

Original Research Article

Peer Assisted Teaching: Are Students Ready For It?

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ABSTRACT

Introduction: Three common instructional strategies used to teach gross anatomy are lecture, discovery or inquiry-based learning, and cooperative learning. By assuming the responsibility of teaching their peers, students not only improve their understanding of course content, but also develop communication skills, teamwork, leadership, confidence and respect for peers that are vital to developing professionalism early in their medical careers. International interest in peer-teaching and peer-assisted learning (PAL) during undergraduate medical programs has grown in recent years, reflected both in literature and in practice. There, remains however, a distinct lack of objective clarity and consensus on the true effectiveness of peer-teaching and its short- and long-term impacts on learning outcomes and clinical practice.

Objective: The goal of the present study is to describe the design and implementation of near-peer teaching in an anatomy course and to evaluate students' perceptions of the program.

Materials & methods: 50 students of 1st year MBBS, department of anatomy, Vydehi institute of medical science & Research Centre, were chosen for study and one of them will be selected as peer assisted teacher to teach their peer group on selected topics priorly discussed by the faculty during dissection hall. At the end of the study, feedbacks were taken for both teacher teaching & of peer teaching study by questionnaires'.

Results & conclusion: The students recognized the merits of the peer assisted teaching & the faculty teaching exceeded peer assisted teaching by 42 %. Results also suggest that there are potential learning benefits are more than the disadvantages like improved study habits, better attitudes toward anatomy, more independent study etc.

Keywords: peer-teaching, peer-assisted learning, near-peer teaching, medical student, Medical school.

INTRODUCTION

Previously the 1st MBBS course duration was of one and half years, since 1998 medical council of India has reduced it to one year. ^[1] The explosion of knowledge to be learned by medical students and the pressures for academic pursuits has put curriculum, students and faculty at premium. Generally most of students find it difficult to understand and retain gross anatomy. For years together

gross anatomy is taught by the traditional teacher oriented teaching method. We feel that with this method it is really difficult to understand the subject conceptually in such a short duration. Hence need of the hour is to bring some change in our traditional teacher oriented, teaching system. ^[2] Reciprocal peer teaching has been used in classrooms for many centuries. The Roman philosopher, Lucius Annaeus Seneca (4BC-AD65) advocated

cooperative learning with a statement 'Those who teach learn'. Although in existence for thousands of years, peer teaching is an underutilized, yet highly valuable resource for higher education. [3] For educators at all academic levels, the learning pyramid has been a longstanding advocate for peer training, demonstrating that the process of teaching others results in a 90% retention rate of material, as compared to the 5% for lecture, 10% for reading, and 50% for discussion. In addition to its intellectual benefits, peer teaching also heightens students' sense of responsibility, increases self-confidence, and allows for growth in interpersonal and collaborative relationships while improving organizational and problem solving skills. Peer teachers are often better at understanding students' learning problems, more interested in their lives and personalities, less authoritarian and yet are still focused on assessment. [4]

RESULTS

1. Objective study results

Sl no	Teaching group	No.	Mean	Std. Deviation	Std. Error Mean	Sig.(2- tailed) P value
1	Faculty	50	15.64	3.135	0.443	.003
2	Peer	50	13.62	3.458	0.489	

Table no1: shows mean, standard deviation, P value of objective study of peer assisted & faculty teaching.

- Effectiveness of objective study was better with faculty teaching than peer teaching
- There was statistically significant difference in the teaching.

2. Subjective Study results

sl.no	Questionnaires	Faculty Teaching		Peer assisted teaching	
		Yes %	No %	Yes %	No %
1	Was teaching useful in consolidating material taught in the lectures	50 (100%)		50(100%)	
2	Was teaching useful in consolidating important & difficult concepts	46 (92%)	4(8%)	45(90%)	5(10%)
3	Was the interactive nature of teaching useful	47(94%)	3(6%)	47(94%)	3(6%)
4	Was being taught in a small group useful to your learning experience	50(100%)		50(100%)	
5	Do you think the teaching will be useful in preparing you for the module tutorial test and knowledge test	50(100%)		50(100%)	
6	Did it helped in 'Learning and retaining anatomy'	47(94%)	3(9%)	43(86%)	6(12%)
7	Did it 'Enhances dissection activity'	48(96%)	2(4%)	47(94%)	3(9%)
8	Merits				
	Increases confidence	20(40%)		28(56%)	
	Communication Skill	7(14%)		9(18%)	
	Team work	15(30%)		18(36%)	
	Retention of subject	7(14%)		12(24%)	
9	Demerits				
	No Demerits	35(70%)		35(70%)	
	No enough time	-		-	
	No comment	2(4%)		2(4%)	
10	Rate PAT as useful mode				
	Poor/Average	-		-	
	Good	37(74%)		35(70%)	
11	Which teaching was better	36 (72%)		14 (28%)	

Objective:

To design and implementation of peer assisted teaching & compare with faculty teaching in an anatomy course & To evaluate students perceptions of the program.

