ORIGINAL RESEARCH ARTICLE

Effect of Early Clinical Exposure on 1st MBBS Students.

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Abstract:

Early clinical exposure integrates the knowledge of the basic sciences, clinical sciences and doctor patient relationship. There is a clear cut separation of pre clinical and clinical subjects during the past. So to emphasis the importance of relevance of preclinical and clinical subjects the present study was carried out at MGM medical college for 1st MBBS students (N=40). The pretest and post test was carried to observe the difference. The collected information was compiled in MS excel sheet in the form of master chart. Data was analyzed using SPSS (Statistical packages for social sciences) version 20th and using Z and T test. Diagrammatic representation data was done. It was observed that students showed improvement in cognitive, psychomotor and affective domains of learning.

Key words: *Teaching Aids, Learning objective, Clinical Knowledge etc.*

Introduction:

Early clinical experience helps the medical students socialized to their chosen profession (5). The first year students need to be given early clinical exposure to actual patient's care. This may help in achieving recognition of basic sciences taught in the classroom, thus making the learning conceptual. It will motivate the students to learn and integrate the ethics and professionalism in doctor patient relationship. With this view the present work is planned to study the impact of ECE on student's perception towards the different domains of learning i.e. knowledge skill and attitude.

Early clinical exposure was introduced by physiology department in learning endocrinology (1). The students clearly enjoyed the experience and perceived that it was valuable. MCI has recommended ECE in new proposed syllabus from 2015 (2). In view of this, different medical colleges are introducing the ECE to 1st MBBS students to study the impact of its implementation (3). Direct contact with patients can be seen to play a crucial role in development of clinical reasoning communication skills & professional attitude (10)

Aims & objectives: Early clinical exposure (ECE) is a teaching learning methodology which fosters the exposure of 1st MBBS students to the patients. The goals of ECE are - To

- Provide context & relevant of basic sciences teaching.
- Gain in some clinical knowledge.
- Gain in basic clinical skills.
- Get wide range of attitude.

Material & methods:

The forty students of the 1st MBBS with their prior consent were selected to undergo the study. Dean's permission, ethical committee permission etc all the norms were strictly followed. The students were arranged in two groups of equal number by random lottery method. A group (ECE) and B group (Non ECE). Both the groups were taught by the same faculty in Anatomy dept. about the kidney. It included gross anatomy laparoscopic structure, development and clinical anatomy by traditional method (black board & chalk piece, microscopic slides – H & E stained, embryology models, X-rays etc). The session included theory as well as practical.

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The students of A group (ECE) were sent to Nephrology department. The faculty from Nephrology department. taught the students about the patient's clinical examination related to kidney. Students were demonstrated about the cardinal signs of kidney failure such as oedema, pallor , B.P. & enlargement of kidney by ballottement method.

The faculties were explained about the syllabus before teaching pretest and post test in theory and practical was carried out with the pre-validated questionnaire.

Theory includes MCQ, SAQ and practical OSPE was used. The results were compiled and statistically analyzed using unpaired "t" test and "Z" test with the help of SPSS version 20th.

Observation and Results:

Table 1 :- Comparison of mean theory test score in Groups:

test	Group	Mean	SD	t-value	p-value
Pre- Theory Score	Group A(ECE)	6.50	1.13	1.15	P=0.26 NS
	Group B (Non-ECE)	6.10	0.75		
Post –Theory Score	Group A(ECE)	7.65	1.23	4.85	P=0.001 S
	Group B (Non-ECE)	6.14	0.71		

Theory Pre test score :- The mean score of pretest theory of group A (ECE) was 6.5 with SD 1.13 marks. The mean score of pretest theory of group B (Non ECE) was 6.1 with SD 0.75 marks. This difference between pretest theory score of two groups was not statistically significant (P=0.26).

Theory Post test score :- The mean score of post test theory of group A (ECE) was 7.65 with SD 1.23 marks. The mean score of post test theory of group B (Non ECE) was 6.14 with SD 0.71 marks. This difference between post test theory score of two groups was statistically significant (P=0.001).

