

IMPACT OF PEER ASSISTED LEARNING ON YEAR 1 MEDICAL STUDENTS**PEER ASSISTED LEARNING MODULE AS AN TEACHING LEARNING METHOD**

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Abstract:**Back ground**

Medical council of India recommends improving quality of training of IMGs by expanding the role of doctors/IMGs from Clinician to Communicator, Leadership and member of the health care team. MCI also recommends improving quality of training by Vertical medical Integration , and expects Doctor as health educator as a core competency amongst the IMGs. Considering all these aspects of vision 2015 we have assessed peer-assisted learning teaching method and compared with traditional faculty based method of medical education. The modern Learning pedagogy is now well supported by evidences to make education system active and student-centered. senior students give and assist their juniors on pre assigned topics especially practical clinical teaching ., lead and provide support to their junior classmates in the form of tutoring. The module is attractive to medical colleges faced with a growing number of learners but a static or rather decreasing faculty size.

Aims and objectives:

- 1] Introduce and evaluate peer assisted learning as T&L method in first year medical students
- 2] To compare the impact of this method on learners with traditional method of learning
- 3] To Get the feedback of PAL

Method:

IEC approval was taken

Study design and type: experimental interventional comparative analysis

Study setting: Dept of physiology ,AMCMET medical college ,Ahmedabad

Study population :1st year under graduate medical students Participants:

Inclusion criteria: All 1st year medical student willing to participate in study

Intervention:

PAL and traditional learning exposure assessed by OSPE tests

Sample size: $n_1 = 50 + n_2 = 50$.Total 100

Assessment: Knowledge gain By post intervention tests : OSPE tests

Feedback: Perception of PAL by linkers scale

Statistical analysis: Mean and SD of results of post intervention tests of two experiment 1] Teaching blood pressure measurement E1 and 2] Teaching clinical examination of pulse.

Total score in each design 20 marks assessed by OSPE. P value measured. P value <0.05 was considered statistically significant other wise statistically insignificant

Feedback was assessed by Likert scale

Results:

The study documented the fact that the result [Score achieved] were similar and statistically insignificant amongst junior students whether by learned PAL module or faculty assisted Learning module

Studies have shown that peer assisted teaching has received a positive feedback **from both the peer teacher , the learners and faculties as taken by linker score .In this setting OSPE scores were comparatively similar whether they have faculty instructors or peer teachers(Statistically insignificant P>0.5).**

The study demonstrates: a) PAL methods **learning scores as measured by OSPE test was statistically similar**(p= 0.692984 in E1 and P =0.633656 E2 set up]

Conclusion:

These findings support that **PAL module is as effective as traditional Module.**

The study demonstrates: a) PAL methods **learning scores as measured by OSPE test was statistically similar.** Teaching skills should be part of the training of all medical graduates [MG], and it should begin at the medical-student level. By such intervention medical students may become more effective communicators and educator in context to future physician-patient interaction[vision 2015] .Students become better learners and as students may be future residents and faculty members , PAL module help them to develop knowledge, attitudes ,skills for medical education. Peer Assisted Learning (PAL) could be an acceptable and beneficial educational strategy to organize the programs by which students can tutor or teach their peers.

We received positive responses from of medical students about their experience of vertical integration. Year 1 students reported that second year students provided guidance and reassurance. Year 2 students reported that the role helped them to improve their own understanding, communication and confidence. Though to find motivated students to teach in group to junior peers is also difficult unless it is made a part of education objectives by institution. Medical colleges should form a PAL as part of educational objectives including teaching methodology if objectives of MCI Vision 2015 i.e. improving quality of training of IMGs by expanding the role of doctors/IMGs from Clinician to Communicator, Leadership and member of the health care team is to be fulfilled .And thus modern Learning pedagogy ,to make education system active and student-centered is also fulfilled .

