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A Study Of Perception On Early Clinical Exposure Among First Year Medical Students.

Kavitha BS¹, Shashiraj HK^{2*}, Arun Kumar HP³, Sathisha TG⁴, and Pavithra V⁵.

¹Associate Professor, Department of Physiology, Siddaganga Medical College and Research Institute, Tumakuru, Karnataka, India.

²Professor & HOD, Department of Physiology, Siddaganga Medical College and Research Institute, Tumakuru, Karnataka, India.

³Professor, Department of Physiology, Siddaganga Medical College and Research Institute, Tumakuru, Karnataka, India.

⁴Professor & HOD, Department of Biochemistry, Shridevi Institute of Medical Science and Research Hospital, Tumakuru, Karnataka, India.

⁵Assistant Professor, Department of Clinical Research, Shridevi Institute of Allied Health Sciences, Tumakuru, Karnataka, India.

ABSTRACT

Regulations on “Graduate Medical Education” introduced by MCI as emphasized the need for Early Clinical Exposure (ECE) in the first professional year to recognize the relevance of basic science in diagnosis, patient care and management. Effective implementation of ECE requires a protocol which can be modified based on perceptions and feedback from the learners. Student’s perception was evaluated. A cross-sectional survey was conducted among first year MBBS students belonging to 2019-20 batch regarding implementation of ECE module. A self-structured questionnaire consisting of five-point Likert scale after validation was prepared and administered. 93% of the students preferred integrated module of classroom teaching and early clinical sessions over traditional teaching. 61% of the students felt the need of incorporation of ECE as a teaching learning method along with lecture classes for other topics as it helps in synchronization of knowledge acquired in classroom with bedside clinical exposures. 83 students (55%) suggested that these sessions should be conducted more frequently and 50% felt that more clinically relevant topics should be covered. ECE is one of the most important components of competency based medical education which will help in application of basic science knowledge into clinical practice.

Keywords: Graduate Medical Education Regulation, competency based medical education, early clinical exposure, hospital visit.

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**Corresponding author*

INTRODUCTION

Medical council of India is responsible for continuously assessing the needs, aspirations, quality and standards of medical education in India. Competency based medical education (CBME) curriculum was introduced for MBBS students of 2019-2020 batch [1]. This curriculum is made to be more student - centric with more emphasis on experiential learning [2]. Regulations on “Graduate Medical Education” introduced by MCI as emphasized the need for Early Clinical Exposure (ECE) in the first professional year to recognize the relevance of basic science in diagnosis, patient care and management [3]. ECE also provides a context that will enhance basic science learning and to relate the experiences of patient as a motivation to learn [4, 5]. ECE in addition to enhancing the correlation between concepts of basic medical sciences and application of the same on real patients also provides an opportunity for students to enhance their communication skills and a deeper understanding of community and humanities [6]. Earlier efforts on integration in teaching shows that there is greater need for faculty participation and commitment [7]. Although ECE contributes in the acquisition of basic clinical skills and leads to development of professional behavior among students, the implementation of the same in a medical college with a student strength of 150 is a challenge in our Indian context [8, 9]. Whatever the limitations, this effective tool of ECE should not be diluted because of apprehensions about number of students [8]. Effective implementation of ECE requires a protocol which can be modified based on perceptions and feedback from the learners. Assessment of student’s responses will contribute to enhance the effectiveness ECE sessions leading to better training of undergraduate medical students [10].

Hence, the present study was taken up to assess the perceptions and usefulness of ECE in acting like a bridge between theoretical understanding of basic sciences and its practical application.

MATERIALS AND METHODS

A cross-sectional survey was conducted among first year MBBS students belonging to 2019-20 batch of Sri Siddhartha Medical College, Tumakuru regarding implementation of ECE module in the Department of Physiology. Approval of institutional ethical committee was obtained. The nature and purpose of the study was explained to all students and informed consent was taken. Physiology topics related to common clinical cases which require bedside demonstration were identified with the goal of exposing the students to commonly encountered clinical scenarios. An ECE session on Jaundice was planned after discussion with the subject experts. Lecture class on pathophysiology of jaundice was conducted and students were taken to the Medicine ward in hospital after communication with the concerned faculty in batches of 30. A self-structured questionnaire consisting of five point Likert scale after validation was prepared and administered to all 150 students who participated in the study.

Details of the ECE session

Session	Clinical department involved	Specific learning objectives	Method followed
Pathophysiology of jaundice	Medicine	At the end of the session the student should be able to, a. Define and classify different of jaundice. b. Understand the pathophysiological basis of signs, symptoms and investigations and treatment of a patient with jaundice.	Lecture class on pathophysiology of jaundice followed by case discussion of a patient with hepatic jaundice

Statistical analysis

Data was tabulated using Microsoft office excel sheet and proportions were expressed as percentages. Data was analyzed using EPI INFO (Version 7).

