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Impact of a Comprehensive Early Clinical Exposure Program for preclinical year medical students

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Abstract

Purpose: To study the impact of an early clinical exposure program designed to provide a wide variety (cognitive, affective and psychomotor) of learning experiences for the preclinical year students.

Method: One hundred and fifty preclinical students were posted in small groups to selected departments – Transfusion medicine, Catheterization lab, Simulation lab, Radiology, Neurology, Nephrology, Respiratory medicine and General surgery. Each student had atleast ten hours of clinical exposure under this program. The program was evaluated through a series of pre and post-test questionnaires, which were designed based on the learning objectives of each session. Students who wished to participate in the program evaluation gave informed consent, took up the pre / post test and were also asked to give their written open comments about the program.

Results: There was a significant increase in the post-test scores (ranging from 9.14 ± 2.67 to 36.65 ± 6.62) when compared to the pre-test scores (ranging from 7.94 ± 2.31 to 28.69 ± 6.11) for all the sessions (p value < 0.001, n=144). Analysis of the open feedback showed that the program had significant impact on the cognitive, psychomotor and affective domains. "Application of basic sciences in clinical practice", "motivation to learn", "got familiar with various specialties", "insight about what the patient undergoes" were the themes identified from the open comments.

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Conclusion: The innovative use of early clinical exposure program to teach/learn clinical skills like phlebotomy and Basic Life Support had been well appreciated by the students. The present design involving a variety of learning experiences has been successful in introducing the various dimensions of medical profession like scientific, ethical, interpersonal, professional and social to the new entrants in addition to enhancing their motivation to learn.

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1. Introduction

In India, students enter medical schools at an early age with little priming towards the profession. Entry of students in most of the medical colleges is entirely based on their academic performance with no weighting for humanistic attitude and communication skills.^{1,2} Due to lack of adequate exposure, most students do not realize what to expect in the medical profession. A few enter the medical college purely due to parental pressure.³ Large classes, intense competition, exploding vocabulary and voluminous content delivered over a short time are some of the challenges faced by the first year MBBS students.^{3,4} Insufficient level of guidance and problems pertaining to transition from school to college life can also be included to this list of problems faced by the students during this period. Some students find the abrupt shift of medium of instruction from vernacular language to English difficult to cope. All these, along with the traditional curriculum, where the students are engaged in long hours of classroom and laboratory teaching with no exposure to the clinical setup, plays a major role in dousing the enthusiasm of the upcoming doctor. Under these circumstances, students often find their preclinical year to be tough, dreary and most importantly, they fail to understand the relevance of basic sciences in the clinical setting.

There has been an urgent call for curricular reforms with emphasis towards vertical and horizontal integration and competency based training.⁵ Many parts of the world have responded to these needs by shifting away from discipline-based curriculum. In line with these changes, Medical Council of India (MCI) developed the 'Vision 2015' document. MCI vision 2015 aims to produce a new generation of medical graduates of global standards through curricular reforms. "The roles of this new age doctor are recognized as clinician, communicator, life-long learner, team leader and professional".⁶ Required curricular changes begin early in the form of a foundation course; early clinical exposure; properly designed integrated teaching and programs to develop

the correct attitude and communication skills (ATCOM module).⁶

Early clinical exposure (ECE) needs to be a coordinated effort by the preclinical, paraclinical and clinical faculty. If implemented effectively, it has the potential to improve motivation for learning and promote deep learning, better understanding and longer retention of the knowledge. It can facilitate the students to understand the application of basic sciences in clinical practice and aid in effective learning of clinical skills. It could also serve as a platform for students to improve their communication skills and get initiated into inculcating professionalism at a very early and impressionable stage of their medical education.⁷ Above all, it provides an opportunity for them to see the illness from the patient's perspective. All this can foster the development of a holistic doctor who will be competent, communicative, humanistic and empathetic towards the patients.

To offer this experience, 'Clinical observership' program was started in PSG Institute of Medical Sciences and Research (PSGIMSR) in the year 2000. In this program, the first year MBBS students had the opportunity to spend half a day in the following selected specialties in small groups: Cardiology, Gastroenterology, Radiology, Nephrology and Transfusion medicine. This initiative was highly appreciated by the students.⁸ This program has now been modified and expanded to include more departments and implemented readily to suit the mandates from MCI as early clinical exposure. The aim of this study was to evaluate the impact of an organized program of early clinical exposure for the preclinical students in enhancing their motivation to learn basic science in relevance to clinical medicine.

2. Methods

2.1. Participants

One hundred and fifty first year MBBS students participated in early clinical exposure program conducted in the year 2015–16. Students were divided into

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