

Original research article

Study of impact of early clinical exposure over the attitude of first years MBBS students

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Abstract:

Introduction: Most attempts at early clinical experiences (ECEs) have been confined to limited patient contact in an introductory course on patient interviewing, a beginning physical examination skills course, or elective opportunities. With this view present study was planned to study impact of early clinical exposure over the attitude of first years MBBS students .

Material and methods: The present study was Descriptive - Cross sectional study with sample collection done using Probability Proportionate Random Sampling (PPRS). The present study was included first year M.B.B.S. students from 2 Government medical colleges, 2 private medical colleges and 2 Deemed university medical colleges from western Maharashtra, who were voluntarily participated. Validated designed questionnaire was used for data collection.

Results: In present study we found , 88.25 % students strongly agreed that the method of ECE teaching aroused interest in learning. 81.99 % students strongly agreed that the method of ECE teaching technique helped in better retention of topic. 84.66 % students strongly agreed that the method of ECE teaching imparts better clinical context. 91.21 % students strongly agreed that the method of ECE teaching allows better assimilation of knowledge gained during learning. With ECE based teaching 83.33 % students found highly satisfied while 78.23% students found highly competent about the knowledge and skills thus acquired via this teaching methodology. 93.22 % students liked ECE teaching methodology and these students enjoyed it a lot and with interest.

Conclusion: Medical students found their first experience with clinical settings valuable and rewarding. Providing clinical exposure in the first years of medical education and presenting the application of basic sciences knowledge in the clinical practice can enhance students' motivation and understanding of the role they will play in the future as a physician.

Keywords: Medical education , Early clinical exposure , Attitude

Introduction:

Traditional medical curricula have been based on the model of teaching that kept medical students in classrooms and laboratory settings for the first year of their education, with an introduction to clinical medicine coming abruptly. ¹The rapid pace of change

in health care and medicine is giving rise to corresponding rapid changes in the content and process of medical education. It is now becoming more commonly recognized that the traditional structure of medical education created an almost impenetrable wall between the so-called preclinical

basic sciences years and the clerkship years. Changes in health care have led to experimentation by medical schools, with the introduction of clinical experience into the otherwise didactic first year. Most attempts at early clinical experiences (ECEs) have been confined to limited patient contact in an introductory course on patient interviewing, a beginning physical examination skills course, or elective opportunities.² Early clinical exposure, and the accompanying knowledge and skills development, does not replace the basic and clinical sciences, but rather enriches and contextualises that learning and offers a wider variety of teaching and learning methods.^{3,4} Early clinical exposure and its concomitants, therefore, ensure well integrated knowledge of the basic sciences, clinical sciences and social functions. With this view present study was planned to study impact of early clinical exposure over the attitude of first years MBBS students .

Material and methods:

The present study was carried out in Department of Physiology, Rural Medical College, Pravara Institute of Medical Sciences, Loni during last two years. It was Descriptive - Cross sectional study with sample collection done using Probability Proportionate Random Sampling (PPRS).

Probability Proportionate Random Sampling (PPRS):

In present study proposal we have decided 50% criteria using Probability Proportionate Random Sampling technique for sample size determination from Government colleges, Private colleges and

Deemed university medical colleges. Hence we have planned to collect results from 2 Government medical colleges, 2 private medical colleges and 2 Deemed university medical colleges from western Maharashtra on the basis of availability of number of students admitted per year in western Maharashtra and number of colleges.⁵

Calculated proposed sample size was estimated was 588 students.

Prior informed written consent was obtained after explaining the procedure and purpose of study.

Inclusion criteria:

The present study was included first year M.B.B.S. students from 2 Government medical colleges, 2 private medical colleges and 2 Deemed university medical colleges from western Maharashtra, who were voluntarily participated.

Exclusion Criteria:

The students voluntarily not willful were not included in the present study.

Validated designed questionnaire was used for data collection.

Study Procedure:

1. Student counseling and orientation class was conducted prior sessions conducted.
2. Students group formation :
 - A. Group A : ECE exposed
 - B. Group B : Traditional teaching exposed
3. Conducted periodical sessions & use questionnaires for data collection.
4. Data tabulation was done .
5. Data analysis with the help of statistician .

Results:

Table 1) During study period a total of 820 students participated in present work.

S.NO.	Name of college	Students participated
1	B J Medical College , Pune	110
2	Government Medical College , Kolhapur	104
3	SKN Medical college , Pune	120
4	VVP Medical college , Ahmednager	112
5	P DR DY Patil Medical College , Pimpri , Pune	181
6	RMC , PIMS , Loni	193
	Total	820

Table 2) Topic and sessions conducted

S.NO.	Session	Group A	Group B
1	Measurement of Blood pressure	ECE	Traditional teaching
2	Clinical examination of Abdomen	ECE	Traditional teaching

Table 3) Validated questionnaire :

	Strongly disagree = 1	Disagree = 2	Agree = 3	Moderately agree =4	Strongly agree =5
The method of teaching arouse interest					
The technique help in better retention of topic					
The method imparts better clinical context					
Allows better assimilation of knowledge					
Will better equip me to apply the knowledge when the opportunity arise					
	0 -10% = 1	21 – 40% = 2	41 – 60% = 3	61 – 80% = 4	81 -100% = 5
Has the method of teaching enhanced your knowledge than what it was?					
How satisfied are you with the method of teaching?					
Are you confident about the knowledge and skills thus acquired?					
Do you like the method of teaching?					
Do you enjoy this process of learning?					

