RESEARCH ARTICLE

Evaluation of Perception of Phase 1 and Phase 2 MBBS Students Regarding Aetcom Module Based Learning in a Tertiary Care Teaching Hospital: A Questionnaire Based, Cross-sectional Study

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Abstract

Background: The National Medical Commission introduced Competency-Based Medical Education (CBME) in India, incorporating the Attitude, Ethics and Communication (AETCOM) module to enhance communication skills, ethical competence, and professional behavior among medical undergraduates. Evaluating students' perception of this module is crucial for assessing its effectiveness.

Materials and Methods: This cross-sectional, questionnaire-based study was conducted among Phase 1 (batch 2024–25) and Phase 2 (batch 2025–26) MBBS students at GMC Kathua after Institutional Ethics Committee approval. A self-designed questionnaire comprising 10 items assessing perceptions of AETCOM was administered via Google Forms. A total of 200 responses were analyzed using descriptive statistics and Chi-square test, with $p < 0.05$ considered statistically significant.

Results: Most students did not perceive the module as an academic burden and found it beneficial ($p = 0.01$). Case scenarios and role plays were the most preferred learning methods. Awareness of bioethics principles (93.1 *vs* 49.5%) and institutional ethics committees (80.4 *vs* 52.2%) was significantly greater among Phase 2 students ($p < 0.0001$). The majority of students in both groups agreed that AETCOM improved communication skills, doctor–patient relationships and clinical decision-making. Summative assessment was preferred over formative assessment.

Conclusion: Students demonstrated a positive perception of the AETCOM module with greater awareness among Phase 2 students. Early and enhanced exposure to bioethics and ethics committees is needed for Phase 1 students. Student-centered teaching approaches are needed to strengthen competency development.

Keywords: Students; perception; AETCOM; bioethics; ethical committee

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Introduction

National Medical Commission (NMC) has introduced Competency Based Medical Education (CBME), which is a major transformation in Indian medical education. Strong communication skills play a vital role for strengthening the doctor-patient relationship, improving treatment adherence, patient satisfaction and overall healthcare outcomes. In the year 2019, new AETCOM module (Attitude, Ethics and Communication) has been introduced by Competency Based Medical Education (CBME) curriculum as a means of directly imparting soft skills to undergraduate medical students across India. It is necessary for students to not only learn but also apply the principles of Attitude, Ethics and Communication (AETCOM) in their everyday clinical Interaction. Conventional knowledge-heavy teaching has shifted to more skill-oriented learning model by CBME, placing significant emphasis on developing competencies in ethical behavior, effective communication and professional attitudes.[1] The AETCOM module has been introduced to heip students in acquiring competencies in attitude, ethics and communication.[2] According to this module, specific hours are allocated during each phase of the undergraduate course so that ethics is taught in an integrated and continuous manner during medical training. It has been reported in a study done by Neumann et al (2011) that communication skills training in medical education can lead to improved patient-centred care.[3,4]

Communication module has been introduced in the undergraduate medical curriculum, which is very important. NMC has introduced this module for students admitted from 2019 onwards, before their clinical postings. For example,

during the first phase of MBBS Communication Module 1.4 (Foundation of Communication 1) is delivered, which is followed by Communication Module 2.1 (Foundation of Communication 2) and then bioethics during Phase 2.

The efficiency of AETCOM module in refining the communication skills of medical students has helped the healthcare professionals by causing reduction in malpractice claims and legal issues faced by them.[5,6]

Improvement in communication skills between doctors and patients will lead to higher degree of satisfaction, better patient compliance related to medical advice and overall improvement in health outcomes.[7]The AETCOM module introduced a hybrid model of problem-based learning that encourages students to analyze and understand real life clinical situations which they will face during their medical careers.[8] The main aim of this teaching strategy is to make students as competent physicians, team leaders, communicators, lifelong learners and professionals.[9] Earlier, Indian medical education system was more concerned about the theoretical knowledge over clinical skills and emotional intelligence; but the updated curriculum by the NMC has brought the balanced development of knowledge, skills and empathy.[10,11] The success of the AETCOM module's inclusion into the medical curriculum is dependent upon the student's response and perception of the programme. Therefore, their knowledge, attitude and opinion is critical in finding the impact of module on learning and also its role in shaping future clinical practice and there have been many studies done regarding the evaluation of perception of students regarding AETCOM modules.

