

A Cross-Sectional Study of Undergraduate Students' Experiences and Perceptions About Examinations in Community Medicine at a Medical College in North Karnataka

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ABSTRACT

Background: Learning is a two-way process, enhanced by understanding student needs and adapting teaching accordingly. The feedback bridges gap between expectations and outcomes and improve student-teacher communication through assessments and strengthen the process of conducting examination. The Competency Based Medical Education (CBME) framework regards assessment as an integral component of learning. Understanding the student experience is fundamental to strengthening the student-teacher relationship and ensuring the successful implementation of the CBME curriculum.

Objectives: To assess the perceptions and feedback of undergraduate medical students regarding assessments undertaken in the medical college.

Materials and Methods: A cross-sectional study was conducted among 227 undergraduate 3rd year MBBS students of a medical college in North Karnataka for six months. Data was collected using structured validated questionnaire after obtaining the written consent. Data was described in frequencies, percentages and mean.

Results: Out of 227 participants involved in the current study, it was found that, almost all students had satisfactory opinion on the process, pattern and conduction of the assessments in the medical college as per the CBME guidelines.

Conclusion: The unanimous student endorsement of the examination atmosphere, coupled with outstandingly high ratings for its academic content and overall conduct, points to a profound level of student satisfaction.

Keywords: CBME, Feedback, Community Medicine, Assessment

INTRODUCTION

Competency Based Medical Education (CBME) curriculum regards assessment as an important component of learning. CBME introduces various modern teaching methods like case-based learning, evidence-based medicine and problem-based learning, thus imparting a sense of inquisitiveness among students to apply their knowledge and improve skill. [1,2] In the CBME curriculum the focus has shifted to ensure that students acquire skill/competency outcomes.[3] This necessitates evaluation and timely feedback as an integral part of education.[3] The lack of a feedback system could result in a gap in the academic expectations and student's experience, affecting learning outcomes.[4] In the undergraduate level, most competencies are expected to be reached at the level of advanced beginner and some at the competent level of professional task entrusted to a basic Indian medical graduate 3. As this learning takes place, it has to be understood that learning is a two-way process that can be enhanced by understanding the student's learning need and modifying the teaching methods accordingly. [5,6] The students and teachers need feedback and direction at every level of these stages of competency development for helping them progress up the competency ladder. To acquire maximum meaningful knowledge, it is very important to have adequate communication between teacher and students.[7] This is obtained through feedback, which is personalised information based on direct observation, crafted and delivered so that receivers can use this to achieve their best potential. It is generally agreed that assessing the teaching learning pattern and assessment methods at regular intervals and modification of methodologies is a must for improvement in undergraduate medical teaching.[7] Feedback from students about assessments is considered to be the best method to bridge the communication gaps that may exist

between educators and learners. This feedback is an inexpensive and indispensable tool to improve the quality of teaching.[7] Though a lot of verbal and non-verbal feedback is conveyed to the teacher, much of which is conveyed is not documented and analysed. This inspired us to undertake this study and improve student-teacher relation and assess the experience of faculty and students with an objective to assess the perceptions and feedback of undergraduate medical students regarding assessments undertaken in the medical college.

MATERIALS & METHODS

A cross-sectional study was conducted in the Department of Community Medicine of a Medical College in North Karnataka for a period of six months wherein, all the students of 3rd year MBBS studying in the Medical College in North Karnataka who were appearing for the assessments of Community Medicine and willing to participate in the study were included and those not consenting for the participate in the study were excluded from the study. Universal sampling was applied for the sampling and data were collected from third-year medical students after obtaining permission from the concerned authorities and informed consent from the students. Data regarding feedback was received from students on assessments using structured questionnaires.

STATISTICAL ANALYSIS

Data collected was entered in Microsoft Excel sheet and analysed. Descriptive data was expressed in the form of frequency and percentages for categorical variable and mean, standard deviation for continuous variables.

RESULT

The results of the feedback survey conducted among 227 undergraduate 3rd year MBBS students about the assessments

in community medicine and their perceptions and evaluation of the examinations are depicted in table 1 and 2. The results are organized into two sections.

The first section provides a descriptive profile of the assessment process. The second details the respondents' perceived quality ratings of the assessment conducted.

Table 1: Frequencies and Percentages of examination process characteristics

Questionnaire	Yes N (%)	No N (%)
1. Time allotted for different sections of the examination	225 (99.1)	02 (0.9)
2. Have all the candidates been uniformly examined?	227 (100.0)	0 (0.0)
3. Were the atmosphere friendly & allowed candidates to express themselves freely	227 (100.0)	0 (0.0)
4. Were supplementary questions asked by the examiners to gauge the depth of knowledge of candidates	227 (100.0)	0 (0.0)
5. Was the assessment done jointly by more than one examiner?	227 (100.0)	0 (0.0)

Out of 227 participants, 225 (99.1%) found the allotted time for different sections of the examination to be adequate, while only 2 (0.9%) found it inadequate. This indicates that almost all candidates were satisfied with the time allocated for various sections of the examination. The adequacy of time is statistically significant at a descriptive level, showing low variability. All 227 candidates (100%) agreed that they were examined uniformly, indicating a high level of consistency in the examination process. All 227 candidates (100%) reported that the

examination atmosphere was friendly and that they were able to express themselves freely. This reflects a positive and supportive environment during the examination. All 227 candidates (100%) confirmed that supplementary questions were asked consistently, suggesting that examiners uniformly explored the candidates' depth of knowledge. The assessment was conducted jointly for all 227 candidates (100%), indicating a standardized and fair assessment procedure.

