Introducing Peer Assisted Learning for Undergraduates in Obstetrics and Gynecology

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ABSTRACT

Introduction: Active learning happens when students are given opportunity to develop interactive learning. The majority of reported applications of Peer Assisted Learning (PAL) have taken place in the pre-clinical years. This study is an effort to explore use of PAL as a stimulator to self directed learning (SDL) in clinical years. The PAL approach in Obstetrics and Gynecology is aimed at developing SDL and learning in team to a small group and stimulate the students in improving academic performance.

Material and methods: The students were sensitized on PAL two weeks prior to commencement of these sessions. Two topics each from cognitive and psychomotor skills were allotted. Consenting students were randomly divided to 12 subgroups for 1:1 interaction changing the pair in all 4 sessions. The impact of PAL was evaluated using qualitative and quantitative (pre and post test) methods. The student and faculty feedback were obtained at the end of final sessions.

Results: A total of 50 MBBS students of eighth semester undertook the PAL sessions. There were 11 dropouts, so 39 cases were analyzed. Students perceived PAL to be a valuable learning activity which improved reasoning, provided better understanding of the subject and helped them in SDL. It promoted confidence in communication. The faculty perception on PAL as intervention was that it promoted SDL and helped develop reasoning, which would help in inculcating lifelong learning.

Conclusion: PAL is recommended as a useful teaching-learning method that could be implemented as an adjunct to the conventional teaching methods.

Keywords: Peer Assisted learning, Obstetrics and gynecology, self directed learning, collaborative learning

INTRODUCTION

Conventional teaching in Obstetrics and Gynecology to undergraduate medical students encourages passive learning, memorising and rote learning. Active learning occurs when students are given opportunities to develop interactive relationship with subject matter, and encouraging them to ignite their minds rather than be passive learners receiving knowledge. In the active learning environment teachers facilitate, students' learn rather than start teaching.[1] Students' previous learning and experience get strengthened when active learning strategies are adopted. Peer assisted learning (PAL) is an active learning strategy.[2] There is emphasis in many Indian schools to decrease the quantum of rote memorization and adopt active learning strategies and motivate on critical thinking among students.[3] PAL does not require much arrangement to promote active learning in a small class. PAL activities were received well by students and some opined it to be a regular activity.[4] Social and cognitive congruence between teacher and student allow for open exchanges between facilitator and learners, and learners feel less inhibited about asking questions and engaging in discussion.[5,6]

There are peer effects in learning that originate in peer interactions and associations.

In order to introduce active learning strategies PAL was incorporated. Majority of the PAL activities are reported in Pre-clinical years, however there is evidence that PAL can be equally effective in clinical training.[7]

Peer-assisted learning thus describes a collaborative and co-operative teaching and learning strategy. Learners are active equal partners, students are self-directed, share in interventions and actively participate in discussions and feedback.

Introduce Peer Assisted Learning as an intervention for undergraduate medical students in Obstetrics and Gynecology was aimed at developing Self Directed Learning and learning in team.

Aim and objectives of the present study were to assess whether PAL helps to develop self directed learning and collaborative learning in peer group, to observe open exchanges between students and with facilitators, to assess whether PAL promotes deep learning, comprehension and communication skills and to assess the students and faculty perception with above intervention

MATERIAL AND METHODS

After Institutional ethical clearance the project was undertaken with third professionals (eighth semester, Clinical-batch) M.B.B.S. students who had completed at least six months in Department of Obstetrics and Gynecology at Era's Lucknow Medical College, Lucknow.

Two batches of students were included in the study; the regular batch comprises of 25 students posted in OBG. As there were dropouts PAL was conducted in two batches. The students were sensitized on PAL two weeks prior to commencement of these sessions. The residents and faculty of the department were sensitized about the project in general and the PAL in particular. They were trained for this method through a lecture and one

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practice session.

Two topics from knowledge aspect and two pertaining to psychomotor skills were allotted. Post partum hemorrhage and cervical cancer screening were topics on knowledge aspect and mechanism of normal delivery and insertion of IUCD (Copper T) for psychomotor skills, taking into consideration the appropriateness with respect to the stage of curriculum and the expected understanding of the students. Adequate resources were provided on request of the group/individual.

An informed consent of the students for participation in the study was obtained. Consenting students were randomly divided to 12 subgroups for 1:1 interaction changing the pair in all 4 sessions. In the PAL session students discussed among themselves for 15-20 minutes. One student each from different 1:1 subgroups presented. Presentation of 5-7 minutes was followed by brief discussion. It was ensured that all students presented at least once in a block. A faculty member was present during the presentations to serve as a resource and facilitator. Learning objectives for study were defined by the teacher. The teacher guided the discussion to match to learning objectives. Four open ended sessions (two for cognitive and two for psychomotor skills) were conducted (concept diagram-Annexure1).

PAL sessions were conducted in two batches, as those students (dropouts) who did not come for last sessions and post-test, were excluded from study.

The performance of the students was quantitatively assessed by Multiple Choice Questions (MCQ) Test, Short Answer Questions Test (SAQ) and Objective Structured Clinical Examination (OSCE). These tests were administered before (Pretest) and after these sessions (Posttest in 5th week).

Test	MCQ	SAQ	OSCE
Pretest Mean score	25.89±4.81	8.02± 3.96	18.33±3.56
Posttest Mean score	35.64±3.54	12.84±1.98*	30.33±3.43*
Values indicate Mean ±S.D.*P<0.001Paired Student's test			

Table-1: Test scores for MCQ,SAQ and OSCE

STATISTICAL ANALYSIS

The data was analyzed using paired't' test. The impact of PAL was qualitatively evaluated using student and faculty feedback questionnaires. The faculty and student feedback were obtained at the end of final sessions analyzed and subsequently communicated.

