems than an exam-oriented system.

Despite this favourable perception, the present study identified substantial operational barriers affecting effective implementation. Faculty members reported concerns regarding excessive documentation, competency mapping, assessment workload, and insufficient manpower. These findings are comparable to the observations of Sulena et al who identified administrative burden, inadequate infrastructure, and stakeholder fatigue as major barriers during CBME implementation in India.[19]

Agarwal et al similarly noted that although faculty appreciated the principles of CBME, difficulties in immediate adapting to newer curricular and assessment requirements limited smooth implementation.[20] The increased workload associated with workplace-based assessments and continuous feedback mechanisms has also been highlighted in global CBME literature.

Another important finding of the present study was the perceived inadequacy of faculty training and sensitization as they themselves underwent coaching in the traditional curriculum. Only a minority of respondents felt adequately prepared for CBME implementation, particularly in domains related to soft skills training, assessment strategies, and integrated teaching. Faculty development has consistently been recognized as a critical determinant of successful CBME implementation. Bansal and Supe emphasized that periodic and structured faculty training is essential to improve educational delivery and ensure uniformity in competency assessment. Similarly, Srinivasan et al highlighted that medical educators require specific competencies in curriculum planning, assessment, mentoring, and feedback to effectively implement competency-based curricula.[11,16]

The detailed analysis further revealed concerns regarding unequal work distribution, faculty stress, and reduced student self-directed learning. These observations suggest that implementation challenges extend beyond logistics and reflect broader issues related to institutional preparedness and educational culture. While CBME promotes learner-centred education and self-directed learning, faculty in the present study perceived that students continued to depend heavily on guided instruction.[19,20] Similar concerns regarding learner adaptability and engagement have been reported in earlier CBME studies. This indicates that successful implementation requires simultaneous orientation of both the faculty and the students toward newer learning paradigms.

Overall, the present study reinforces existing evidence that while CBME is widely accepted as an educationally superior model, its successful implementation depends on addressing structural, administrative, and faculty-development challenges. Strengthening institutional support systems, ensuring regular faculty training, and rationalizing documentation processes may improve sustainability and fidelity to CBME principles in Indian medical colleges.

Limitations

Small sample size, as this was intended as a pilot audit, single-center design limits generalizability and findings represent faculty perception and may not reflect student outcomes were limitations of the study.

CONCLUSION

This pilot audit underscores that while CBME is well accepted among faculty as a progressive and necessary educational reform, its effective implementation is hindered by systemic constraints. Addressing faculty workload, manpower shortages, and training inconsistencies is crucial to ensure sustainable and faithful adoption of CBME in Indian medical colleges.

Recommendations

Increase faculty and clerical manpower, mandatory CBME training for all faculty, rationalization of documentation workload and institutional incentives and recognition for CBME-related work.

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