Table 2: Examination Quality perception rating analysis

Quality Rating variable	Mean/SD	Min	Maximum
1. Rate the content of the interaction while Viva-Voce (Give extent of coverage of subject, on a scale of 10 where 0=Very poor and 10= Outstanding) Score: 10	9.13 ± 0.89	5	10
2. Standard of the Practical Examination displayed (On a scale of 10 where very poor and 10= Outstanding) Score :10	9.24 ± 0.77	7	10
3. Rate the conduction of examination (On a scale of 10, where 0=very poor and 10= Outstanding) Score :10	9.42 ± 0.74	7	10

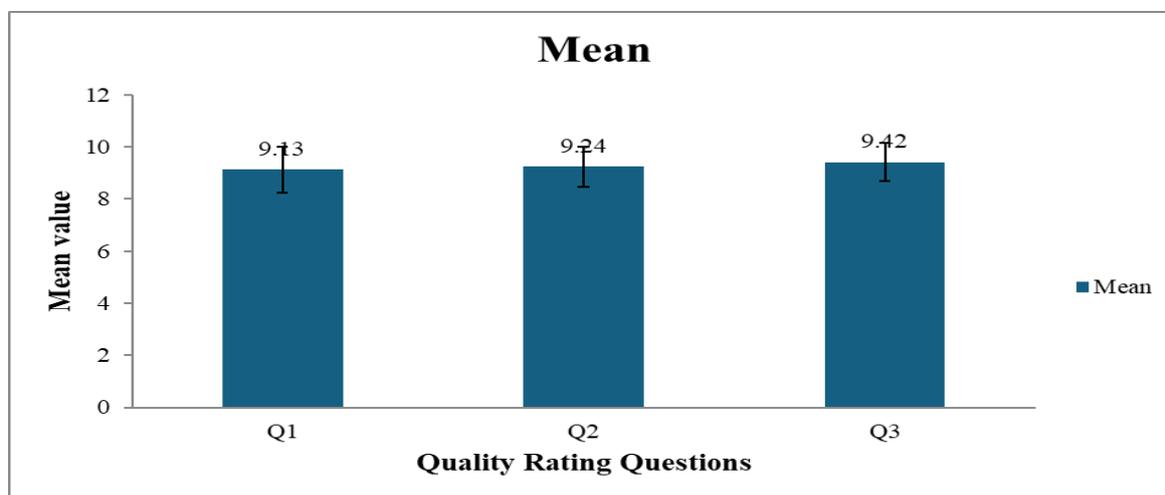


Figure 1: Graph showing the mean scores of perception ratings by the participants

94 (41.4%), of the respondents, rated the content of interaction of viva-voce a perfect 10/10. 79 respondents (34.8%) rated the content 9/10, also indicating very high satisfaction. In total, 96.5% of respondents provided a rating between 8 and 10. Only 3.5% of respondents gave a rating below 8, indicating moderate satisfaction. The mean score was 9.13, and standard deviation of ± 0.89 which signifies a very high level of satisfaction with the content coverage during the viva voce (Table 2, Graph 2). Regarding the standard of practical examination, 99 respondents (43.6%) rated the practical exams as 'outstanding'. 87 respondents (38.3%) rated the exams as 'excellent'. Combined, 186 respondents (81.9%) rated the practical exams as either 'outstanding' or 'excellent'. 38 respondents (16.7%) gave a score of 8. 3 respondents (1.3%) gave a score of 7. The mean score was 9.24, and standard deviation of ± 0.77 showing that most candidates rated the practical exam pattern as excellent, which indicates very high satisfaction. Regarding feedback on the conduction of the examination, 127 (55.9%) of candidates provided an 'outstanding' rating, scoring it 10/10. A further 70 candidates (30.8%) were 'highly satisfied.' 2 candidates (0.9%) scored the experience a score of 7, stating it was 'good'. The mean score was 9.42, and standard deviation of ± 0.74 showing that most candidates rated the conduction of the examination positively as depicted in figure 1

DISCUSSION

The survey of 227 undergraduate medical students assessing various aspects of community medicine examinations revealed overwhelmingly positive feedback. Nearly all participants (99.1%) agreed that the time allocated for each section was sufficient. Even more notably, complete unanimity (100%) was observed regarding key elements of fairness and the learning environment. All respondents confirmed that assessments were conducted uniformly, involved multiple examiners, and included

supplementary questions to evaluate depth of understanding. Furthermore, every student reported that the examination setting was friendly and encouraged open expression. These perceptions are reflected in the high-quality ratings of the exam's academic components. On a 10-point scale, the viva-voce content received an average score of 9.13, the practical examination 9.24, and the overall conduct 9.41. The consistently high means with low standard deviations indicate a strong consensus that the examinations are efficiently organized and uphold excellent academic standards