However, there is a paucity of research works in literature comparing the students' perception regarding AETCOM module and till no such study has been conducted in our institution, therefore we planned this study to assess and compare perception of phase 1 and phase 2 MBBS undergraduate students in relation to attitude, ethics, and communication modules.

Materials And Methods

This observational, cross-sectional, questionnaire-based study was conducted after obtaining approval from the Institutional Ethics Committee vide no. IEC/GMCK/2025/227 in phase 1 (batch 2024-25) and phase 2 MBBS (batch 2025-26) students of GMC Kathua. A self-designed questionnaire comprising of 10 close-ended questions regarding student's perception on AETCOM module was administered to them as a google form which was disseminated as a link.

The responses obtained from phase 1 and phase 2 students were recorded and compared.

Inclusion Criteria

- All phase 1 and phase 2 MBBS students of GMC Kathua who had attended sessions on AETCOM modules in their physiology and pharmacology classes respectively.
- All students who were willing to participate were included in the study.

Exclusion Criteria

- Students not willing to participate
- Students who had not attended the AETCOM sessions and
- Those who had incompletely filled the google form were excluded from the study.

Statistical Analysis

The data was compiled and entered into Microsoft Excel. Descriptive statistics were employed for data analysis and the results were expressed as numbers and percentages. Chi square test was used for finding out if there were statistically significant differences in the responses given by the two batches of students i.e. phase 1 and phase 2. The *p-value* <0.05 is considered statistically significant.

Results

A total of 87 out of 100 (87%) students from phase 2 MBBS and 113 out of 150 (75.3%) students from phase 1 MBBS participated in the study. A total of 200 filled google forms were received with a response rate of 80%. Among the 200 students, 93 were males (46.5%) and 107 were females (53.5%) with a mean age of 20 years (Figure 1). 84 students of 2nd phase (96.5 %) and 100 students of 1st phase (88.4%) were aware of the addition of the AETCOM module in the MBBS syllabus (*p-value*=0.03, statistically significant). 82 students of 2nd phase (94.3%) and 93 students of 1st phase (82.4%) did not feel that AETCOM modules have created unnecessary burden on them when asked and found them to be interesting, while the rest of the students felt AETCOM modules put burden on them (*p-value*=0.01, statistically significant).

Regarding the preferred learning method of 2nd phase MBBS students, 51 (58.6%) students chose case scenarios as their preferred way of learning followed by role plays (44.8%) and small group discussions (40.2%). Majority of 1st phase MBBS students also (52.2%) preferred case scenarios followed by role plays (40.7%) and video clips (37.1%) as their preferred learning methods. Out of all the preferred learning methods, statistical significance between the groups (*p-value*=0.01) was observed in debates as a learning method (phase 2nd - 16.09% Vs phase 1st -31.8%) (Table 1).

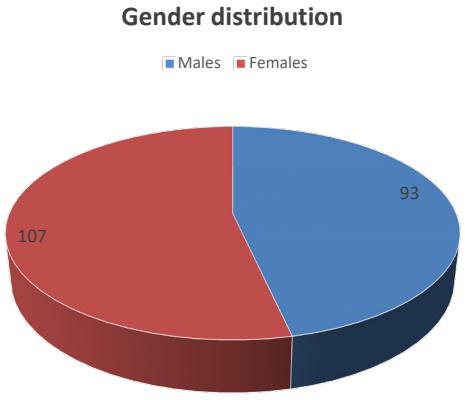

Figure 1: Showing Gender distribution of participating students (n=200)

