Original Research Article

Stakeholders' Perspectives on Implementation of Early Clinical Exposure for I-MBBS Students in a Tertiary Institution: A Qualitative Study

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Abstract:

Background: Early Clinical Exposure (ECE) introduces first-year MBBS students to clinical environments, enhancing their understanding of pre-clinical subjects through real-world application. **Aim:** To explore faculty perspectives on the implementation of ECE for I-MBBS students in a tertiary care medical institution. **Materials and Methods:** A qualitative study was conducted using focus group discussions among 40 faculty members from preclinical, paraclinical, and clinical departments. Participants were grouped by department and engaged in sessions lasting 60–90 minutes. Thematic content analysis was conducted using Braun and Clarke's six-phase approach. **Results:** Four key themes emerged: general perspectives on ECE, faculty preparedness, human resource requirements, and time constraints. While most preclinical faculty supported ECE, others cited challenges such as lack of training, insufficient staffing, and limited time allocation for ECE activities. **Conclusion:** Faculty acknowledged the value of ECE in aligning basic sciences with clinical relevance. However, successful implementation requires enhanced faculty development programs, resource allocation, and curriculum planning.

Keywords: clinical Education, curriculum, early exposure, faculty development, medical students

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Introduction :

Medical education has transitioned from traditional didactic methods to competency-based frameworks, with the 2019–2020 MBBS batch marking the introduction of Competency-Based Medical Education (CBME) in India.[1] The shift emphasizes holistic care, ethical practice, and scientific acumen among Indian Medical Graduates (IMGs). One of the notable CBME components is Early Clinical Exposure (ECE), aimed at integrating basic and clinical sciences and enhancing relevance in preclinical training.[2]

ECE exposes students to real clinical environments, thereby building their confidence, motivation, and awareness about future roles as physicians.[3] Globally, ECE has been implemented in multiple forms, demonstrating favorable outcomes in terms of early professional identity formation and empathy development.[4] In India, the Medical Council has earmarked 90 hours of ECE in the first year to be distributed equally among the

preclinical departments.[5] Revised schedule has only 30hrs for ECE 3hrs per session for 10 months

Despite its growing importance, discrepancies exist in how ECE is perceived and implemented, especially regarding time constraints, faculty training, and resource adequacy.[6] This study explores the perceptions of stakeholders actively involved in ECE at a tertiary institution.

Materials and Methods:

This qualitative study was conducted in 2023 among faculty members from various departments involved in ECE sessions for I-MBBS students after getting informed consent. A total of 40 faculty members, including preclinical, paraclinical, and clinical disciplines, participated in focus group discussions (FGDs) conducted in six sessions (6–8 participants per session). Participants were selected using purposive sampling.

Inclusion criteria: Faculty members (Assistant Professors and above) from preclinical, paraclinical, and clinical departments who were actively involved in delivering ECE sessions to I-MBBS students. All faculties preclinical, paraclinical departments (10,8) clinical departments (Medicine allied sciences (Medicne, Pediatrics, Psychiatry, Emergency Medicine) 11 members except one faculty who attended 2days and skipped last day due to unavoidable emergency work.

Exclusion criteria: Faculty members below the rank of Assistant Professor or those not involved in ECE delivery during the study period were excluded. The department-wise composition was:

- Preclinical Departments (Anatomy, Physiology, Biochemistry): 10 members
- Paraclinical Departments (Pathology, Microbiology): 8 members
- Clinical Departments (Medicine, Emergency Medicine, Pediatrics, Psychiatry): 12 members
- Clinical Departments (Surgery, OBG, ENT, Ophthalmology, Orthopedics): 10 members

FGD was conducted in 6 sessions, each group with 6-8 members, the discussion lasted for 60 min to 90min.This was carried out by principal investigator. The moderator for the session first explained background of the study to the participants, conducted the session by asking open ended questions like

- General perception of faculties about ECE
- Whether ECE has to be implemented for IMBBS students as a part of CBME revised curriculum,
- If so at what time it can be implemented,
- Whether it helps the students to understand the concepts better,
- Whether it helps in clinical correlation of basic sciences,
- How to increase the awareness about this implementation to faculties,
- Preparedness of faculty for ECE,
- What are the time and resource constraints faced by them.

FGDs were moderated by the principal investigator, and open-ended questions guided the discussions. Sessions lasted between 60–90 minutes. Data collection adhered to ethical guidelines, with approval obtained from the Institutional Ethics Committee. Digital informed consent was secured. Each session had a designated Assistant Professor serving as the recorder, documenting responses verbatim. Only faculty of the rank of Assistant Professor and above were included. Thematic content analysis was performed using Braun and Clarke's six-phase framework.[7] The six steps followed in the analysis process are illustrated in Figure 1.