In medical education, the learning environment is widely acknowledged as a key determinant of academic achievement, professional growth, and student well-being.^[7] The department's success in cultivating a supportive and non-threatening atmosphere represents a notable educational accomplishment. Such conditions promote psychological safety—a state in which learners feel comfortable taking risks, posing questions, and performing without fear of criticism.^[8] Given that high-stakes assessments such as medical examinations often provoke considerable stress and anxiety, this supportive approach helps students better demonstrate their actual competence. The department's procedural rigor appears to directly contribute to the authenticity of the assessment process. Indeed, a fair and friendly environment serves as the foundation for meaningful and rigorous learning. Perceived fairness is central to student satisfaction and plays a decisive role in their acceptance of assessment results, regardless of outcome.^[7] Moreover, the consistent involvement of multiple examiners, reported by all students, aligns with established best practices that enhance objectivity and reliability by reducing individual bias. Through the steadfast application of these strategies, the department has fostered a strong sense of trust among its students—an invaluable strength in any educational context.

The findings of the study closely align with the core tenets of the Competency-Based Medical Education (CBME) curriculum, which India has implemented to transition from traditional, knowledge-oriented instruction to a more comprehensive, skills-driven, and outcome-focused model. [1,2] The CBME framework positions assessment as an essential element of the learning process rather than merely a concluding evaluation. [3] Its goal is to nurture specific competencies that enable graduates to perform as “advanced beginners” or “competent” practitioners prepared for professional practice. [3] The observation that examiners posed supplementary questions to assess the depth of understanding illustrates an evaluation approach designed to engage higher-order cognitive abilities. This method extends beyond rote memory to assess students’ capacity for application, analysis, and synthesis—precisely the cognitive processes that CBME seeks to develop. [5,6]

Additionally, the very process of conducting this study and systematically gathering student feedback reflects a fundamental principle of CBME—the dedication to ongoing quality improvement through active, reciprocal communication between educators and learners. [7] Constructive feedback lies at the heart of competency development, helping bridge the distance between a learner’s current performance and the expected level of proficiency. [5,8] Although this research focused on collecting student opinions about the assessment rather than giving performance feedback, it highlights a departmental culture that values student input. Such a culture is essential for developing a robust feedback framework in which students engage as active contributors rather than passive recipients in their learning experience. [7] This intentional effort to understand the student perspective plays a pivotal role in strengthening faculty-student relationships and in ensuring the effective implementation of the CBME model. [1]

A direct comparison with a similar study conducted by Qamar K, et al. (2016) among medical students in the subcontinent highlights the significance of the current findings. [9] As illustrated in table 1, the level of student satisfaction at the study implementing medical college is substantially higher across several key parameters. For instance, while 78.2% of students in the study by Qamar K, et al. found the allotted time adequate, this figure rises to 99.1% in the present study. The disparity is even more pronounced regarding the conduct of the examination. In the Qamar K, et al. study, 68.5% of students were satisfied with the helpful behaviour of the conducting staff, and some students lodged specific complaints about staff attitudes. In stark contrast, 100% of students in the present study described the atmosphere as “friendly.” Similarly, satisfaction with the overall examination atmosphere was approximately 63.5% in the comparator study, versus a unanimous 100% in this investigation. [9]

The highly favourable feedback from students provides strong affirmation of the department’s existing assessment practices, highlighting them as a significant institutional strength. This positive perception represents a valuable resource that should be intentionally maintained, carefully analysed, and strategically utilized to further advance the educational experience. One of the key challenges in establishing effective feedback mechanisms lies in alleviating student anxiety and fostering an open, receptive learning culture. [8] In the medical college where the study was conducted, the students already view the faculty as equitable, supportive, and encouraging, making them more open to receiving constructive feedback on their performance. Consequently, the department is well-positioned to extend its achievements in summative evaluations by developing a more comprehensive, structured, and dialogic formative feedback system. [3,4] Moreover, the successful experience within Community Medicine—a

discipline central to public health can serve as a valuable model for other departments across the institution.

CONCLUSION

In conclusion, the findings of this study present strong evidence that the Department of Community Medicine has effectively established an assessment environment recognized by third-year MBBS students as highly fair, supportive, and academically demanding. The unanimous student agreement regarding the consistency and friendliness of the examination process, together with the exceptionally high ratings for its academic quality and overall execution, reflects a remarkable degree of satisfaction. This success aligns closely with the foundational principles of Competency-Based Medical Education and represents a distinguished accomplishment in contrast to the varied results frequently noted in broader medical education research. The department's assessment approach serves as an exemplary model for designing evaluation systems that function not only as measures of performance but also as enriching and constructive learning experiences for students.

Declaration by Authors

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