The data concern with attitude of students was collected using validated questionnaire. The data was tabulated and analyzed on percentage basis scale. In present study we found , 88.25 % students strongly agreed that the method of ECE teaching aroused interest in learning. 81.99 % students strongly agreed

that the method of ECE teaching technique helped in better retention of topic. 84.66 % students strongly agreed that the method of ECE teaching imparts better clinical context. 91.21 % students strongly agreed that the method of ECE teaching allows better assimilation of knowledge gained during learning.

With ECE based teaching 83.33 % students found highly satisfied while 78.23% students found highly competent about the knowledge and skills thus acquired via this teaching methodology.

93.22 % students liked ECE teaching methodology and these students enjoyed it a lot and with interest.

Discussion:

The goals of medical education should be student oriented in which the student development should be along with knowledge, skills and attitude. Learning is the active process going on inside the student's mind and teachers main role is to facilitate this learning process. A good learning involves a good communication.⁶ Bell K et al stated real patient learning led to a rich variety of learning outcomes, of which at least some medical students showed high metacognitive awareness. Bell K observed that teaching from doctor teachers found more appreciable than other teachers.⁷

Today, however, we are experiencing tectonic changes in medical knowledge, technology, and practice. Changes to the clinical environment, the expectation of patients, the accountability to stakeholders, and the understanding of learning and its theoretical basis demand new, effective approaches to the learning, and the preparation of learners to be fit for purpose. Responding to these changes within and outside of medicine mandates an introspection to the existing lacunae in medical education and refurbishing the system to align with the shifting times. It can be rightly said that medical education is at "crossroads" and the time is right to adjust our sails!^{8,9,10}

ECE is just one modus operandi of contextualizing medical education. It is one method of modifying the curricula to meet tomorrow's need. It is basically "A

teaching and learning methodology which fosters exposure of medical students to patients (actual human contact) as early as the first year of medical college, in a social or clinical context that enhances learning of health, illness or disease, and the role of the health professional."^{11,12}

ECE is an archetype of "vertical integration" in medical education, with an immense interdisciplinary contribution. A tremendous teamwork is required, and the same is encouraged for the success of this offbeat yet resourceful format. At the same time, the teachers (both basic science and clinical) are primarily facilitators, like a lighthouse, showing the path that the students take. This imparts the students a sense of responsibility and encourages them with self-directed learning.¹³

Providing finer minutiae in relation to ECE is beyond the scope of this editorial. Despite increasing attention to providing preclinical medical students with early patient experiences, little is known about associated outcomes for students.¹⁴

Number of studies were conducted at International level concern with the study of impact of ECE over attitude of medical students.

A study carried out by Mahboobeh Khabaz Mafinejad et al in Iran (2016) found based on the quantitative data, the majority of students (80.1%) stated that the ECE program could familiarize them with the role of basic sciences knowledge in medicine and the way to apply it in clinical settings. Further, 84.5% of them believed that the early clinical experience increased their interest in medicine and motivated them to read more. Also, 87.3% of students mentioned that group discussion during the grand round could help them to reflect on their experiences and share them with others.

Furthermore, 89.1% of students agreed (completely agree/agree) with the usefulness of the grand round, and 8.9% were neutral. In this study of the 298 medical students, 216 (72%) completed the questionnaires.¹⁵

In our present study we also found similar results. In present study we found, 88.25% students strongly agreed that the method of ECE teaching aroused interest in learning. 81.99% students strongly agreed that the method of ECE teaching technique helped in better retention of topic. 84.66% students strongly agreed that the method of ECE teaching imparts better clinical context. 91.21% students strongly agreed that the method of ECE teaching allows better assimilation of knowledge gained during learning.

With ECE based teaching 83.33% students found highly satisfied while 78.23% students found highly competent about the knowledge and skills thus acquired via this teaching methodology.

93.22% students liked ECE teaching methodology and these students enjoyed it a lot and with interest.

Earlier studies have focused on the existing types of early clinical exposure in medical education. Hence, the purpose of this study was to assess the medical students' attitudes and to explore their perceptions of early clinical exposure.

Another important finding in this study was that the ECE program increased students' interest in being a doctor. It seems that interacting with other clinical

students, clinical faculties, physicians and patients motivated them and provided them with an opportunity to discuss and share their knowledge. Moreover, it might be that these students benefited from familiarity with the physicians' expected roles and responsibilities they should do in the future. Dyrbye et al. believed that interactions with and between peers and faculty are also important in professional development.

Limitations and strengths:

The strength of this study was the high volume of samples that were exposed to clinical settings in the first years of medical students covering number of colleges with different set ups like Private medical colleges as well as Government medical colleges.

The major limitation of this study was that the students' attitudes were evaluated immediately after participation in the early clinical exposure sessions conducted for them. Hence, the longterm effects of this experience on the students' performance and attitude during the clinical years should be assessed.

Conclusion:

Medical students found their first experience with clinical settings valuable and rewarding and while providing clinical exposure in the first years of medical education and presenting the application of basic sciences knowledge in the clinical practice can enhance students' motivation and understanding of the role they will play in the future as a physician.

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Conflict of Interest:

The authors declare that they have no conflict of interest.

Abbreviations:

ECE: Early clinical exposure

MCI: Medical council of India

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