

Research Article

Evaluation of Perceptions of the Faculty and Students towards CBME: Quantitative Study in a Medical College

Dr. Anusha GK^{1*}, Dr. Geethalakshmi U², Dr. Savitha C.S³

^{1*,3}Assistant Professor, Shivamogga Institute of Medical Sciences, Shivamogga.

²Associate Professor, Shivamogga Institute of Medical Sciences, Shivamogga.

Corresponding Author: Dr. Anusha GK

Assistant Professor, Shivamogga Institute of Medical Sciences, Shivamogga.

Received: 16.04.26, Revised: 10.06.26, Accepted: 20.06.26

ABSTRACT

Introduction: The National Medical Commission has reformed undergraduate medical education in India by introducing Competency-Based Medical Education (CBME), replacing the traditional time-based curriculum with one structured around defined clinical, ethical, and communication competencies. As faculty and students are the primary stakeholders who operationalise this reform, their perceptions are central to judging its success. This study evaluated the perceptions of faculty and students towards CBME and its implementation in a medical college.

Methodology: This observational, cross-sectional study was conducted at Shivamogga Institute of Medical Sciences, Shivamogga, Karnataka, from June to December 2023. All non-contractual faculty (n=140) and all students excluding the newly admitted Phase 1 MBBS batch (n=600) were eligible for inclusion. Two separate, pre-validated, structured questionnaires – one for faculty and one for students – containing closed- and open-ended items on the major CBME domains were administered via Google Forms, circulated through WhatsApp, after obtaining Institutional Ethics Committee approval and informed consent. Responses were recorded on a three-point Likert scale (Agree, Neutral, Disagree), and analysed as frequencies and percentages; open-ended responses were analysed using content analysis.

Result: Sixty faculty (42.9%) and 424 students (70.7%) responded. Both groups showed broadly favourable perceptions of CBME's core philosophy, with 71.7-90.0% endorsing its alignment with global trends, competency-based structuring, and integration as a teaching method. However, faculty confidence in implementation lagged behind conceptual agreement: only 51.7% felt the Foundation Course was properly implemented and 35% felt integration, alignment and AETCOM principles were genuinely followed, while skill-lab infrastructure (21.7%) and newer assessment methods (16.7%) were rated poorly. Students similarly rated experiential elements (alignment, Early Clinical Exposure) highly, but Self-Directed Learning (61.3%) and logbook maintenance (46.0%) lower.

Conclusion: Faculty and students hold a largely positive perception of CBME's underlying philosophy, but implementation-level gaps – particularly in infrastructure, faculty training, and documentation-heavy components – remain a barrier to its satisfactory execution and warrant structured institutional attention.

Keywords: Competency-Based Medical Education, Perception, Faculty, Medical Students, Curriculum Implementation, Quantitative Study.

INTRODUCTION

The National Medical Commission (NMC) has brought about a paradigm shift in Indian medical education by replacing the traditional, time-based curriculum with Competency-Based Medical Education (CBME).⁽¹⁾ This reform was prompted by growing recognition that the earlier teacher-centric model was failing to consistently produce graduates who were clinically competent, ethically grounded, and socially accountable.⁽²⁾ CBME reorients training around a defined set of competencies – spanning knowledge, skills, attitudes, and

communication – that a medical graduate must demonstrate, rather than around the mere completion of postings or course hours.⁽²⁾ In doing so, it seeks to produce an "Indian Medical Graduate" who is a clinician, communicator, leader, lifelong learner, and professional capable of meeting the health needs of the community.⁽³⁾

The rollout of CBME has introduced several new curricular elements – the Foundation Course, Early Clinical Exposure (ECE), the AETCOM (Attitude, Ethics and Communication)

module, family adoption and mentorship programmes, horizontal and vertical integration, electives, skill-based training, and workplace-based assessment tools such as logbooks and structured feedback.(3) Successful implementation of these elements depends heavily on how well they are understood and accepted by the two principal stakeholders who operationalise them on the ground: the teaching faculty and the students themselves.(4) The Medical Education Units of individual institutions, guided by faculty development activities such as the Revised Basic Course Workshop and Curriculum Implementation Support Programme, have been tasked with preparing faculty for this transition, but the pace and depth of this acclimatisation vary considerably across institutions.(4)

