



Feedback of Early Clinical Exposure from first CBME batch in the Department of Anatomy

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Abstract

Objectives

This study was carried out to investigate the medical student’s attitudes and perspectives toward early clinical exposure at HBT Medical College & Dr. R. N. Cooper Hospital

Methods

During 2021-2022 a cross-sectional study was conducted. A convenient sample of 199 students in the 2nd M.B.B.S year enrolled voluntarily for this study. To collect our data, we used an open-ended questionnaire in a structured pattern using a 5-point Likert scale.

Results

86.4% of the participants agreed that ECE

helped them better understand anatomy topics, while 83.2% of participants believed that ECE motivated them to dive deeper into anatomy topics. 89.5% of students believed that ECE increased their interest in clinical medicine and have a better attitude toward future clinical practice.

Conclusion

All the students who participated received it very enthusiastically and positively. According to them, it is an effective method to supplement traditional teaching. It definitely enhances their skills and knowledge in the upcoming years of their clinical practice. It should be continued for coming

generations and to make it mandatory was their suggestion.

Keywords

Perspective, Early clinical exposure, First batch of CBME Medical students.

Introduction

Imparting meticulous knowledge to learners is an important aspect of any teaching professional. In today's era, we need variation in teaching methods. Medical education is becoming more competitive day by day. It is very important to have an idea regarding student's interests as well as perceptions regarding any subject. The initial years of medical education are critical to form the pre-conceived attitudes of medical students towards medicine and to familiarize them with the roles they will play in the future as a physician¹.

It has been observed that when Anatomy is taught in a clinical context, the students understand and retain it better. This has led to the need of integrating Anatomy with clinical sciences. It can be achieved by exposing the 1st year UG students to ECE as is advocated by MCI vision 2015 document².

There is some evidence showing that the delivery of ECE programs in the early years of medical curricula may move medical education towards the real context of practice. They facilitate medical students transition to the clinical phase, help them develop a professional identity, increase their motivation and satisfaction and make them more aware of the application of basic sciences in medical practice, and boost their confidence to handle the patient's problems in practice¹.

Aims & Objectives

- To gain feedback and analyze the impact of early clinical exposure from the first CBME batch

- To assess a student's perspective about early clinical exposure
- To assess a student's attitude towards early clinical exposure

Study Design, Material & Methods

A cross-sectional study was conducted at HBTMC & Dr. R. N. Cooper Hospital, Mumbai. After a thorough review, this study received clearance from the Institutional Ethics Committee. 199 medical students were involved in the study, all of whom had passed their first-year MBBS examinations and were the first to confront the MCI's new CBME curriculum (2019). There were no monetary rewards for participating, and it was entirely voluntary. The student participants signed informed written consent forms.

The following procedures were used to collect data as part of our approach. A thorough research questionnaire was created. It included ten well-structured closed-ended questions that were assessed on a five-point Likert scale ranging from strongly agree to strongly disagree. The relevance of the feedback was presented to the participants once again, and they were made aware of how important their reaction would be for future generations.

This first cohort of CBME Curriculum students was sensitized to ECE for the whole year. According to the CBME curriculum, ECE was allocated a total of 90 hours, which were evenly distributed across three first-year MBBS preclinical disciplines. So, throughout the course of the year, each subject received 30 hours of instruction. It was further separated into two sections: fundamental sciences correlation (18 hours) and clinical skills (experience and human context) (12 hours). It was planned to hold a three-hour session once a month for

the next ten months. We worked with the clinical departments in a single session for each department³.

The program was created in such a way that in basic sciences, clinical correlation can be introduced through actual patient contact, paper-based cases, charts with clinical correlation, and videos. Small feasible groups were formed in demonstration rooms where clinical skills situations were shown on mannequins by preclinical professors or clinicians in outpatient department wards.

