



ORIGINAL RESEARCH PAPER

Medical Biochemistry

EARLY CLINICAL EXPOSURE FOR CLINICAL TRAINING AMONG MBBS STUDENTS: A STUDY

KEY WORDS: Early Clinical Exposure, Medical Students, Medical curriculum, Clinical skills, MCI

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ABSTRACT

ECE has an overall impact on the performance of the students and increases their confidence in the first phase of the medical course. ECE can be planned in a variety of settings with the use of resource materials such as logbooks, textbooks, instruments, case sheets and computers. Medical Council of India in new educational reforms has made ECE sessions mandatory in undergraduate medical curriculum from 2019. Early Clinical Exposure (ECE) is a teaching-learning method that leads to clinical exposure of first year medical students and Helps them to interact with patient's right from the beginning of the first year of the medical course. ECE sessions help students to improve their academic strength, clinical and communication skills thereby making them more confident. This paper highlights the different roles of the student in ECE sessions, its implementation in regular teaching and various ECE settings. Students found it difficult to remember important basic concepts during their clinical postings. One of the ways to improve the quality and usefulness of the basic sciences taught to medical students is early clinical exposure (ECE). A pre-validated questionnaire was given to the students after the clinical ward rounds. Feedback indicates that ECE is perceived positively by students and can provide a framework for the integration of basic sciences with clinical subjects for medical students. The present observational study was conducted among 150 first MBBS students to sensitize them to the clinical set-up, appreciate the finer aspect of human behaviour while dealing with patients and make them more knowledgeable in first year subjects. To be motivated to develop interest.

1. INTRODUCTION

In medical curriculum, ECE has a major impact on the performance and confidence of students during the graduation period. Early Clinical Exposure (ECE) motivates students to improve their academic, clinical and communication skills making them more confident. Early clinical exposure is a teaching pedagogy that promotes exposure of medical students to patients in the first phase of the MBBS course. ECE is a form of vertical integration between preclinical and clinical disciplines. The new competency-based medical education curriculum implemented in 2019 includes early clinical exposure to become part of the medical curriculum. The current medical education curriculum spends a lot of time developing the student's knowledge and skills, but there is a huge gap in strengthening ethical and value based notions. The Vision 2015 document of the Medical Council of India deals with the development of student sensitivity index within the curriculum incorporating several innovative designs, in addition to knowledge and skills. This will help in establishing cognitive (knowledge); practical skills); and ethical (practicing with integrity and respectability) components in business education (Derby 2007). In the present scenario of traditional curriculum of medical education, it is difficult for students to remember important basic scientific concepts during their clinical practice (Ebrahimi2012). New methods of didactic instructions have been introduced to improve teaching and make it more practical (Mishra 2013).

2. METHODOLOGY

One hundred fifty (150) MBBS students participated in the study. After a brief description about the responsibilities of a physician towards the patient and society, students divided into 15 groups of 10 each under the supervision of a clinical faculty member. A faculty orientation was conducted to share the objectives of the program so as to reduce subjectivity and increase uniformity.

The program included ward rounds for a memorable and meaningful hospital experience in the departments of Medicine and Gynaecology. The aim was to expose students

to the real clinical environment early in their medical education and to make them aware of the events that occur in the clinical ward, the rules and disciplines to be followed while working on the ward, and especially doctor-patient communication strategies. To sensitize about the challenges faced in the process of history. Patients who readily cooperated and agreed to medical conditions were selected to be visited by the medical students. Informed consent was taken from the students and a pre-designed validated questionnaire was taken as per the assessment. Experts in the field of medical education were administered. Anonymity was maintained. The questionnaire was open ended at both ends with questions that elicited descriptive comments and unidirectional bipolar additive Likert scale ratings reflecting semi quantitative data. The final score for the respondent and overall rating of the program was determined on a 5 point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree. The questionnaire inquired about the experience of health care visits and patient contact and whether this informed the students about their future role as a doctor. Statistical analysis was done using percentile method.