Table 2 :- Comparison of mean practical test score in Groups:

Test	Group	Mean	SD	t-value	p-value
Pre- Practical Score	Group A(ECE)	20.4	5.08	1.04	P=0.30 NS
	Group B (Non-ECE)	18.9	3.76		
Post –Practical Score	Group A(ECE)	24.2	5.24	2.48	P=0.032 S
	Group B (Non-ECE)	20.9	4.98		

Practical Pre test score:- The mean score of pretest practical of group A (ECE) was 20.4 with SD 5.08 marks. The mean score of pretest practical of group B (Non ECE) was 18.9 with SD 3.76 marks. This difference between pretest practical score of two groups was not statistically significant (P=0.30).

Practical Post test score:- The mean score of post test practical of group A (ECE) was 24.2 with SD 5.24 marks. The mean score of post test practical of group B (Non ECE) was 20.9 with SD 4.98 marks. This difference between post test practical score of two groups was statistically significant (P=0.032).

Table 3:- Mean Difference Between Pre And Post Theory and Practical Test Scores.

	Pre vs Post theory score	Mean Difference	t-value	p-value
Pre vs Post theory score	Group A(ECE)	1.15	2.78	P=0.008 S
	Group B (Non-ECE)	0.04	0.242	P=0.842 NS
Pre vs Post practical score	Group A(ECE)	3.8	2.36	P=0.024 S
	Group B (Non-ECE)	2.0	1.49	P=0.14 NS

The mean difference between pre and post theory score in group A was 1.15 marks. This Mean difference between pre & post theory score in group A was found statistically significant (P = 0.008).

The mean difference between pre and post practical score in group A was 3.8 marks. This difference between pre & post theory score in group A was found statistically significant (P = 0.024).

The mean difference between pre and post practical score in group B was 2.0 marks. This difference

The mean difference between pre and post theory score in group B was 0.04 marks. This difference between pre & post theory score in group B was found statistically not significant (P = 0.842).

between pre & post theory score in group B was found statistically not significant (P = 0.14).

Discussion:

Early clinical experience helps medical students to socialize to their chosen profession. It helps to acquire a range of subject matter and makes their

learning more meaningful, real and relevant. It has potential benefits for other state holders notably teachers and patients (3,11). MCI has also proposed ECE (2) from 2015 batches. The survey by Dr. Tayade et al (3) indicates the knowledge given by didactic lectures strengthens the behaviour sciences. It also prepares the students to behave like future professionals. ECE sensitized the students between the relationship of basic sciences subjects and their clinical co-relation (14). The attitude of medical students changed during the teaching by ECE for learning endocrine physiology. This can be an adoptable approach for teaching basic sciences more effectively (3). ECE can support patient care centered interviewing skills. Students can be molded to receive & be willing to learn more from their senior colleagues (14). Direct contact with patient can be seen to play a crucial role in development of clinical reasoning, communication skills and professional attitudes (9). Debra et al (13) has concluded in his study that peer tutors can be support acquisition of basic patient centered interviewing skills in first year medical students. The students were receptive and willing to learn from their senior colleagues. The division of pre, para & clinical was for the sake of convenience (Dornan 2015). Now a days there is a need of vertical integration of practical knowledge due to rapid changes in medical innovations for health care, content of medical education & its process is essential (Berzansky et al) (6).

Good communication is a key for good learning. Learning is an active profess (Dr. Hitesh et al) (7). Students if taught by medical educators will appreciate the learning skills more effectively (Bell K. et al) (15). Spencer J. et al (4) has mentioned about the important role of development of clinical reasoning, communication skills, professionals attitude and empathy by direct contact with the patients. The findings of Bokken et al (8, 9) are similar to the findings of the spencer. Mrunal R. et al (12) stated the impotence of active participation in learning is more effective that passive contribution.

Conclusion:

The present study therefore relived that there was a statistically significant improvement of students score in both theory as well as practical tests. The effective improvement requires additional efforts from the faculties. There is a need be co-ordination between the preclinical & clinical developments. Faculty training is also a point of consideration.

Limitations of the study:

This is a pilot project so it should be further implemented for authenticity. No of participants is minimally optimum.

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