Following was the guideline for a typical 3-hour ECE session:

- Introduction to the module and instruction by preclinical faculty: **30 minutes**
- Clinical experience (in groups at different places like wards/OPDs/classrooms with guided observation/checklist): **1 hour 30 minutes**
- Summary and Conclusion with learning points: **30 minutes**
- Reflection on what was learned (with assistance and monitoring): **30 minutes**

We began working with the Orthopedics department based on this approach. "Clinical Aspects of the Hip Joint" was our topic. The three-hour program was broken into three parts as scheduled. A voluntary patient was wheeled in for patient-based research, and surgical movies linked to the hip joint were displayed. A two-way conversation with an interactive dialectic session of questions and answers was held. Maximum sessions were also held in collaboration with other clinical departments. Small groups were formed in a few sessions, and ward visits were accompanied by preclinical faculty. Visits to the

blood bank were scheduled. Field visits to rural health centers were organized in conjunction with the Community Medicine department. This provided students with an understanding of the aims and obligations of a medical student toward patients and familiarity with the wards, participation in ward rounds, bedside attendance, and the schedule of a health care worker. The ECE program's principal goal was to provide students with a chance to work in a genuine clinical setting during their first years of study.

Statistical Analysis

Data entry and analysis were done using Microsoft Office Excel 2007; student's perception of early clinical exposure was gathered using online google forms, due to the ongoing pandemic, on 10 close-ended questions with five options each, based on a 5-point Likert scale.

Results

In this study, 199 medical students participated, after informed consent was taken. Feedback regarding various aspects of early clinical exposure was taken in the form of a 10-point feedback questionnaire based on the Likert scale (**Error! Reference source not found.**). Due to the ongoing pandemic, the questionnaire was sent to them online via a google form.

Table 1: Student's feedback (using a 5-point Likert scale) with statistical analysis.

S. No	Item	Strongly Agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)
1	ECE helped reduce a sense of anxiety pertaining to clinical aspects of medicine	77 (38.69)	98 (49.25)	22 (11.05)	2 (1)	0
2	ECE helped me better understand the topics of anatomy	83 (41.71)	89 (44.72)	22 (11.05)	4 (2.01)	1(0.5)
3	ECE motivated me to dive deeper into anatomy topics	83 (41.71)	81 (40.70)	28 (14.07)	4 (2.01)	1(0.5)
4	ECE has increased my attention span in the class	72 (36.18)	72 (36.18)	47 (23.62)	7 (3.52)	0
5	ECE increased my interest in learning clinical medicine	104 (52.26)	74 (37.19)	21 (10.56)	0	0
6	ECE helped me in having a better attitude toward future clinical practice	99 (49.75)	79 (39.70)	20 (10.05)	1(0.5)	0
7	The number of hours of ECE module was satisfactory	43 (21.61)	70 (35.18)	50 (25.13)	25 (12.57)	4 (2.01)
8	ECE provided an important validation of my decision to join medical school	77 (38.70)	88 (44.22)	29 (14.57)	4 (2.01)	1(0.5)
9	ECE in the first year of the CBME curricula helped in my second year of studies	65 (32.66)	77 (38.70)	43 (21.61)	12 (6.03)	2 (1)
10	I would strongly recommend this ECE module for the junior generations to come	110 (55.28)	65 (32.66)	21 (10.55)	2(1)	1(0.5)

The results of the questionnaire were that

- 38.7% and 49.2% of students who took the survey strongly agreed and agreed, respectively, that ECE helped reduce a sense of anxiety about the

clinical aspect of medicine, while 2% disagreed with this.

- 86.4% of students agreed with the fact that ECE helped them better understand the topics of anatomy.
- 83.2% of participants strongly agreed that ECE motivated them to dive deeper into anatomy topics, however, 2.5% of them didn't agree with this.
- 36.2% of the students strongly agreed that ECE helped in increasing their attention span in class
- 89.5% of students reported that ECE helped increase their interest in learning clinical medicine.
- 89.4% of students agreed that ECE helped them have a better attitude towards future clinical practice
- While 21.6% of students strongly agreed that the number of hours in the ECE module was satisfactory, 14.6% disagreed with the time allocated to ECE.
- 38.9% of students and 44.4% strongly agreed and agreed, respectively, that ECE provided an important validation of their decision to enter medical school.
- Overall, 71.7% of students believed that having a module like ECE in their first year helped them in their second year and 88% of students would recommend this ECE module for the junior generations to come.