Table 1: Comparison of the responses in percentages among phase 1 and phase 2 MBBS students

Question no.	*Phase 2 (%)*	*Phase 1(%)*	*p-value*	*Result*
Yes, students are aware of AETCOM modules	96.5	88.4	0.03	S
AETCOM modules don't create burden for exams	94.3%	82.4	0.01	S
Preferred learning method a.Case scenario	58.6	52.2	0.3	NS
b.Role play	44.8	40.7	0.5	NS
c.Small group discussion	40.2	35.5	0.4	NS
d.Debates	16.09	31.8	0.01	S
e.Video clips	26.43	37.1	0.1	NS
f.Lecture by teacher	35.6	30.08	0.4	NS
g.Seniors	11.4	11.5	0.9	NS
h.Others	6.8	7.9	0.7	NS

Table 2: Comparison of the responses in percentages among phase 1 and phase 2 MBBS students

Question no.	*Phase 2 (%)*	*Phase 1(%)*	*p-value*	*Result*
Summative assessment is the preferred assessment method	67.9	71.68	0.5	NS
Yes, knowledge about ethics is important	98.8	99.1	0.8	NS
Yes, students are aware of medical ethics committee	80.4	52.2	<0.0001	HS
Yes, AETCOM helps in improving doctor patient relationship	98.8	98.2	0.7	NS
Yes, students are aware of bioethics principles	93.1	49.5	<0.0001	HS
Yes, student's behaviour changed towards patients after AETCOM session	91.1	88.4	0.53	NS
Yes, AETCOM impacted student's clinical decision making capacity	90.8	82.3	0.08	NS

Regarding the assessment of AETCOM competencies, 59 (67.9%) students of 2nd phase and 81 (71.68%) students of 1st phase felt summative assessment (SA) in the form of Short questions in theory exams is more effective evaluation method of AETCOM competencies than formative assessment (FA) in the form of complete logbooks and practical exams (*p-value*=0.5, statistically insignificant). When asked whether they think knowledge about medical ethics is important during MBBS, 86 (98.8%) students of 2nd phase and 112 (99.1%) students of 1st phase students gave a positive response and said yes to the above statement (*p-value*=0.8, statistically insignificant). Regarding awareness about medical ethics committees in the college, 70 (80.4%) students of 2nd phase and only 59 (52.2%) students of phase 1st were aware of its existence in the college, while rest of the students were unaware (*p-value* <0.0001, statistically highly significant) (Table 2).

Almost all students (86 students of 2nd phase- 98.8% and 111 students of 1st phase- 98.2%) opined that attending AETCOM sessions helped in improving their relationship with the patients (*p-value*=0.7, statistically insignificant).

When asked whether they are aware of the four cardinal principles of bioethics, 81 (93.1%) students of 2nd phase were aware while only 56 (49.5%) students of 1st phase were aware of principles of bioethics indicating lack of awareness among 1st phase students (*p-value*<0.0001, statistically highly significant). 80 (91.1%) students of 2nd phase and 100 (88.4%) students of 1st phase believed that after attending AETCOM classes, their behaviour towards the patients has changed while the remaining students did not believe that it has led to any changes (*p-value*=0.53, statistically insignificant). Regarding the impact of AETCOM session on clinical decision making, 79 (90.8%) students of 2nd phase and 93 (82.3%) students of 1st phase responded in affirmation while the rest of the students did not see any change in their decision making capacity (*p-value*=0.08, statistically insignificant) (Table 2).