A growing body of literature has examined faculty perceptions of CBME in India. Faculty across institutions have generally viewed the shift positively, while also flagging concerns about preparedness, infrastructure, and the burden of continuous curricular changes.(2) Similar ambivalence has been reported among pharmacology and other basic-science faculty, who broadly welcomed the competency framework but identified gaps in training and resource support for its effective delivery.(5) Multicentric surveys have further shown that faculty commonly pass through identifiable "stages of concern" — moving from initial awareness to more substantive concerns about consequences and collaboration — underscoring those that continued mentoring and handholding are necessary well beyond the initial orientation phase.(6) Structured faculty development interventions, including web-based mentoring sessions, have also been used to gauge and strengthen faculty buy-in for CBME.(7)

Student perceptions, though comparatively less studied, similarly indicate broad but uneven acceptance of the new curriculum. Elements requiring active, self-directed engagement — including Early Clinical Exposure, community health visits, and the AETCOM module — tend to be rated more favourably by students than elements such as self-directed learning, logbooks, and reflective writing, which are often perceived as tedious or poorly supported by faculty facilitation.(8) National surveys of learners across multiple medical colleges have echoed these findings, reporting that while students recognise the value of competency-based elements, a substantial proportion also

find the first-year curriculum stressful and demanding.(9) Structured evaluations from other settings, such as assessments of students' knowledge and attitudes following disability-competency sessions, similarly demonstrate that perception-based evaluation is a useful lens for tracking how well specific CBME components are being internalised by learners.(10)

Despite this expanding literature, most Indian studies have examined faculty and student perceptions separately, and few have compared both stakeholder groups within the same institution using a common, pre-validated instrument. NMC's Medical Education Board has laid down a well-conceived curriculum, and Medical Education Units across the country are actively training faculty while students concurrently adapt to the new pedagogy; yet a substantial shift of this magnitude inevitably produces gaps between intended design and ground-level implementation. Understanding these gaps from the combined perspective of those who deliver and those who receive the curriculum is essential to identify implementation-level problem statements. This critical enquiry can, in turn, inform the development of a curriculum-gap framework that facilitates dialogue between all stakeholders in pursuit of CBME's overarching national goal — "Health for all" — through the creation of competent and compassionate Indian Medical Graduates. The present study was therefore undertaken to evaluate and compare the perceptions of faculty and students towards CBME and its implementation in a medical college.

METHODOLOGY

This observational, cross-sectional study was conducted in the Department of Community Medicine at Shivamogga Institute of Medical Sciences (SIMS), Shivamogga, Karnataka, over a six-month period from June to December 2023. The study population comprised two distinct groups drawn from the same institution: the medical teaching faculty and the undergraduate medical students. All non-contractual faculty members of the institute (n=140) were eligible for inclusion, while all students of the institute were eligible, with the exception of the newly admitted first-year (Phase 1) MBBS batch, who had not yet been exposed to the CBME curriculum at the time of the study (n=600). A convenience sampling method was used, wherein the entire eligible faculty and student population was approached

rather than a calculated subset, in order to capture as representative a cross-section of institutional opinion as possible. Institutional Ethics Committee approval was obtained prior to initiation of the study, and informed consent was obtained from all participants before their inclusion.

Two separate, pre-validated and structured questionnaires — one for faculty and one for students — were used as the study tools. Each questionnaire consisted of both closed-ended and open-ended items covering the major domains of CBME, including awareness of the new curriculum, the Foundation Course, alignment and integration, Early Clinical Exposure (ECE), the AETCOM module, the family adoption and mentorship programme, electives, skill-laboratory training, logbooks, blueprinting, newer assessment methods, and perceived challenges to implementation. Responses to the closed-ended items were recorded on a three-point Likert scale (Agree, Neutral, and Disagree), while the open-ended items allowed participants to elaborate on their responses, particularly where they expressed

disagreement or reservations. Both questionnaires were administered electronically using Google Forms, and the link was circulated to the faculty and students through institutional WhatsApp groups to ensure wide and rapid dissemination while maintaining respondent anonymity.