Discussion

Medical education programs typically include three significant changes for students to go through: preclinical to clinical years, student to junior doctor, and from junior doctors to independent healthcare workers⁴. Each of these transitions is challenging in its own way, the period of transition from preclinical to

clinical years of medical education can be made easier and smoother in many ways. ECE is one such vertical integration program that has proven to improve the medical student experience in ways like strengthening communication and clinical skills, academic excellence, and overall sense of confidence^{5,6,7}. The MCI, as part of the new CBME reform, included early clinical exposure (ECE) for undergraduate students as a part of the medical curriculum³. Our study targeted the first CBME batch to ever have this ECE experience, to gain their feedback about this module.

We collected our data using a simple 10-question online survey, with each question having options from the Likert scale, ranging from strongly agree to strongly disagree. Inadequate preparedness for clinical clerkships and settings puts medical students in a state of stress and anxiety⁸. Our study showed that 89.2% of students agreed that ECE helped reduce this sense of anxiety pertaining to clinical medicine, and 89.5% of students believed that ECE served as a booster of interest in learning clinical medicine. 86.4% believed it helped them better understand their first-year topics. These results align with the outcomes of the studies done by Esfehni et al.⁹, Kar M. et al¹⁰, and Deolalikar S. et al².

Medical curriculum for long had no clinical exposure till 2nd year of medical school, but the recent guidelines of CBME changes included models like ECE and AETCOM to the medical school curriculum. The aim is to sensitize students in their early years, while they are still mouldable, to patient-centric care, while making medical education outcome- and context-oriented^{2,11,12}. 83.2% of students reported having increased motivation to learn in-depth about topics, aligning with the results of the study conducted by Gupta¹³ and Rawekar¹⁴. Tang et al reported a

positive correlation between students learning achievement in basic sciences & clinical exposure environment¹⁵.

The transition from preclinical years to actual patient interaction and care can be a daunting process and anxiety-inducing for most students¹⁶. 89.2% of our students reported that ECE reduced a sense of anxiety about clinical aspects of medicine. Early clinical exposure, for example, a month-long rotation in the hospital, boosts confidence in students, helping them have a better attitude towards future clinical practice¹⁷. A lot of students face self-doubt when entering medical school, and expected occurrence considering the transition from student to professional life. 8.3.3% of the students reported that ECE served to provide an important sense of validation of their decision of joining medical school, resembling the results stated by the Tayade et al study¹⁸

A thorough understanding of basic sciences is key, as it serves as a base on which understanding of clinical subjects is founded. Sawant et al¹⁹ reported that anatomy, will be better understood, retained, and clinically applied if taught in a clinically significant setup. Hence, early clinical exposure in any form, community-based or hospital-based, proves to enhance knowledge, instill a sense of professionalism, increase confidence, assisting with the smooth transition from students to healthcare professionals²⁰. Early clinical exposure can help students reduce stress, enhance interest and attention span, make the transition to clinical years easier, and boost confidence and professionalism in aspiring physicians. This research includes good comments from students who were part of the first batch of students to get this module instruction, demonstrating its value as a much-needed change in the medical curriculum. One

limitation is that due to the ongoing pandemic, we had to conduct the feedback questionnaire on an online platform, which made for some logistical issues and lack of in-person interaction.

With this feedback, we hope to drive future research on the effectiveness of early clinical exposure modules on a large scale, including most, if not all of the colleges enlisted under the MUHS. The valuable feedback provided by students can be used to make any required changes in the already existing module, to make it more student-oriented, and to help in the overall growth of the upcoming future healthcare providers

Conclusion

This study concludes that the ECE module of the CBME curriculum is well received by the students and that they would recommend it to their future generations, indicating that this module is a beneficial change in the Indian medical curriculum.

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