RESULTS

Table 1: Student’s perception about ECE as a learning tool among first year medical students

Questions	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	N	%	N	%	N	%	N	%	N	%
Would you agree that relevant Physiological aspects taught during lecture class were adequate?	115	77	21	14	8	5	4	3	2	1
Would you agree that adequate time was provided for clinical discussion to understand the pathophysiological concepts of jaundice?	119	79	25	17	3	2	2	1	1	1
Would you agree that there was adequate student-teacher interaction during group discussion session?	105	70	27	18	5	3	10	7	3	2
Would you agree that time allotted for writing reflections was adequate?	109	73	30	20	7	5	3	2	1	1
Would you agree that adequate time was given for feedback?	114	76	29	19	3	2	2	1	2	1
Would you agree that the overall format of the ECE session was appropriate?	120	80	19	13	5	3	5	3	1	1
Would you agree that the session was helpful in clinical application of your knowledge about jaundice?	123	82	15	10	5	3	5	3	2	1
Would you prefer ECE over traditional Teaching?	121	81	12	8	10	7	7	5	0	0

Table 2: Student’s feedback on ECE session

Items	Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
	N	%	N	%	N	%	N	%	N	%
Increased my attention in class	100	67	32	21	11	7	6	4	1	1
Better understanding of the topic	105	70	36	24	4	3	3	2	2	1
Better retention of the topic	96	64	42	28	10	7	1	1	1	1
Motivated me to read more about the topic	99	66	37	25	11	7	2	1	1	1
Incorporate ECE as a teaching-learning method along with lecture classes for other topics in physiology	91	61	33	22	17	11	2	1	0	0
Liked the group discussion and interactions	102	68	29	19	15	10	3	2	1	1

Table 3: Student’s suggestions regarding ECE as a teaching learning method.

Suggestions	Number	%
Should be conducted more frequently	83	55
More topics should be covered	75	50
Include more videos in lecture classes	62	41
Provide more scope for group discussion	70	47
No suggestions	69	46

77% of the respondents strongly agreed that relevant physiological aspects were taught in the lecture class.



Majority (79%) of the students agree that sufficient time was provided for clinical discussion to understand the concerned topic.

70% of the students felt that there was adequate student-teacher interaction during group discussion.

Majority of the students (73%) were of the agreement that sufficient time was allotted for writing reflections and 76% of the students agreed that adequate time was given for feedback.

Most of the students (80%) agreed that the overall format of ECE session was appropriate and 82% were of the opinion that this session was helpful in clinical application of the knowledge.

93% of the students preferred integrated module of classroom teaching and early clinical sessions over traditional teaching.

67% of the students gave the feedback that this integrated module of traditional class room teaching followed by ECE sessions increased their attention in class and helped them in better understanding of the topic (70%). Majority of the students (64%) opined that these sessions helped them in better retention of the topic and 66% felt that it motivated them to read more extensively about the topic. 61% of the students felt the need of incorporation of ECE as a teaching learning method along with lecture classes for other topics as it helps in synchronization of knowledge acquired in classroom with bedside clinical exposures. 68% liked the interactions during group discussions.

Most of the students appreciated the initiative taken by the department in conducting ECE sessions and giving an opportunity to provide the feedback and suggestions.

83 students (55%) suggested that these sessions should be conducted more frequently and 50% felt that more topics should be covered in the same teaching learning method. 41% suggested to include more videos in lecture classes and 47% felt that there is a need to provide more opportunity for individual participation in group discussions.

DISCUSSION

Traditional curriculum which was followed by medical colleges in the country was characterized by compartmentalization of the entire course into preclinical, paraclinical and clinical branches [11]. Medical council of India through its document "Regulations on undergraduate medical education, 1997" felt the need to reduce compartmentalization of disciplines and to encourage horizontal and vertical integration across different phases between the traditional subject areas [12].

ECE is one of the most important aspects of competency based medical education where the students develop a holistic approach based on the health needs of the society [6, 13].

ECE sessions can motivate students and realize the role they have to play in the future as a physician [14].

Hospital setting provides an opportunity for direct patient exposure and case-based learning [15].

The module of integrating traditional lecture class with early clinical exposure sessions is challenging at the implementation level because of various constraints like active faculty participation and lack of interdepartmental cooperation [11]. In our country the number of medical students admitted in a medical college act like a major barrier for implementation of these sessions in hospital setting.

The results of our study are encouraging as most student feel that these sessions have enhanced their understanding of the subject and the relevance of application of theoretical knowledge to clinical scenarios.

It is encouraging to find out that most of the students preferred ECE over traditional classroom teaching.

Similar findings were observed in a study done by Kalpesh Vidja et al. were in 80% of students preferred ECE over traditional teaching [16].

Our study also revealed that the ECE sessions led to better understanding and retention of the topic.

Majority of the students suggested that the ECE sessions should be conducted more frequently on all topics related common diseases which we would encounter in routine clinical practice.

Our findings indicate that ECE enhances student learning and acts like a connect between basic science learning and its practical application in bedside clinics so as to reduce the disconnect between classroom learning and its practical application on patients.

CONCLUSION

ECE is one of the most important components of competency based medical education which will help in application of basic science knowledge into clinical practice. The feedback received from the students suggests that ECE should be considered as a teaching learning method for all topics of clinical relevance. This exercise comes with many challenges and requires active faculty participation and interdepartmental coordination for it to be successfully carried out in the future.

Limitations

There is a need to study the perceptions of faculty members involved in the program for better implementation of these ECE sessions.

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