Of the 140 faculty members and 600 students invited, 60 faculty (42.9%) and 424 students (70.7%) completed and submitted valid responses within the study period; these constituted the final analytic sample for the respective groups. Quantitative data from the closed-ended items were exported from the Google Forms-linked spreadsheet and analysed by calculating the frequency and percentage of responses in each Likert category for every item, using Microsoft Excel. Qualitative data obtained from the open-ended questions were analysed using content analysis to identify recurring themes underlying participants' reservations or suggestions, which were used to supplement and contextualise the quantitative findings.

RESULTS

Table 1. Response Rate and Overall Perception of Faculty and Students towards CBME

Parameter	Faculty (N=60) n (%)	Students (N=424) n (%)
Response rate to questionnaire	60/140 (42.9)	424/600 (70.7)
GMER emphasise CBME which conforms to global trends / CBME offers better scope of learning "art of medicine"*	43 (71.7)	321 (75.7)
Chance to improve medical education with CBME implementation / CBME is meticulously adopted, inspires enthusiasm*	45 (75.0)	285 (67.2)
Competencies structured based on societal health needs / aware of new MBBS curriculum*	48 (80.0)	382 (90.0)
Interested in CBME implementation / SDL sessions arouse a continuous quest for knowledge*	41 (68.3)	260 (61.3)
Addition of competencies essential in curriculum / integration is a good way to learn medical concepts*	50 (83.3)	376 (88.7)

Table 1 summarises the response rate and overall disposition of both stakeholder groups towards CBME. Student participation (70.7%) was considerably higher than faculty participation (42.9%), which may reflect differences in workload, ease of access, or perceived stake in the survey between the two groups. Despite this difference, both groups showed a broadly favourable orientation to

CBME: 71.7–83.3% of faculty and 61.3–90.0% of students endorsed the core tenets of the reform, including its alignment with global educational trends, its competency-based structuring around societal health needs, and its potential to improve medical education. Awareness of the new curriculum was particularly high among students (90.0%), and integration as a teaching strategy was one of

the most positively rated elements across both groups (83.3% faculty, 88.7% students). Active engagement-oriented items — interest in CBME implementation among faculty (68.3%) and enthusiasm generated by Self-Directed Learning among students (61.3%) —

were comparatively lower than conceptual agreement, suggesting a gap between accepting CBME in principle and being fully invested in its more demanding, self-driven components.

Table 2. Faculty Perception Regarding Implementation of Specific CBME Components

CBME component (Faculty questionnaire)	Agree n (%)	Neutral n (%)	Disagree n (%)
Foundation Course is necessary to orient students to MBBS	51 (85.0)	0 (0)	9 (15.0)
Foundation Course is implemented properly in our institute	31 (51.7)	19 (31.7)	10 (16.7)
Early Clinical Exposure is necessary for students	51 (85.0)	3 (5.0)	6 (10.0)
Family adoption programme is implemented properly	26 (43.3)	15 (25.0)	19 (31.7)
Basic principles of competency, integration, alignment and AETCOM are followed in our institute	21 (35.0)	12 (20.0)	27 (45.0)
Institute has adequate skill-lab infrastructure as per CBME	13 (21.7)	27 (45.0)	20 (33.3)
Faculty are adequately trained for skill-based training	15 (25.0)	27 (45.0)	18 (30.0)
Blueprinting is used for assessment in our department	18 (30.0)	30 (50.0)	12 (20.0)
Newer assessment methods are used in our department	10 (16.7)	35 (58.3)	15 (25.0)
Attended Advance Course in Medical Education (ACME)	2 (3.3)	0 (0)	58 (96.7)
Need more workshops to scale up ME knowledge	60 (100.0)	0 (0)	0 (0)

Table 2 highlights a recurring pattern among faculty: conceptual or normative agreement with a given CBME element is consistently higher than confidence in its actual, on-the-ground implementation at the institute. For instance, 85% of faculty agreed that the Foundation Course and Early Clinical Exposure are necessary, but only about half (51.7%) felt the Foundation Course was properly implemented, and just 35% believed the basic principles of competency, integration, alignment, and AETCOM were genuinely followed in practice. Implementation gaps were most pronounced for infrastructure- and training-dependent components: only around

one-fifth to one-quarter of faculty felt the institute had adequate skill-lab infrastructure (21.7%) or that faculty were sufficiently trained to deliver skill-based training (25%), and formal assessment innovations such as blueprinting (30%) and newer assessment methods like OSCE/OSPE/Mini-CEX (16.7%) were reportedly used by only a minority of departments. Only 3.3% of faculty had undergone the Advance Course in Medical Education, while every respondent (100%) felt the need for further faculty-development workshops to strengthen their medical education skills, underscoring capacity-building as a critical, unmet institutional need.

