

Effect of Students' Seminar on Learning in 1st Year MBBS Students

Praveena Sabbani¹, V. Sunanda², Sujatha Pasula³

¹Associate Professor, Department of Biochemistry, Kamineni Academy of Medical Sciences and Research Centre, Hyderabad, Telangana. ²Professor and HOD, Department of Biochemistry, Mamatha Academy of Medical Sciences, Hyderabad, Telangana. ³Assistant Professor, Department of Biochemistry, Osmania Medical College, Hyderabad, Telangana.

ABSTRACT

BACKGROUND

In majority of the medical colleges in India, theory classes are being conducted as didactic lectures, which is a passive method of teaching. In this method of didactic lectures, the student's attention span will decrease after 20 minutes & retention of memory will be less. Therefore, there is a need to introduce interactive teaching methods like interactive student-LED seminars and small group discussions etc. In this scenario, we have introduced student's seminar on a particular topic and studied its effectiveness in student's learning. The purpose of the study was to know the perception of 1st MBBS students towards this interactive student led seminar method of teaching and a pre-test and post test was conducted to evaluate the students learning by this method.

METHODS

Study was undertaken on 150 students of 1st year MBBS. A pre- and post-test questionnaire from the vitamins topic is given before and after the session on student led seminar and a feedback was obtained by giving the questionnaire based on Likert scale to know the effectiveness of seminar in learning process.

RESULTS

More than 70% students responded positively to most of the questions given in the questionnaire. Post-test assessment showed improvement in scores of students after seminar presentation compared to pre-test. Results showed that seminar method of teaching-learning is an effective way of learning, which is interactive, promotes active students participation, stimulates critical thinking and improves communication skills.

CONCLUSIONS

Seminar presentation can be considered as an active and effective method of learning technique. Students' attitude is very decisive for an active learning method like seminar and it should be promoted in routine practice.

KEYWORDS

Seminar, Pre-Test and Post-Test, Questionnaire, Teaching Methods

Corresponding Author:

*Dr. Praveena Sabbani,
H. No. 5-11/2, Plot-91,
Saivihar Nagar Colony,
Meerpet- 500097, Hyderabad.
E-mail: drpraveenasabbani@gmail.com*

DOI: 10.18410/jebmh/2020/171

*Financial or Other Competing Interests:
None.*

How to Cite This Article:

Sabbani P, Sunanda V, Sujatha P. Effect of students' seminar on learning in 1st year MBBS students. J. Evid. Based Med. Healthc. 2020; 7(15), 787-790. DOI: 10.18410/jebmh/2020/171

*Submission 04-03-2020,
Peer Review 10-03-2020,
Acceptance 25-03-2020,
Published 09-04-2020.*



BACKGROUND

Teaching methods in India are dictated by the ancient teaching methods. With modern times, teaching methods should also be improvised. Nowadays, a deluge of techniques is encouraged to increase the interest of students in learning. Teaching methods has a major role to play in making the subject innovative, interesting and participatory for the students. In India still teaching is controlled by teacher centred classroom method. Apart from this, one of the methods adopted is organizing seminars for the students. Knowledge acquisition through seminars forms an essential part of medical training programme. The idea behind the seminar system is to familiarize students more extensively with the methodology of their chosen subject. Seminars are nothing but, a group of people gathering at one place for the discussion and learning of specific techniques and topics. There will be several keynote speakers within each seminar, and these speakers are usually experts and well versed in their own fields, or topics. Many topic reviews are scheduled each day throughout the seminar, and people who attend it can usually choose their topics from among these scheduled events. In recent times, changes in medical curricula with a goal to achieve students based learning have often been accompanied by the introduction of small group learning. The result of this educational format have been examined in many studies, mostly within contexts of problem-based learning.¹ A recent review of cognitive and motivational effects of small group tutorials² showed that small group learning promotes interactive learning, problem based thinking and positive cognitive effects, such as prior knowledge activation, recall of prior information, individual and collaborative knowledge construction, and cognitive conflicts leading to conceptual change.³

METHODS

The study was carried out in the Department of Biochemistry at Kamineni Academy of Medical Sciences and Research Centre, Hyderabad. 150 students from 1st MBBS were included in the study and they were divided into 15 groups of 10 students each.