MATERIALS & METHODS

50 students of 1st year MBBS, department of anatomy, Vydehi institute of medical sciences & research centre, Bangalore. One of them will be selected as peer assisted teacher to teach their peer group during dissection hall. At the end of the study, feedbacks are taken for both faculty teaching & that of peer teaching study by objective assessment (examination grades) & subjective assessment (student opinion) by questionnaires.

Statistical analysis: Analytical study was carried out. Test of proportion, t test, Mean, SD, was done using SPSS software.

Table no2: shows percentage of opinion regarding different questionnaire for both faculty & peer assisted teaching, an subjective assessment.

Peer assisted teacher feedback: felt comfortable in the role as a teacher , believed that students benefited by his teaching, learned better about techniques of teaching , learnt a better about the subject matter while teaching ,If had the same choice, he'd choose to be a Near Peer Teacher again ,Every medical student should learn how to teach.

Students' opinion about PAT:

1. Advantage: Beneficial method of teaching, Understanding is better by teaching others, Increases stage confidence, Small group teaching was better, No hesitation to ask doubts, Can ask for repetition
2. Disadvantage: Lack of confidence in peer teacher, Lack of experience, Missing out some matter of the topics
3. Suggest for improvement: Benefits of questions after lecture, Topic told previously for better understanding.

DISCUSSION

Sl no	Authors/country	Terminology used	Student-teachers (no.)- Student-learners (no.)	Conclusion
1	Batchelder et al, [5] UK	Peer-led teaching	Senior students in clinical(8)-- Junior students in preclinical (358)	Peer Teaching was better than Faculty Teaching
2	Graham et al [6] UK	Peer-assisted learning	Years 3 to 5 (12)-- Year 2 (64)	Peer Teaching was better than Faculty Teaching
3	Weyrich et al [7] Germany	Peer-assisted learning	Years 4 + 5 (14)-- Year 3 (89)	Peer Teaching was better than Faculty Teaching
4	Tolsgaard et al [8] Denmark	Student teacher	Year 2 + (6)--Year 1 (59)	Peer Teaching was better than Faculty Teaching
5	Sobral [9] Brazil	Peer tutoring	(50)-- Year 3 (91)	Peer Teaching was better than Faculty Teaching
6	Steele et al [10] USA	Student-led learning	Year 2 (? number)-- Year 2 (127)	Peer Teaching was better than Faculty Teaching
7	Haist et al [11] USA	Student preceptors	Year 4 (9)-- Year 1 (100)	Peer Teaching was better than Faculty Teaching
8	Hughes et al [12] UK	Peer-led training	Final-year (Year 6) --Year 5 (132)	Faculty Teaching_(20%) better than Peer Teaching
9	Kassab et al [13] Bahrain	Student-led tutoring	Year 3 (25)-- Year 3 (91)	In support for the group leader Peer Teaching was better than Faculty Teaching In Self-assessment performance Peer Teaching was as effective as Faculty Teaching
10	Present study Bangalore	Peer Assisted Teaching	Year 1(1)--Year 1(50)	Merits of PAT method in Peer Teaching was better than Faculty Teaching. Objective assessment of student performance in Faculty Teaching was better than Peer assisted teaching.

Table no3: showing comparison of different authors, their opinion regarding peer assisting study terminology used for it, no. student & faculty used for the study with the present study.

From above table no.3, discussion with other authors: Batchelder et al, [5] Graham et al, [6] Weyrich et al, [7] Tolsgaard et al, [8] Sobral, [9] Steele et al, [10] Haist et al [11] concluded from their study that peer teaching was better than faculty teaching.

Hughes et al [12] & Kassab et al [13] concluded from their study that faculty teaching better than peer teaching.

Our study goes well with the Kassab et al [13] study in recognizing the merits of the PAT & with Hughes et al [12] study with the faculty teaching exceeding peer assisted reaching by 42 %. Subjective assessment of merits of peer assisted reaching: peer assisted teaching better than faculty teaching. In other aspects of

subjective & objective learning outcomes of peer assisted teaching: Faculty Teaching was better than Peer Assisted Teaching.

CONCLUSION

In recognizing the merits of the peer assisted teaching was better than faculty teaching. In other aspects of subjective & objective learning outcomes of the study Faculty Teaching was better than Peer Assisted Teaching. Reason being unreliable quality of teaching from peers, lack of confidence in one's peers to carry out the role of primary of peer teacher. Students felt that they were receiving inadequate instruction from their peer, there was no seriousness with peer teacher teaching. Results also suggest that there are potential learning benefits are more than the disadvantages like improved study habits, It is a form of active learning, better attitudes toward anatomy, more independent study, improves the communication skills, Helps to understand the subject conceptually etc. In view of benefits of peer teaching it should be adopted in medical curriculum within and beyond anatomy courses & for better understanding of subjects & to become good doctors.

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