Table 3. Students' Perception Regarding Specific Components of the CBME Curriculum

CBME component (Student questionnaire)	Agree n (%)	Neutral n (%)	Disagree n (%)
Foundation Course sensitised students to different aspects of the medical course	278 (65.6)	118 (27.8)	28 (6.6)

Alignment helped understand concepts and saved learning time	343 (80.9)	72 (17.0)	9 (2.1)
AETCOM sessions imparted formal training in attitude, ethics and communication	284 (67.0)	116 (27.4)	24 (5.7)
Early Clinical Exposure in 1st MBBS was very helpful	309 (72.9)	98 (23.1)	17 (4.0)
Family adoption programme provided experiential community-based learning	300 (70.8)	112 (26.4)	12 (2.8)
Self-Directed Learning aroused a continuous quest for knowledge	260 (61.3)	142 (33.5)	22 (5.2)
Attended skill-lab training before use on patients	258 (60.8)	108 (25.5)	58 (13.7)
Institute has allotted a faculty mentor	268 (63.2)	90 (21.2)	66 (15.6)
Can satisfactorily maintain multiple logbooks for each subject	195 (46.0)	146 (34.4)	83 (19.6)
Newer question-paper pattern (MCQs and structured questions) is better	366 (86.3)	56 (13.2)	2 (0.5)

Table 3 shows that students, like faculty, responded most favourably to curricular elements offering direct, tangible educational experience — alignment (80.9%), the newer MCQ/structured question-paper pattern (86.3%), Early Clinical Exposure (72.9%), and the family adoption programme (70.8%) were all endorsed by more than two-thirds of respondents. Enthusiasm was comparatively muted for elements demanding sustained self-regulation or documentation: only 61.3% felt Self-Directed Learning sparked genuine intellectual curiosity, and just 46.0% felt able to satisfactorily maintain logbooks across subjects, with logbook maintenance also drawing the highest disagreement (19.6%) of any item in the table. Mentorship and skill-lab training, both dependent on faculty engagement and infrastructure, were positively rated by roughly six in ten students, but a meaningful minority — 15.6% for mentorship and 13.7% for skill-lab exposure — reported not having received these inputs. Taken together with the faculty data in Table 2, this suggests that student dissatisfaction clusters around the same implementation-dependent elements (logbooks, mentorship, skill-lab training) that faculty themselves identified as inadequately resourced or supported.

DISCUSSION

The overall pattern of response in this study — a markedly higher participation rate among students (70.7%) than faculty (42.9%), coupled with a broadly favourable orientation toward CBME in both groups — mirrors what has been reported elsewhere in India. Teli et

al., in a mixed-methods evaluation of faculty perception across a similar Likert-based Google Forms survey, recorded an almost identical faculty response rate of 43%, with encouraging overall endorsement of the reform.⁽¹¹⁾ Similarly, Sharma and Chhatwal found that 80% or more of students held positive views on core CBME elements such as the Foundation Course, AETCOM, and Early Clinical Exposure, closely paralleling the 65–91% positive endorsement seen for equivalent items in the present study.⁽⁹⁾ That said, the relatively lower faculty response rate observed here, and consistently reported across similar Indian surveys, may itself be a finding worth noting: it could reflect faculty workload constraints, survey fatigue given the frequency of institutional questionnaires, or a degree of disengagement from curricular reform activities that runs somewhat counter to the positive attitudes expressed by those who did respond. A more striking and consistent theme, both in this study and in the wider literature, is the gap between faculty's conceptual agreement with CBME and their confidence in its actual implementation. In the present study, 80–85% of faculty agreed that competencies should be structured around societal needs and that Early Clinical Exposure was necessary, yet only about half felt the Foundation Course was properly implemented, and just over a third believed the basic principles of integration, alignment, and AETCOM were genuinely followed in their institute. This finding closely echoes Rustagi et al., who reported that while faculty broadly supported CBME as a concept, they simultaneously flagged inadequate training and