RESULTS

The results of the study are as under:

Quantitative Tests

Fifty students of M.B.,B.S. VIII semester undertook the PAL session. Dropout of 11 students led to 39 cases being analyzed. The mean pretest (baseline) and post test scores for the MCQs, SAQs and OSCE stations are as in Table 1. There was statistically significant difference ($p<0.001$) in the pretest and posttest in MCQs, SAQs, and OSCEs (Table 1). The higher mean post-test scores suggest that the PAL was useful intervention.

Qualitative Tests:

Feedback from students (Table 2): Following were the opinions of the students about the PAL method of learning [Expressed as number (percentage in parenthesis) responses] on a 5 point Likert's scale

The students had positive perception to liking of PAL, psychological support and cooperation with peers and perception of retention, self directed learning and communication skills. There was improvement in learning which is self –explanatory by improved post-test scores. Majority of faculty (75%) also experienced enhanced interest in PAL.

DISCUSSION

We observed that the quantitative scores improved significantly

Questions	Likert's Scale				
	SA	A	US	D	SD
Liking Concept Of Pal					
PAL sessions helped me to organize my study material. Time allotted for study was adequate	7(17.9)	24(61.5)	8(20.5)	-	-
It helped me to interact more closely with my peers.	8(20.5)	23(59)	8(20.5)	-	-
PAL helped me in preparing these sessions.	9(23.1)	26(66.7)	4(10.3)	-	-
Would I recommend this to a friend	6(15.4)	28(71.8)	5(12.8)	-	-
Students perception on SDL and retention					
PAL has improved my learning skills.	8(20.5)	30(76.9)	1(2.6)	-	-
PAL has facilitated my independent learning skills.	13(33.3)	23(59)	3(7.7)	-	-
PAL has increased my analytical skills	9(23.1)	27(69.2)	3(7.7)	-	-
PAL helped me in retaining relevant information	9(23.1)	23(59)	7(17.9)	-	-
Students Perception On Communication Skill					
PAL enhanced my communication skills	12(30.8)	26(66.7)	1(2.6)	-	-
PAL as a whole worked as an effective learning tool.	10(25.6)	22(56.4)	7(17.9)	-	-
Students Perception On Psychological Support In PAL					
The peer seemed informed	4(10.3)	31(79.5)	4(10.3)	-	-
Comfort in asking questions	9(23.1)	25(64.1)	5(12.8)	-	-
Reference material were useful and adequate	9(23.1)	23(59)	7(17.9)	-	-
PAL helped me better understand difficult parts by hearing my classmates and discuss it.	10(25.6)	22(56.4)	7(17.9)	-	-
PAL helped me better understand the difficult parts by talking it out.	8(20.5)	26(66.7)	5(12.8)	-	-
The faculty present during PAL facilitated	9(23.1)	21(53.8)	8(20.5)	1(2.6)	-

Table-2: Opinions of the students

P<0.001. Arendale's study[8] also revealed statistical significance for the PAL participants at the p of <0.05 or lower for earning better scores.

75-85% of the students liked their participation in PAL and demonstrated a high level of acceptability of better educational exchange. Similar observations were by Glynn et al[5] and Hammond et al 2010.[8] A sense of cooperation and closeness appears to permeate

PAL as a whole and probably explains some of the reasons behind it's success. The concept

of "promotive interaction", describes how individuals encourage and facilitate each

other's efforts in order to reach the groups goals. This was done by exchanging resources and information; giving and receiving feedback; and mutually influencing each other's reasoning and behavior. It increased students' confidence and improved learning in psychomotor and cognitive domains.[7l]

86-95% of our students reported that their retention of knowledge was better with self directed learning. Kyrch 2005[10] has demonstrated that 100% of students agreed that peer teaching experience increased their understanding of the topics they taught and 97% agreed it increased their retention of information they taught to their peers.

84-92% of participants agree positively on psychological support lead by peers. The social attributes of collaborative learning have been stated as an effective educational strategy by many in medical education research, forming an important reason for its application. Many researchers have recognized the impact of collaboration among peers in enhancing team work and communication skills.[5,8]

83-97% Students enrolled in PAL expressed improvement in communication and understanding basic concepts, remember factual information, and they enjoyed the learning experience. The peer learners found their environment relaxed with freedom to communicate and seek knowledge. Kyrch's[10] observations were similar, 92% agreed that PAL improved their communication skills, which can be applied beyond anatomy to their careers as future physicians. The opinion that PAL environment was friendly and there was less inhibition in communicating with peers was likewise shared by students in the study conducted by Naqi (2014) in Lahore.[11] Shankar et al. made observations from their study results that after attending PAL sessions, learners were confident that they could attempt questions and prepare for examinations.[12]

Similarly, a statistically significant difference was observed in the perceptions of PAL learners who were in higher agreement that their sessions improved their communication skills (and), stimulated them to take active part in discussions (and) and provided an opportunity for learning with others (and).[13] Patel et al suggested that PAL can be an effective adjunct to traditional teaching methods in the clerkship years.[7]

CONCLUSION

PAL is recommended as a useful teaching-learning method that could be implemented as an adjunct to the conventional teaching methods in Obstetrics and Gynecology. It promotes understanding; develop reasoning and self directed learning among students. It promoted confidence in communication skills with both the teachers and peers. Interpersonal relations were also strengthened. It should be implemented and sustained by faculty.

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Annexure 1

Concept map-Schematic Flowchart

Peer Assisted Learning in Department of Obstetrics and Gynecology