Abbreviation: IMG= Indian medical graduate, PAL= Peer assisted learning. T&L=Teaching and learning, OSPE= Objective structured practical examination

Key words; Peer assisted learning, medical education, Teaching and learning

Introduction:

Medical council of India recommends improving quality of training of IMGs by expanding the role of doctors/IMGs from Clinician to Communicator, Leadership and member of the health care team. MCI also recommends improving quality of training by Vertical medical Integration , and expects Doctor as health educator as a core competency amongst the IMGs. Considering all these aspects of vision 2015 we have assessed peer-assisted learning teaching method and compared with traditional faculty based method of medical education. The modern Learning pedagogy is now well supported by evidences to make education system active and student-centered. Student centered activities have been linked to more effective learning because need to actively engage with the material in order to participate.

Learning by teaching is key element in peer-assisted learning. In this context there's a lot of evidence to suggest that peer-assisted learning works really well. Peer assisted learning is not a single, undifferentiated educational strategy. It encompasses a broad sweep of activities. Peer-based learning is both cost-effective and versatile because it is customized to the group involved, utilizes their own experience, and addresses real-world issues and challenges. In Peer assisted learning [PAL] students act as teachers and widely used in many universities and increasingly in medical schools. The module is attractive to medical colleges which faced with a growing number of learners but a static or rather decreasing faculty size. Peer assisted learning [PAL] is a form of vertical educational integration. Here senior students give and assist their juniors on pre assigned topics especially practical clinical teaching .They lead and provide support to their junior classmates in the form of tutoring. The module is attractive to medical colleges which faced a growing number of learners but a static or rather decreasing faculty size.

Aims and objectives:

- 1] Introduce and evaluate peer assisted learning as T&L method in first year medical students
- 2] To compare the impact of this method on learners with traditional method of learning
- 3] To Get the feedback of the PAL module

Methods: IEC approval was taken.

Study design and type: experimental interventional comparative analysis

Study setting: Dept of physiology ,AMCMET medical college ,Ahmedabad

Study population : 1st year under graduate medical students Participants:

Inclusion criteria: all 1st year medical student willing participate in study

Intervention:

PAL and traditional learning exposure assessed by OSPE tests

Sample size: $n_1 = 50 + n_2 = 50$.Total 100

Assessment: Knowledge gain By post intervention tests : OSPE tests

Feedback: Perception of effectiveness of PAL by linkers scale by students

Statistical analysis: Mean and SD of results of post intervention tests of two experiment 1] Teaching blood pressure measure E1 and 2] Teaching clinical examination of pulse.

Total score in each design 20 marks and T and P value measured. value <0.05 was considered statistically significant other wise statistically insignificant

Feedback by Likert test

Procedure:

In Peer assisted learning [PAL] teaching method [PAL] senior medical students were given optional teaching module to take. It worked in two phases. All senior medical students were invited to participate in exploring the vertical educational integration. In the first week an intense training is given about clinical –practical topic to be taught. They taught the basics of how to structure a lesson plan and ask effective questions, and allow practicing their skills. IN PAL , second week and onward senior medical students who are just about to start working in laboratory class set up. The idea is for the senior medical students to teach the junior medical students what they should expect on the ward i.e. measuring [E1] blood pressure ,and perform clinical examination of pulse [E2]. The PAL module, senior students generally teach between eight to ten students per session. In this experimental set up ,two practical session were planned .In PAL module the first session was observed once so to see their skills . In PAL module We undertook study of how medical students are impacted by being peer teachers and how having a peer teacher impacts learners. Two clinical practical session were given by peer students and assessed by OSPE. The scores were compared with the same session given by regular Faculties. The present study conducted in AMCMET medical college to examine and compare the effects of two educational methods: Peer Assisted Learning [PAL module] and teaching by regular faculty members [Regular Module]on year 1 students. The learning and retention scores we compared . Paired t-test were used for assessing effectiveness of educational methods.