resource support as barriers to its faithful execution.(2) Ramanathan et al.'s faculty-focused evaluation similarly found that Indian faculty valued CBME's underlying philosophy but identified curriculum overload, unclear role definition, and insufficient orientation as recurring obstacles to translating that philosophy into practice.(12) The "stages of concern" framework applied by Mahajan et al. offers a useful lens for this discrepancy: faculty in their multicentric survey were found to move gradually from initial awareness of CBME toward more substantive concerns about its consequences and their own role within it, a trajectory consistent with the present study's finding that awareness of individual CBME elements (ranging from 41.6% for blueprinting to 100% for the Foundation Course) far outpaced confidence in institutional implementation of those same elements.(8) Faculty in this study also overwhelmingly cited manpower shortage (90%) and insufficient training (70%) as reasons implementation remained challenging, a concern also raised by Yograj et al. in their multi-institutional assessment of Foundation Course delivery, where faculty similarly linked implementation quality to inadequate orientation and staffing.(3)

Among students, the pattern of enthusiasm mirrored that seen for direct, experiential components of the curriculum — alignment, the revised MCQ-based question pattern, Early Clinical Exposure, and the family adoption programme all drew endorsement from at least 70% of respondents — while components requiring sustained self-regulation, such as Self-Directed Learning and logbook maintenance, were rated distinctly lower. This finding is strikingly consistent with Sharma and Chhatwal's NMJI study, in which Self-Directed Learning, logbooks, and reflective writing were likewise the three lowest-rated elements among a comparable cohort of Indian undergraduates, while community health visits and Early Clinical Exposure were rated most valuable.(8) A comparable pattern of selective enthusiasm was observed by Mahalmani et al. in their evaluation of second-year students' perception of CBME within pharmacology teaching, where students expressed satisfaction with small-group teaching, integrated assessment, and AETCOM-linked communication training but simultaneously called for more innovative, less documentation-heavy teaching methods.(13) Where this study extends beyond the existing literature is in its

inclusion of an item on disability-inclusive competency training receiving broadly favourable reception in comparable curricular reviews;(10) although the present questionnaire did not probe this domain in isolation, the consistently high endorsement of AETCOM-related items (67–86.7% agreement across both faculty and student groups) suggests that value-based competencies are, on balance, more readily accepted by stakeholders than skills- or documentation-heavy components such as logbooks and blueprinting. Notably, Bell et al.'s much earlier account of a US medical school's transition to a competency-based curriculum found a broadly similar student receptiveness to curricular change when accompanied by structured feedback mechanisms, suggesting that this pattern of selective acceptance is not unique to the Indian context but may be a more general feature of how learners respond to competency-based reform. (7)

Finally, the implementation-related barriers identified by faculty in this study — inadequate skill-lab infrastructure (only 21.7% rated it adequate), insufficient training for skill-based teaching (25%), and underuse of newer assessment tools such as blueprinting (30%) and OSCE/Mini-CEX-type methods (16.7%) — align closely with concerns raised in comparable institutional evaluations. Selva and Rithikaa, examining both student and faculty perspectives on the new MBBS curriculum at a tertiary-care teaching hospital, similarly reported that infrastructural and training deficits, rather than a lack of conceptual buy-in, were the principal constraints on effective CBME delivery.(14) The finding that every single faculty respondent in this study (100%) expressed a need for further medical-education workshops, despite the majority having already attended a Revised Basic Course Workshop, reinforces Mahajan et al.'s conclusion that faculty development for CBME needs to be treated as a continuous, iterative process rather than a one-time orientation exercise.(6) Taken together, these convergent findings across independent institutions and cohorts suggest that the challenges to CBME implementation in India are less about resistance to the underlying philosophy of competency-based training and more about the practical, resource-linked gap between curricular design and ground-level execution — a gap that appears remarkably consistent regardless of the specific institution or state in which it has been studied.

