

Questionnaire- Based Assessment of the Attitude of Medical Students towards Implementation of Early Clinical Exposure Module in First Professional Year Subjects

Pallavi Sahay¹, Bhawna Sahay², S. K Karn³

¹Tutor, Department of Anatomy, Darbhanga Medical College and Hospital, Laheriasarai, Darbhanga, Bihar, India

²Senior Resident, Department of Pathology, AIIMS, Patna Bihar, India

³Associate Professor and HOD, Department of Anatomy, Darbhanga Medical College and Hospital, Laheriasarai, Darbhanga, Bihar, India

Received: 08-01-2024 / Revised: 11-02-2024 / Accepted: 27-03-2024

Corresponding Author: Dr. Bhawna Sahay

Conflict of interest: Nil

Abstract

Aim: The aim of the present study was to assess the attitude of MBBS students towards implementing ECE modules in their 1st professional year subjects.

Methods: This study was a Questionnaire- based conducted in the Department of Anatomy, Darbhanga Medical College and Hospital, Laheriasarai, Darbhanga, Bihar, India from November 2020 to October 2021

Results: The study included 298 MBBS students in their second and third professional years. Their attitude towards implementing the Early Clinical Exposure (ECE) module in first professional year subjects was assessed using a feedback questionnaire using a 5-point Likert scale, and the results were tabulated. Many students strongly agreed that the ECE module changed their perspective on learning pre-clinical subjects, helped them better assimilate knowledge, and sensitized them to the clinical setting. Additionally, most students expressed satisfaction with the number of hours allotted to each subject and believed that the ECE teaching method enhanced their understanding of the topics.

Conclusion: ECE allows students to contextualize their theoretical knowledge by exposing them to real-world clinical settings early in their training. This helps students understand the relevance of their studies to clinical practice from the outset. By observing and interacting with patients, medical students can develop essential clinical skills such as communication, history-taking, physical examination, and bedside manner. It provides opportunities for students to hone these skills under supervision. Exposure to clinical environments early in medical training instills professionalism, empathy, and ethical values in students.

Keywords: Early Clinical Exposure, Modules, Students' Attitude, Competency-Based Undergraduate Curriculum, Professional Years, Medical Education, Implications

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

Today, India has 542 medical colleges means the highest number of colleges in the world. [1] This growth has been occurred in the past two decades in response to the escalating demand of doctors due to the increasing healthcare needs of our country. The most significant challenge for the regulatory bodies like the Medical Council of India (MCI) is to maintain equilibrium between the need for more medical colleges and simultaneously improvement in quality standards. [2] In the last two decades, tremendous changes are observed in medical education reforms and learning styles/approaches in India. Their impact on medical education and medical students is under study process by the

number of expert local as well as international medical education communities. [3]

In India current new CBME reforms (Competency-Based Medical Education) the MCI has included early clinical exposure in undergraduate medical curriculum. MCI instructed inclusion of early clinical exposure from foundation course. [4] As per the new curricula, student should be competent and works as the first contact of the community with having requisite knowledge, skills, attitudes, values and responsiveness, as per IMG (Indian Medical Graduate) concept. [5]

With this view undergraduate medical education is now shifting towards new curricular model

'competency-based education' with specified competencies, objectives and standardized approaches. [6] With these changes Indian Medical Education is in phase or compulsion to be adopting newer teaching methodologies that will suit for local needs and will be responsible for greater outcome. As a part of these reforms MCI introduced early clinical exposure (ECE) as one of the important intervention in Medical teaching. It is stated in literature, ECE helps to relieve stress of the students pertaining to patient handling, developing real-time clinical reasoning ability, communication skills, professional attitude and patient empathy. [7] With this view this study was planned to assess effectiveness of early clinical exposure in improving attitude and communication skills in the Indian medical education set up. Advantages of early clinical exposure proved in the research literature are that ECE plays an important role in understanding basic clinical terms, making easier transition from layperson to student physician, provide an opportunity to bring social relevance and contextualize basic science learning, provide teaching and learning of basic clinical skills, enhances student motivation and encourages the students to learn professional behavior. [8-11]

The aim of the present study was to assess the attitude of MBBS students towards implementing ECE modules in their 1st professional year subjects.