Figure 1: Braun and Clarke's six-phase framework for thematic analysis

Thematic codes were generated using a coding manual. The visual outlines a step-by-step approach including familiarization, code generation, theme development, review, significance determination, and reporting of findings, providing clarity on the structured process used for data analysis in this study.

The six steps followed in the analysis process are illustrated in Figure 1. Thematic codes and direct verbatims were used to develop categories and interpret perspectives.

Results:

Theme 1: General Perspectives on ECE Seventy-five percent (30 out of 40) of preclinical faculty welcomed ECE as a positive curricular reform. However, 25% (10) of faculty from paraclinical and clinical departments expressed concerns over the timing and perceived added burden of ECE. Some clinical faculty suggested its implementation only after foundational knowledge is established, such as in the latter half of the first year or Phase II. Respondents described ECE as "old wine in a new bottle" and voiced concerns that it was being rushed without adequate groundwork.[8]

Theme 2: Faculty Preparedness Faculty unanimously identified inadequate training as a critical barrier. Several were unaware of ECE's structure within the CBME curriculum. Those trained through the Curriculum Implementation Support Program (CISP) considered it insufficient for ECE delivery. Calls were made for local faculty development programs and improved access to nodal and regional training centers, which currently restrict participation to only two faculty per institution.[9] MEU-trained faculty also emphasized the need for additional support in teaching soft skills such as communication and empathy.[10]

Theme 3: Human Resource Requirements Nearly all respondents (97.5%) stated that existing faculty numbers are insufficient to handle ECE, especially given its small-group delivery model. Participants advocated for training Tutors, Senior Residents, and Postgraduates to aid in ECE, allowing senior faculty to focus on final-year students.[11]

Theme 4: Time Constraints Most faculty felt ECE-related planning, sensitization, and execution are time-consuming. The allocated 12 hours per department was viewed as inadequate, and many suggested increasing the duration to at least one month. Others proposed integrating ECE within current lecture schedules rather than adding separate hours.[12]

Table 1: General perceptions of ECE among faculty members

1.CODE/THEME	SUBTHEME	PARTICIPANT RESPONSES (VERBATIM)
General perspective	Curriculum—revision of curriculum	Need to revise the existing curriculum with small incremental changes

	Time of implementation of ECE	Can be implemented for 1st MBBS students during last 3months after completing almost all portions after acquiring basic knowledge in each subject
	Training of undergraduates	1. Class room setting can be done with help of videos, case scenario discussion, bringing patient to classroom to show the findings 2. Clinical finding helps the students to correlate with basic sciences better than traditional way of teaching 3. It can be done under clinical setting by showing cases in the wards
	Burden for students	1. Since the duration of course is only 13months instead of 18 months it over burden the students. 2. They find it difficult to read the basic subjects since time for reading basic sciences is short.

Themes include perceived value, timing concerns, and familiarity with the concept. Data reflect faculty distribution across preclinical, paraclinical, and clinical departments.

Table 2: Reported faculty preparedness and training needs

2.CODE/THEME	**SUB THEME**	**PARTICIPANT RESPONSES(VERBATIM)**
Nodal centre	Training requirements	1. Faculty preparedness is inadequate 2. Faculty training is need of hour 3. Most of clinical departments are unaware of ECE in new curriculum 4. training is necessary and should be done in large numbers 5. Quicker and more sessions of faculty training on ECE are needed first 6. ECE can be implemented after training all faculties for better results 7. Conduct training of trainers (tot) for faculty development programs, increase the number of training centres, training sessions and number of participants per session. 8. MEU trained teachers express inadequate training in 3days CISP program 9. they feel frequent meetings should be conducted among faculties to revise this implementation 10. Non-MEU trained faculties express the inability to attend at nodal centre as only 2 faculties per

		college are allowed to attend the program, they request the need for faculty development programs in the same institution to train more faculties
ECE document	Availability in department	1. Hard and soft copy should be available in each department 2. Frequent discussion with ECE members of each department for better implementation of ECE

Captures awareness of CBME structure, CISP training status, and need for soft skills training. MEU and nodal training center limitations are highlighted

Table 3: Human resource requirements for effective ECE delivery

3.CODE/THEME	SUB THEME	PARTICIPANT RESPONSES (VERBATIM)
Resources	need for additional human resources	1. There is dire need for improving faculty members as soon as possible 2. Faculty: students' ratio is inadequate more faculties are needed to carry out small group discussion. 3. Request training of Tutors, Senior Residents, Postgraduates also for ECE since the senior faculties have to concentrate on final MBBS students

Summarizes perceptions on faculty sufficiency, demand for PG/SR involvement, and administrative recommendations.