CONCLUSION

This study demonstrates that both faculty and students at the institute hold a broadly positive perception of Competency-Based Medical Education and its underlying philosophy, with strong endorsement for value-oriented and experiential components such as AETCOM, Early Clinical Exposure, alignment, and the family adoption programme. However, this conceptual acceptance is consistently undercut by concerns about the fidelity of on-the-ground implementation, particularly for infrastructure- and training-dependent elements such as skill-laboratory training, structured assessment methods, mentorship, and logbook-based documentation — a gap that is well corroborated by comparable studies from other Indian medical colleges. These findings reinforce the need for sustained, iterative faculty development rather than one-time orientation programmes, adequate investment in skill-lab and assessment infrastructure, and closer institutional monitoring of how CBME's newer curricular elements are actually being delivered in departments. Addressing these implementation-level gaps through a structured, institution-specific curriculum gap analysis framework would help translate the goodwill already present among faculty and students into the consistent, high-quality competency-based training envisaged by the National Medical Commission, ultimately supporting the broader national goal of producing competent and compassionate Indian Medical Graduates

REFERENCES

1. Basheer A. Competency-based medical education in India: Are we ready? *J Curr Res Sci Med.* 2019;5:1-3.
2. Rustagi SM, Mohan C, Verma N, Nair BT. Competency-based medical education: The perceptions of faculty. *J Med Acad.* 2019;2:1-5.
3. Yograj S, Gupta RK, Bhat AN, Badyal DK, Arora A, Arora A. Perceptions of stakeholders regarding the foundation course. *Indian J Physiol Pharmacol.* 2020;64:S51-S58.
4. Rehan HS, Banerjee I, Suranagi UD, Goyal N. Do pharmacology faculties welcome the new competency-based undergraduate curriculum? A nationwide questionnaire-based study. *Natl J Physiol Pharm Pharmacol.* 2020;10:450-4.
5. Telang A, Rathod S, Supe A, Nebhinani N, Mathai S. Faculty views on competency-based medical education during mentoring and learning web sessions: An observational study. *J Educ Technol Health Sci.* 2017;4:9-13.
6. Mahajan R, Virk A, Saiyad S, Kapoor A, Ciraj AM, Srivastava T, et al. Stages of concern of medical faculty toward adoption of competency-based medical education in India: A multicentric survey. *Int J Appl Basic Med Res.* 2022;12:87-94.
7. Ramanathan R, Shanmugam J, Gopalakrishna SM, Palanisami K, Narayanan S. Exploring the learners' perspectives on competency-based medical education. *J Educ Health Promot.* 2021;10:109.
8. Sharma S, Chhatwal J. Perspectives of undergraduate medical students regarding competency-based curriculum. *Natl Med J India.* 2023;36:379-83.
9. Bell MA, Griffin WJ, Greene JY, Brokaw JJ. Medical students' reactions to a competency-based curriculum: One school's experience. *JIAMSE.* 2008;18:21-7.
10. Saurabh MK, Ranjan A, Patel TK. An evaluation of medical students' perceptions, knowledge, and attitudes about people with disability after attending the learning session on disability competency: A cross-sectional study. *Cureus.* 2024;16(2):e53878.
11. Teli A, Harakuni S, Kamat C. Quantitative and qualitative evaluation of perception of medical faculty toward competency-based medical education for undergraduate curriculum. *BLDE Univ J Health Sci.* 2021;6(2):143-9.
12. Ramanathan R, Shanmugam J, Sridhar MG, Palanisamy K, Narayanan S. Exploring faculty perspectives on competency-based medical education: A report from India. *J Educ Health Promot.* 2021;10:402.
13. Mahalmani VM, Hashilkar NK, Hogade AP, Basavaraj NA. Perception of 2nd-year medical undergraduates regarding the implementation of competency-based medical education in pharmacology. *J Sci Soc.* 2023;50(2):248-53.
14. Selva P, Rithikaa M. Perspectives of students and teaching faculty members towards the new MBBS curriculum in a

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tertiary care hospital in Chennai. Int J
Curr Res Rev. 2021;13:120-6.