

Original article:

Attitude of medical students towards early clinical exposure and integrated teaching in Western Maharashtra

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Abstract:

Introduction: Integrated teaching process allows medical students to gather, explore, refine and integrate the adopted knowledge for better implementation in clinical practice. Recently Medical Council of India, in its reforms encourages integrated teaching and early clinical exposure. Present study was planned with an aim to collect and analyze attitude of medical students towards early clinical exposure and integrated teaching especially in western Maharashtra in Indian medical education set up .

Methodology: In present study, we used self developed expert validated 10- item questionnaires. The student feedback was assessed using likert scale and percentage scale. We randomly chose the students from six different colleges' viz. two from Deemed University, two from Government sector and two from private sector but affiliated to Maharashtra University of Health sciences, Nasik. We designed module entitled "Clinical examination of abdomen" including anatomy, physiology, pathology and medicine. We collected feedback from 328 students after exposed them to 30 minutes training session.

Observations and results: 90.85 % students strongly agreed that this new process aroused interest of learning. However 76.82% students strongly stated this will be the method that helps in better retention of knowledge than traditional method. It was interesting to note that 70.12% students strongly agreed that this method helps better impartment of clinical context. Nearly 96.03% students strongly agreed and were satisfied and enjoyed learning using present demonstrated method.

Conclusion: The present work strongly underlines student's interest towards early clinical exposure and integrated teaching.

Keywords: MCI vision 2015, Early clinical exposure, Medical education

Introduction:

Integrated teaching process allows medical students to gather, explore, refine and integrate the adopted knowledge for better implementation in clinical practice.¹ Recently Medical Council of India encourages integrated teaching and early clinical exposure in its reforms.² Syllabus from medical universities or Institutions required to be regularly updated alongwith latest advances learning process in order to improve the knowledge , skill and attitude of

medical students.^{1,3} Early clinical exposure and integrated teaching pattern underlines well integrated knowledge of the basic sciences, clinical sciences and community based approach required for clinical practice competency .³ The first year of medical curriculum is very important for academic success of medical students. In traditional teaching pattern students collect theoretical knowledge in compartments of subjects while goes for true clinical exposure in their final year in India . Early clinical

exposure and integrated teaching pattern can develop new insight and motivation. Recent era of exposure of medical students towards information based technology and social media leads them more enthusiastic.⁴ Present study was planned with an aim to collect and analyze attitude of medical students towards early clinical exposure and integrated teaching especially in western Maharashtra in Indian medical education set up .

Methodology:

The present qualitative descriptive study was approved by Institutional Ethical Committee from our university, Pravara Institute of Medical Sciences, Loni, India. We used self developed expert validated 10- item questionnaires for feedback collection.

Study area: It was based on student's interest, enjoyment during study period, skill improvement, overall knowledge reforms etc. We randomly chose the students from six different colleges' viz. two from Deemed University, two from Government sector and two from private sector but affiliated to Maharashtra University of Health sciences, Nasik. We collected feedback from 328 students after exposed them to training session.

Sample size determination: The sample size was calculated using Probability Proportionate Random Sampling (PPRS) technique. In present study we 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 planned to collect results from 2 Government medical colleges, 2 private medical colleges and 2 Deemed university medical colleges from western Maharashtra.

Prior informed written consent was obtained after explaining the procedure and purpose of study. **Study Information Brochure (SIB)** was provided to all students before study participation.

Inclusion criteria: The first year MBBS students who voluntarily participated were included in present study.

Exclusion criteria: The students not willing to participate were excluded from study.

We conducted 30 minutes session of early clinical exposure and integrated teaching based module for each one batch in these six medical colleges. We designed module entitled "**Clinical examination of abdomen**" including anatomy, physiology, pathology and medicine. Each session was designed with 30 minutes teaching in OPD and wards with patient interaction. Feedback was collected.

Observations:

Following training session **10 item questionnaire** was filled by students. Collected feedback is summarized in following table number 1.

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IC Value 91.48

Table 1 :10 item – Questionnaire: (N= 328)

	Strongly disagree = 1	Disagree = 2	Agree = 3	Moderately agree =4	Strongly agree =5
The method of teaching arouse interest	3 (0.91)	9 (2.74)	8 (2.43)	10 (3.04)	298 (90.85)
The technique help in better retention of topic	10 (3.04)	8 (2.43)	12 (3.65)	46 (14.02)	252 (76.82)
The method imparts better clinical context	3 (0.91)	1 (0.30)	22 (6.70)	72 (21.95)	230 (70.12)
Allows better assimilation of knowledge	2 (0.60)	12 (3.65)	18 (5.48)	68 (20.73)	232 (70.73)
Will better equip me to apply the knowledge when the opportunity arise	3(0.91)	7 (2.13)	13 (3.96)	90 (27.43)	215 (65.54)
	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?	4 (1.21)	7 (2.13)	17 (5.18)	45 (13.71)	255 (77.74)
How satisfied are you with the method of teaching?	0	1(0.30)	5(1.52)	7(2.13)	315 (96.03)
Are you confident about the knowledge and skills thus acquired?	8(2.43)	6 (1.82)	18 (5.54)	45(13.71)	251 (76.52)
Do you like the method of teaching?	5 (1.52)	13(3.96)	12(3.65)	38 (11.58)	260 (79.26)
Do you enjoy this process of learning?	0	11(3.32)	15 (4.22)	12(3.65)	290 (88.41)

90.85 % students strongly agreed that this new process aroused interest of learning. However 76.82% students strongly stated this will be better method that helps in better retention of knowledge than traditional method. It was interesting to note that

70.12% students strongly agreed that this method helps better impartment of clinical context. Nearly 96.03% students strongly agreed and were satisfied and enjoyed learning using present demonstrated method.