Table 4: Reported time constraints and recommendations

4.CODE/THEME	SUB THEME	PARTICIPANT RESPONSES(VERBATIM)
Time duration	Teaching hours	1. Planning, implementing, framing SLOS for ECE is time consuming 2. Sensitizing, training staff in implementation of ECE needs more time 3. Students are posted for ECE only for short duration 12hrs (3hrs per department per week) which will not be beneficial much for the students, duration should be increased to one month to have better understanding or they can be asked to read the basic sciences in depth in allotted teaching hours for ECE

Reflects challenges in current ECE time allocation, calls for integration into existing curriculum, and optimal scheduling duration.

The qualitative data was analyzed using manual, theoretical thematic content analysis following the steps endorsed in Braun and Clarke's six-phase framework.

The transcripts were read and re-read to ensure familiarity with the data corpus. Also, the notes were made, and early impressions jotted down. The data was then organized in a systematic meaningful way by generating codes. Because each open-ended question was thematically enquired about, the data was thematically sorted to start with. However, it was ensured whether the themes make sense, data supports these themes, trying to fit too much into a theme, overlaps, subthemes within predetermined themes, or other novel themes within the data. The results were presented according to themes (n = 4). Under each theme, codes and supportive manually chosen verbatims were provided.

Discussion:

The findings indicate a broadly supportive stance toward ECE among preclinical faculty, while highlighting ambivalence from clinical and paraclinical staff. The concerns expressed relate primarily to timing, resource allocation, and preparedness for delivery. Similar patterns have been documented in studies assessing CBME rollouts across institutions, particularly where rapid curricular reforms outpace training infrastructure.[13]

The faculty training gap highlighted by respondents mirrors global trends in CBME adoption, where structured faculty development remains the cornerstone of sustainability.[14] Insufficient exposure to MEU training and time constraints reduce the ability of faculty to meet CBME objectives. The suggestion to decentralize training programs to institutional levels is both practical and echoed in existing literature.[15]

On the matter of staffing, the demand for additional human resources aligns with studies showing that ECE's small-group format necessitates more facilitators than traditional lecture formats. The inclusion of trained residents and postgraduates has been proposed by other institutions as a scalable interim solution.[16] However, for long-term viability, dedicated posts or workload redistribution may be necessary.

Time constraint remains a cross-cutting theme. The challenge of fitting ECE into already saturated schedules echoes earlier critiques about overly compressed medical curricula. The recommendation to embed ECE within standard teaching blocks—rather than as an add-on—could alleviate the strain, a strategy supported by previous academic models.[17]

The overall perception of ECE as an "integration tool" aligns with its core purpose: to contextualize basic science learning. Faculty acknowledged its role in improving clinical correlation and boosting student engagement. However, as other authors have noted, effective implementation hinges not just on conceptual buy-in, but logistical feasibility.[18]

Furthermore, Ramachandran et al. emphasized the importance of interactive clinical anatomy sessions, which aligns with participants' view that applied, patient-based sessions enhance understanding better than traditional lectures.[19] Similarly, Dornan et al. discussed the role of apprenticeship-based learning in promoting empathy, which supports the argument for ECE inclusion in early years.[20] Lastly, Schmidt et al. argued that problem-based learning approaches like ECE result in more context-aware and motivated learners which correlates with present study.[21]

In a study by Singh RA majority of the students reported that ECE helped them in understanding and knowledge of the topic and provides them an exposure to reality of patient care and medical environment.[22] Students also expressed the need for increasing the frequency and duration of ECE

sessions which was contradictory to the views of faculty in our study.

Study by Neetha Shastry et al, shows that Most of the faculty interviewed considered the use of simulation in ECE as an excellent adjunct to teaching in a clinical setting.[23] However, the faculty also noted a few challenges, such as fidelity, time constraints and the ratio of students to faculty members, in implementing SB-ECE which correlates with present study.

Conclusion:

The study revealed generally positive attitudes toward ECE implementation among faculty, particularly those from preclinical backgrounds. However, the initiative is challenged by constraints in training, manpower, and scheduling. Addressing these issues through institution-specific training, redistribution of faculty workload, and integration into existing timetables can facilitate smoother adoption.

Faculty development remains a pivotal enabler, especially in equipping educators with pedagogical and soft skills necessary for holistic training. The perspectives captured here suggest that ECE is a valuable innovation in undergraduate medical education, but its potential can be realized only through collaborative efforts in curricular planning and capacity building.

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