Statistical analysis :Students T test

Ethics

Ethical approval for this study was obtained from authority

Complicit of interest: Nil

Results

The study documented the fact that the result [Score achieved] were similar and statistically insignificant amongst junior students whether by learned PAL module or faculty assisted

Learning module .Studies have shown that peer assisted teaching has received a positive feedback **from both the peer teacher , the learners and faculties as taken by linker score. In this setting OSPE scores were comparatively similar whether they have faculty instructors or peer teachers(Statistically insignificant $P>0.5$).**

The study demonstrates: a) PAL methods **learning scores as measured by OSPE test was statistically similar**($p= 0.692984$ in E1 and $P =0.633656$ E2 set up]

These findings support that **PAL module is as effective as traditional Module.**

Experiment 1

Experiment	No of students	Mean	SDDEV	P value
Post PAL	50	12.24	3.190987	
Post traditional	50	12.44	2.532725	
				0.692984 NS >0.5

Experiment 2

Experiment	No of students	Mean	SDDEV	P value
Post PAL	50	11.4	2.747912	
Post traditional	50	12.2	2.77746	
				0.633656 NS >0.5

Discussion:

The study documented the fact that the result [Score achieved] were similar and statistically insignificant amongst junior students whether by learned PAL module or faculty assisted Learning module

Studies have shown that peer assisted teaching has received a positive feedback **from both the peer teacher , the learners and faculties as taken by linker score. In this setting OSPE scores were comparatively similar whether they have faculty instructors or peer teachers(Statistically insignificant $P>0.5$).**

The study demonstrates: a) PAL methods **learning scores as measured by OSPE test was statistically similar**($p= 0.692984$ in E1 and $P =0.633656$ E2 set up].In the paper "Why medical students should learn how to teach?" Dandavino et al concluded that teaching skills should be part of the training of all medical graduates [MG], and it should begin at the medical-student level. The reasons they proposed are (1) medical students may become more effective communicators and educator in context to future physician-patient interaction; (2) students become better learners. 3]medical students are future residents and faculty members and with PAL module help them to develop students' knowledge, skills, and attitudes in education may further stimulate these aspects.

Studies on medical education suggest that Peer Assisted Learning (PAL) could be an acceptable and beneficial educational strategy to organize the programs by which students can tutor or teach their peers.

We received positive responses of medical students about their experience of vertical integration. Year 1 students reported that second year students provided guidance and reassurance. Year 2 students reported that the role helped them to improve their own understanding, communication and confidence.

Though Students find peer learning a positive experience, it is not easy to implement as senior medical students have their own educational schedules to follow and so they have to follow time management schedule .To find motivated students to teach in group to junior peers is also difficult unless it is made a part of education objectives by institution. Some seniors are arrogant and may not ready to work with first years . Though the attitude is entirely counterproductive to the aims of vertical integration. The benefit to younger students is that they feel more comfortable asking what they perceive to be 'stupid' questions. The 'hidden curriculum' – that is, knowledge that's not part of the official syllabus, things like how to please, and behavior that might upset the professors. It is been felt that students are more comfortable asking questions to peer students. Though there is also a fear of inaccurate information Transmission .

LIMITATIONS.

This study had several limitations. It was a small study with 50 Jr students and 5 peer students. The study Can be expanded to cover all students .There is genuine difficulty to find and motivate students to participate as teacher in PAL module.

Conclusion:

The study demonstrates: a) PAL methods **learning scores as measured by OSPE test was statistically similar**. Teaching skills should be part of the training of all medical graduates [MG], and it should begin at the medical-student level. By such intervention medical students may become more effective communicators and educator in context to future physician-patient interaction[vision 2015] .Students become better learners and as students may be future residents and faculty members , PAL module help them to develop knowledge, attitudes ,skills for medical education. Peer Assisted Learning (PAL) could be an acceptable and beneficial educational strategy to organize the programs by which students can tutor or teach their peers.

We received positive/supporting responses from medical students about their experience of vertical integration. Year 1 students reported that second year students provided guidance and reassurance. Year 2 students reported that the role helped them to improve their own understanding, communication and confidence. Though to find motivated students to teach in group to junior peers is also difficult unless it is made a part of education objectives by institution. Medical colleges should form a PAL as part of educational objectives including teaching methodology if objectives of MCI Vision 2015 i.e. improving quality of training of IMGs by expanding the role of doctors/IMGs from Clinician to Communicator, Leadership and member of the health care team is to be fulfilled .And thus modern Learning pedagogy,to make education system active and student-centered is also fulfilled .

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