Materials and Methods

This study was a Questionnaire- based conducted in the Department of Anatomy, Darbhanga Medical College and Hospital, Laheriasarai, Darbhanga, Bihar, India from November 2020 to October 2021

Inclusion criteria: This study included MBBS students of 2nd and 3rd professional years who had undergone the full 90 hours of ECE module teaching of all three preclinical subjects in their first year and volunteered to participate after sensitization.

Exclusion criteria: Students who did not volunteer to participate in the study and those who had not been exposed to the full 90 hours of ECE module were excluded.

Study Population: All the MBBS students fulfilling the inclusion criteria, 298 (from the 2nd and 3rd professional years combined).

Data collection procedure and analysis: A feedback questionnaire on the ECE module, mainly designed and validated after consulting experts in the related field, was given to the volunteering students at a pre-specified day, date, and time in the Department of Anatomy, Sarjug Dental College Darbhanga, Bihar, India.

Results

Table 1: Feedback Questionnaire: This questionnaire uses a 5-point Likert scale to assess the attitude of MBBS students towards implementing the Early Clinical Exposure (ECE) module in first professional-year subjects

Items	Strongly disagree-1	Disagree-2	Neutral-3	Agree-4	Strongly agree-5
ECE has changed my perspective of learning subjects	6.50%	11.30%	17.50%	21.70%	43%
ECE has helped me in understanding of applied aspects of the topic	4.60%	12%	19.40%	23.90%	40.10%
ECE is an enjoyable method for learning compared to traditional lecture as it breaks the monotony of didactic lectures	5.20%	15.20%	18.80%	19.10%	41.70%
The number of hours of ECE allotted to each subject were satisfying	3.50%	11.70%	24.60%	15.50%	44.70%
ECE helped me to be sensitized to the clinical setting	2.90%	9.40%	17.50%	21.70%	48.50%
ECE helped me in better assimilation of knowledge on the topic	2.30%	10.70%	21%	19.40%	46.60%

The technique will better equip me to apply the knowledge when the opportunity arises	6.20%	13.30%	18.10%	18.40%	44%
Learning of 1st professional year subjects has been satisfying with the use of ECE	6.40%	12%	19.10%	23%	39.50%
I am confident about the knowledge and skills thus acquired	6.50%	12.30%	19.40%	19.40%	42.40%
The method of teaching has enhanced my knowledge than what it was	10.30%	9.70%	14.90%	21.70%	43.40%

The study included 298 MBBS students in their second and third professional years. Their attitude towards implementing the Early Clinical Exposure (ECE) module in first professional year subjects was assessed using a feedback questionnaire using a 5-point Likert scale, and the results were tabulated. Many students strongly agreed that the ECE module changed their perspective on learning pre-clinical subjects, helped them better assimilate knowledge, and sensitized them to the clinical setting. Additionally, most students expressed satisfaction with the number of hours allotted to each subject and believed that the ECE teaching method enhanced their understanding of the topics.

Discussion

The ECE module emphasizes the beginners' correlating learning in first professional-year subjects with their clinical application. Learning basic sciences with respect to a clinical context can improve students' motivation to learn and retention. It also provides an early introduction to immersion into the clinical environment. The clinical context includes case scenarios, videos, actual patients, simulated patients, etc. [12] Thus, ECE acts as a bridge between preclinical and clinical disciplines. This would help future doctors rationalize the diagnosis and management of diseases. It is mainly achieved by horizontal and vertical integration among different MBBS subjects. [13,14]

The study included 298 MBBS students in their second and third professional years. Their attitude towards implementing the Early Clinical Exposure (ECE) module in first professional year subjects was assessed using a feedback questionnaire using a 5-point Likert scale, and the results were tabulated. Many students strongly agreed that the ECE module changed their perspective on learning pre-clinical subjects, helped them better assimilate knowledge, and sensitized them to the clinical setting. Additionally, most students expressed satisfaction

with the number of hours allotted to each subject and believed that the ECE teaching method enhanced their understanding of the topics. The cross-sectional study done by Tayade MC et al. was carried out amongst 820 students for three years, wherein the students were randomly divided into two groups viz. ECE exposed group (Group A) and traditional teaching exposed group (Group B). Periodical sessions were conducted (60 minutes each), and a validated 10-point questionnaires for feedback collection was used. [15]