3. Delimitation of the study:

This study was delimited as follows:

- **Area Delimitation:** This study was conducted in Korba district of Chhattisgarh state only.
- **Level Delimitation:** This study was limited Government Late. Bisahu Das Mahant Memorial Medical College, Korba, Chhattisgarh, MBBS First Year Students only.

4. RESULTS AND DISCUSSION

The new health care delivery system demands that the emphasis of medicine should be on generalist (rather than specialist) training. Graduates are required to have experience in a variety of settings including hospitals, communities, primary health care, etc. at the beginning of their medical training, especially in developing countries (Mitchell 2004). In our curriculum, the artificial division between basic medical science and clinical medicine can create a clearly visible gap in the learning graph of students

and this motivates us to conduct such a pilot study.

Student participation in the clinical experience overall was greater than expected. Of the 150 students who visited the wards and underwent ECE, 138 (92%) returned complete questionnaires. Seventy-four percent of the students who visited the wards were excited about the announcement and 16% were happy to know about it. Eighty percent of students indicated that their health care visits to the wards were a relatively meaningful and effective experience. 60% of the participants rated their experience as excellent and 32% as good (Sixty-nine percent (69%) were happy and 26.27% were excited after visiting the ward and learning about its functioning. Eighty-seven percent of the students considered the ward visit as a pre-clinical can relate to the topics and indicated that it piqued their interest and inspired them Learning basic medical topics with an average value of 5 on a 5 point Likert scale indicating a strong agreement in favor of integration. Ninety-eight percent of students felt that ECE would again increase their susceptibility to various disease conditions, with an average value of 5 on a 5 point Likert scale indicating agreement in favor of increased susceptibility. Thus, students' descriptions of ECE were filled with enthusiasm and appreciation of their learning experience, which helped them understand that medical education is valuable. This positive effect of ECE on student learning in the present study is similar to that of Johnston and Scott 1998. Although the initial idea of conducting ECE was to make students aware about the interactions of doctors with patients, they realized that the team. The work, the feeling of being in a medical institution, practical knowledge and the humanistic elements in medical practice were of supreme importance. Sixty-one percent of the students were in favor of conducting similar interventions again and again. This provided important opportunities for students to enter the unfamiliar territory of the hospital environment.

5. Role of Student in Early Clinical Exposure

ECE sessions can be run in the form of small group teaching, clinical bed side teaching, demonstration of procedures, case based teaching etc. ECE sessions often take place in outpatient departments, primary care settings and hospital wards and some events take place in the community. The student may play any role in the setting of initial clinical exposure. He may participate as a passive observer in the outpatient department, observe minor surgeries in the OT, interact with the patient doctor and receive advice given to patients. The student may be an active observer in simple clinical skills such as catheterization, pleural fluid tapping, and intubation. Students can note down the checklist of these procedures. It is the actual performance of medical or surgical procedures to improve memory retention and developing abilities. Their active participation improves the memory power of the students. Students can assist the resident in performing procedures such as catheterization and intramuscular injections after carefully observing these procedures step by step.

6. Merits of Early Clinical Exposure

ECE helps students develop fundamental clinical skills along with an ethical approach and active learning. It helps students to overcome their stress and anxiety and helps them to actively learn the subject with keen interest. This will create a positive attitude towards medical education and will help them in achieving social and professional satisfaction. Will get it. ECE will expose the students to all the relevant clinical problems that can be learned along with the practical aspects covered in the first phase of the curriculum and will try to improve better understanding of the topics in depth. It helps in learning practical aspects of the subject so that students can gain interest and better understanding in the subject. ECE can be planned with resources such as patients, standardized patients, log books, text books, equipment, case sheets, and computers. The main goal of early clinical

exposure is to integrate basic science with clinical knowledge so that students learn the basic as well as clinical aspects of the subject.