Discussion:

Early clinical exposure is a prominent key in reinforcement of integrated teaching based curriculum. It enables medical students to obtain a better and deeper understanding of medicinal theory and practice through the application of their knowledge in exact hospital environment perusing community based approach .⁵ This learning not only engages students in knowledge oriented learning platform rather than community based practices. Traditional medical teaching has been based on the model of theoretical teaching that kept medical students in classrooms and laboratory settings for the first year of their education, with an introduction to clinical exposure coming abruptly. It is now more commonly recognized that the traditional structure of medical education created an almost impenetrable wall between the preclinical basic sciences, para clinical and clinical years of practices.⁶ 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 truly offers a wider variety of teaching and learning methods leading to competency based learning .⁷

Early clinical exposure and integrated teaching practices are implemented worldwide as per their need of concern country. To prepare clinicians to be competent in providing healthcare, the **Jefferson School of Population Health** designed a specialized interdisciplinary curriculum that allows students with different experiences and backgrounds to take classes together, to assist in the preparation for and comprehension of areas related to health policy, public health and health care quality.⁸ Changes in the health care system in areas in disease management and treatment have affected the medical education

curriculum in the United States, and medical educators are emphasizing the need for clinicians to receive training in population-based preventive health care, in order to provide quality care to community. This improving community based practice approach among medical students. Students' direct involvement in the learning process made a fulfilling experience and helped students appreciate patient interaction, acquire interviewing skills, learn basic physical examination skills, communicate with patients and peers effectively and understand the relationship of population health to a patient's condition in a clinical setting.⁹

To create competent doctors henceforth to face the growing health challenges in society today, organizations such as the **Institute of Medicine (IOM)** and the **Association of American Medical Colleges (AAMC)** recommend that core competencies and key concepts in public health be integrated into undergraduate medical education.¹⁰

Integrated Learning is more frequently designed and used in undergraduate training than in post-graduate teaching. Generally, broad topics or topics that involve complex processes, theoretical knowledge based modules are selected for integrated teaching. Although used less frequently, it is worth noting that opportunities do exist for implementing integrated learning in post-graduate curriculum. For example, case-discussion sessions for complex cases, mortality meetings, clinico-pathological discussions, clinico-radiological discussions are some of the examples where integrated learning can be practiced in post-graduate training.

In India , study conducted by **Shardkumar Savant** from Mumbai in Anatomy found that it is a useful method for a basic science like anatomy if it is adopted in teaching with the traditional teaching

method. Anatomy will be better understood, retained and later practically applied, if learned in a clinically significant set-up. ECE helps to improve understanding, develop problem solving skills & increases interaction. Retention of knowledge is obviously better due to integration of basic science and clinical science and development of self directed learning skills. Such type of practices creates feeling among students as medico from their first year of course. It is a better learning methodology than traditional teaching alone. But there are some underlined and commonly observed draw backs like consumption of more manpower, infrastructure, time and extra efforts on the part of faculty along with problems like coordination with clinical departments. ECE sessions can be carried out in the classroom, in the hospital or even in the community. Students who visit the community are better able to relate to patients and communicate empathy.¹¹

A significant underlined practice of early clinical experience is observed in **Shiraz University of Medical Sciences** where this module is implemented alongwith regular basic sciences training. In this pattern, first year medical students participated in the hospital environment in order to become familiar with clinicians and also their own duties and future role as a physician. According to the results received, it seems that the program had a valuable and positive effect on the students' perspective on medical education. The students found the

experiences valuable for their learning paralleling their awareness of patients' need.^{12,13,14}

A study conducted by **Prasad Uma** at Rajeev Gandhi Institute of Medical Sciences, Srikakulam, Andhra Pradesh, India found that eighty five percent of the students were agreed that integrated teaching helped in appreciation and application of the basic science knowledge to health and disease and integrated teaching improves the performance in clinics and university examinations. 24% of students preferred traditional teaching to integrated teaching and 24% of students felt that horizontal integrated teaching is better than vertical integrated teaching.¹⁵

In our present study we found 90.85 % students strongly agreed that this new process aroused interest of learning. However 76.82% students strongly stated this will be better method that helps in better retention of knowledge than traditional method. It was interesting to note that 70.12% students strongly agreed that this method helps better impartment of clinical context.

Conclusion: The present work strongly underlines student's interest towards early clinical exposure and integrated teaching.

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Source of support: Nil

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