In the experimental study conducted by Chimmalgi M et al., the primary objective was to determine if ECE and E-learning can be effective alternative methods of teaching anatomy for first-year medical students. It was concluded that ECE can be an effective method to teach anatomy in the described format. E-learning did not improve the test scores in the self-study format used in this study, but 3D visualization can benefit the students when used as an adjunct to traditional methods. [16] In the study done by Meshram SW et al., 100 medical students in first-year MBBS courses were divided into two groups, group A and group B. Both groups were exposed to a pre-test. Then, a didactic lecture was given to group B, and group A was taught a topic similar to the patients', which means group A was exposed to early clinical settings. Again, the post-test was taken for both groups, and the results of the post-test for both groups were compared. [17]

Conclusion

ECE allows students to contextualize their theoretical knowledge by exposing them to real-world clinical settings early in their training. This helps students understand the relevance of their studies to clinical practice from the outset. By observing and interacting with patients, medical students can develop essential clinical skills such as communication, history-taking, physical examination, and bedside manner. It provides

opportunities for students to hone these skills under supervision. Exposure to clinical environments early in medical training instills professionalism, empathy, and ethical values in students. It helps them understand the responsibilities of healthcare providers and the importance of patient-centered care. This training method encourages a culture of lifelong learning by emphasizing the importance of staying curious, seeking out new knowledge, and continuously improving clinical skills throughout one's medical career. Overall, implementing ECE modules in medical education contributes to producing well-rounded, competent, and compassionate healthcare professionals who are better prepared to meet the challenges of clinical practice.

References

1. Goswami S. Problems and challenges in medical education in India. *Eur J Contemp Educ.* 2015;11:31–7.
2. Ogur B, Hirsh D, Krupat E, Bor D. The Harvard Medical School-Cambridge integrated clerkship: An innovative model of clinical education. *Acad Med.* 2007;82:397–404. [PubMed] [Google Scholar]
3. Lawley TJ, Saxton JF, Johns MM. Medical education: Time for reform. *Trans Am Clin Climatol Assoc.* 2005;116:311–20.
4. MCI Early Clinical Exposure for Undergraduate Medical Education Program 2019, Delhi. 2019.
5. AETCOM Module, Medical Council of India, Delhi. 2018.
6. Jacob KS. Medical council of India's new competency-based curriculum for medical graduates: A critical appraisal. *Indian J Psychol Med.* 2019;41:203–9.
7. Das P, Biswas S, Singh R, Mukherjee S, Ghoshal S, Pramanik D. Effectiveness of early clinical exposure in learning respiratory physiology among the newly entrant MBBS students. *J Adv Med Educ Prof.* 2017;5:6–10.
8. Kar M, Kar C, Roy H, Goyal P. Early clinical exposure as a learning tool to teach neuroanatomy for first year MBBS students. *Int J Appl Basic Med Res.* 2017;7(Suppl 1):S3 8–41.
9. Verma M. Early clinical exposure: New paradigm in medical and dental education. *Contemp Clin Dent.* 2016;7:287–8.
10. Khabaz Mafinejad M, Mirzazadeh A, Peiman S, Khajavirad N, Mirabdolhagh Hazaveh M, Edalatifard M, et al. Medical students' attitudes towards early clinical exposure in Iran. *Int J Med Educ.* 2016;7:195–9.
11. Shah N, Desai C, Jorwekar G, Badyal D, Singh T. Competency-based medical education: An overview and application in pharmacology. *Indian J Pharmacol.* 2016;48(Suppl 1):S5–9.
12. Medical Council of India. Early Clinical Exposure for the Undergraduate Medical Education Training Program. 2019:1-43.
13. Sheshgiri C, Komala N, Ashwini CA. Early Clinical Exposure in Anatomy. *Natl J Integr Res Med.* 2017; 8(5):53-56.
14. Gune AR, Nikam VR, Gaikwad VV, Wagh DT. The effectiveness of early clinical exposure in teaching anatomy: A study among 1st year medical students. *Natl J Clin Anat.* 2020; 9:97-100.
15. Tayade MC, Giri PA, Latti RG. Effectiveness of early clinical exposure in improving attitude and professional skills of medical students in current Indian medical education set up. *J Family Med Prim Care.* 2021; 10:681-5.
16. Chimmalgi M, Jose R, Chandra Kumari K. The Effectiveness of Early Clinical Exposure and E-learning in teaching Anatomy. *Int J Anat Res.* 2017; 5(1):3398-03.
17. Meshram SW, Gajbe U. To Study The Perceptions of First Year MBBS Students Towards Early Clinical Exposure (ECE) In Anatomy. *IOSR Journal of Dental and Medical Sciences.* 2018; 17(2):32-35.