7. Early Clinical Exposure – Setting

The setting used for early clinical exposure are broadly divided into three groups:

- a. Classroom setting
- b. Hospital-based setting
- c. Community setting

7.1 Class Room Setting

The classroom setting is first basic form of ECE which can be arranged with minimum efforts. ECE can be used as an educational strategy in the following ways:

1. Direct arrangement of patients/ standardized patients to the classroom.
2. Case scenario discussion.
3. Discussion of patient case sheets, Electrocardiogram (ECG), X-rays, computed tomography scan (CT scan), other blood investigation reports.

These settings can be arranged with the help of direct or indirect involvement of clinical teachers. Topics or cases may be selected aligning and integrating with the topics covered under the current curriculum taught in regular classes in Anatomy, Physiology and Biochemistry. This can be done in several small groups. When a patient is brought into the classroom, the patient must be handled in an ethical manner by obtaining consent for examination. The teacher should explain the signs and symptoms of the disease, basic clinical examination skills that were previously taught in teaching. Thus, classroom setting is considered to be the most convenient way to conduct ECE sessions. Hence, all students can be actively involved. If small group teaching sessions are planned then students can be assessed on the basis of their interest, active participation, understanding of the subject and a self-assessment questionnaire can be given to the students. Feedback about the session can also be obtained.

7.2 Hospital Settings

The hospital setting is the most important form. A dedicated team of faculty from both the departments can be formed. Any special case can be selected and finalized before the trip. The cases should be discussed with the students and their context should be correlated and integrated with the topic taught earlier in the class and students should be able to reflect on it after the session. In the Physiology subject, matters covering all systems like the cardiovascular system, respiratory system, stomach or endocrine system can be taught. This helps students to increase interest in learning basic science. In the Anatomy subject, visits to the surgical ward or radiology department can be arranged, including matters relating to basic anatomy. X-rays may be taught directly in a radiology department setting. In Biochemistry subject, laboratory investigation reports related to cases can be interpreted and ECE sessions can be conducted on common topics like Diabetes Mellitus, Myocardial Infarction, Anemia and students have to recall the topic previously learned in theory classes. This can be arranged batch-wise including permission or collaboration with clinical departments after obtaining prior approval.

The following may be emphasized during the ECE session: Students should be able to reflect on the topics they have learned with their own ideas by writing in their logbooks rather than copy-pasting or copying other students' theoretical ideas. Students should be introduced to the clinical environment, develop awareness in a variety of presenting cases, observe the doctor-patient relationship, and observe doctor-patient communication and patient empathy. Students should be encouraged to take notes and fill in their logbooks.

7.3 Community Settings

Community setting sessions are very important in following the vision of the students. It helps in learning preventive aspects of medicine, ethical dimensions of doctor-patient relationships, behavior in real time practices and social sciences. Regular periodic community visits can be planned and family adoption program has become an important part of MBBS curriculum at the very first stage. It also helps in identifying community level health issues and creates health awareness at the community level. Community setting is the third and very interesting setting from the student's point of view. The focus of the community setting should be based on ECE visits covering the following points: basic science, integration of clinical dimensions and social perspectives, observation of community problems, patient empathy, observation of primary care providers at work, etc.

8. Recommendations

In light of the various benefits accruing from early clinical exposure of first year MBBS students, it is strongly felt that such interventions should be made mandatory by the implementing authorities such as the Medical Council of India and the respective universities.

9. CONCLUSION

In conclusion, the early clinical exposure helps the students to understand the clinical basis of all the medical disorders taught in the first phase of the curriculum and also to apply the basic concepts learnt in the first year subjects. Although, there are a few challenges in the form of manpower requirement, early clinical exposure when carried out at an early age of medical curriculum positively helps the first year MBBS students in not only increasing their interest in the subject and in the basic motivational levels but also understand doctor patient interaction, team work and a feeling of being in the medical institute which requires humanistic element.

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