Discussion

Knowledge of attitude, ethics and communication skills play a huge role in the medical profession. Therefore, AETCOM module has been introduced in the MBBS curriculum starting from the first year itself. Teaching AETCOM modules to the undergraduate medical students will improve their communication and attitude towards patients, thereby enhancing doctor patient relationship and

patient satisfaction. [12] We conceived this study so as to do a comparison between phase 1 and phase 2 MBBS students regarding perception towards AETCOM modules as there is a scarcity of similar research works in the past. In the present study, 84 students (96.5%) of 2nd phase and 100 students (88.4%) of 1st phase reported being aware of the addition of the AETCOM module in the MBBS curriculum which suggests that 1st year MBBS students had lower awareness as compared with 2nd year students, maybe because 2nd year students have had greater exposure to the medical curriculum, more interaction with faculty and more clinical experience. 86 students of 2nd phase (98.8%) and 111 students of 1st phase (98.2%) opined that AETCOM is essential for effective communication with patients. Similar results were observed in some other studies which showed that AETCOM sessions help in building stronger doctor patient relationship.[13,14,15]

In the present study, when asked about whether the incorporation of the AETCOM competency module into the main curriculum burdens them in the exams, 82 students of 2nd phase (94.3%) and 93 students of 1st phase (82.4%) opined it is not a burden on them while the rest felt they do get little bit nervous during exams because this adds up to the already heavy syllabus. Our results are in accordance with a study conducted by Shanmugam et al. [16] More number of 1st year students perceived AETCOM as an additional burden compared with 2nd year students which may be due to the transition from school education to the medical education. During the 1st year of MBBS, students are adapting to a vast syllabus, new learning methods and professional expectations. So the introduction of AETCOM modules may initially be viewed as extra burden rather than as an integral part of curriculum.

In our study, 51 (58.6%) students of 2nd phase chose case scenarios as their preferred way of learning followed by role plays (44.8%) and small group discussions (40.2%). Majority of 1st phase MBBS students also (52.2%) preferred case scenarios followed by role plays (40.7%) and video clips (37.1%) as their preferred learning method. Our findings are in concordance with a study conducted by Ganguly B et al who reported that majority of students preferred case scenario-based teaching as a learning method. Other teaching methods preferred were role play and audio-visual film-based teaching. Students are more interested in student centric ways of learning where they are more involved and learn by doing themselves.[17]

59 (67.9%) students of 2nd phase and 81 (71.68%) students of 1st phase felt summative assessment (SA) in the form of Short questions in theory exams is more effective evaluation method of AETCOM competencies than formative assessment (FA) in the form of complete logbooks and practical exams. Our results are in contrast to the study carried out by Rekha et al where most students opined FA was the most appropriate method for assessing AETCOM modules.[9] FA is a continuous and repetitive process in nature where as SA is at the end of learning session and assesses overall knowledge of a student. In our study, students were more in favour of SA in the form of theory exams. Regarding awareness about medical ethics committees in the college, 70 (80.4%) students of 2nd phase and only 59 (52.2%) students of phase 1st were aware while rest of the students had no idea about ethics committee. In this study, 81 (93.1%) students of 2nd phase were aware of bioethics principles while only 56 (49.5%) students of 1st phase were aware of principles of bioethics. Our findings are in agreement with a study conducted by Vani M where 79% of the students were aware of its existence, while 21% were not. [18] This study found that 1st year MBBS students had lower awareness regarding the college's Institutional Ethics Committee and the principles of Bioethics compared with 2nd year students. Relatively less exposure of 1st year students to formal teaching in ethics, institutional processes and academic activities may be accountable for limited knowledge of 1st year students about ethics committee.

These findings suggest that introducing orientation and training sessions on the Institutional Ethics Committee and basic bioethics principles early in the 1st MBBS year may improve awareness and strengthen understanding of ethical committee and bioethics from the beginning of undergraduate medical education.

Conclusion

We conclude that there are significant differences regarding knowledge about principles of bioethics and medical ethics committee among phase 1 and phase 2 MBBS students due to limited training on AETCOM modules in 1st year. Case scenarios and Role plays are perceived as effective ways of learning methods. Students believed that AETCOM modules have enhanced their clinical decision making, communication skills and it is an essential part of their curriculum. The findings of our study highlight the need for medical colleges to focus on teaching and training the undergraduates on bioethics, institutional ethical processes, student centric learning methods to make them capable and compassionate medical professionals in the future.

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Conflict of Interest

None declared.

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