A feedback questionnaire comprising of 10 questions was prepared to assess the efficacy of seminars in students' learning process. Along with it another questionnaire comprising of 15 questions from the topic vitamins was prepared to do pre-test and post-test evaluation. Questions which stimulate discussion, case based, and clinically relevant, reasoning type are incorporated in the pre and post-test questionnaire. Both these questionnaires were validated. Permission and ethical clearance from Institutional research committee was taken. Consent was obtained from all the students and purpose of the study was explained. Topics were allotted to all the groups and 15 days' time was given for preparation. We have chosen the topic

"VITAMINS "because it's a vast chapter, confusing and is important from university exam point of view. Pre-test questionnaires and 15 minutes time was given to all the students for answering, before the start of the seminar and were taken back for evaluation. The students from each group were selected randomly at the time of presentation. So, totally 15 presentations were conducted during a tutorial class. Each student was given 10 minutes time for presentation and 2-3 minutes for questions from the audience. Feedback questionnaire forms and post session evaluation questionnaires were given to all the students immediately after the seminar sessions. The procedure was explained and instructed that the students' response should be unbiased. Sufficient time was given to fill up the feedback forms and post-test questionnaires and they were taken back for assessment. Grading and Likert scale was used for taking feed-backs.⁴ Feedback forms and pre-test & post-test questionnaires to evaluate before and after the seminar were assessed and summarised with the MS excel and IBM SPSS statistical software version 20.0.

RESULTS

This was an observational study on 150 students from 1st MBBS. We evaluated the students before and after the seminar and took the feedback which is summarised in the following tables. Out of 150 student participants, 126 students (83.4%) agreed that it stimulated them to think critically at the subject, and it assisted their learning. But 62 students (41%) have written that, it interfered with routine method of studying. 106 students (70.2%) felt that the session was interactive and 70 students (46.3%) agreed that it encouraged their participation and made them feel like team members. 118 students (78%) agreed that it was helpful in usage of audio-visual aids more effectively. 144 students (98%) have written that teachers' feedback was very helpful to them. 140 students (93%) felt that there was improvement in communication skills and 78 students (52%) have written that seminars have to be included in university curriculum.

Trendline on post assessment shows there is improvement in scores of students after seminar presentation.

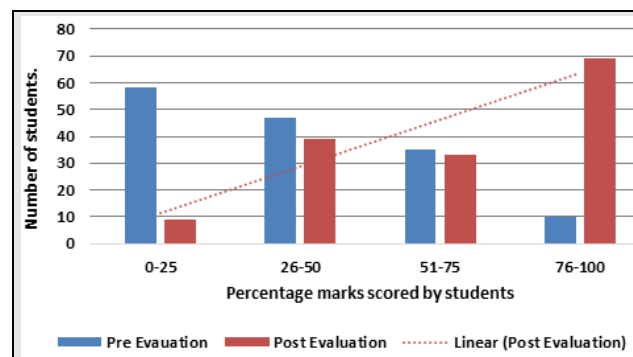


Figure 1. Pre- and Post-Evaluation with Exam Conducted on the Chapter Vitamins

Feed Back Questionnaire	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean SD
1. Was it informative?	5	4	3	2	1	4.2+0.54
2. Was it helpful in understanding the subject and for self- study?	40	100	10	-	-	4.12+0.72
3. Was it interactive?	46	80	20	4	-	3.96+0.81
4. Did it interfere with your routine method of studying?	42	64	40	4	-	3+1.07
5. Was it helpful in improving your communication skills and self-confidence?	12	50	42	38	8	4.45+0.66
6. Did it enhance team work among you?	80	60	8	2	-	3.2+1.21
7. Was it helpful to use audio-visual aids effectively.	26	44	52	20	8	3.96+0.75
8. Was the selected topic appropriate?	34	84	30	-	2	4.1+0.81
9. Was teachers' feed- back helpful to you?	54	62	30	4	-	4.65+0.55
10. Should seminars by students be included in the university curriculum?	104	40	6	-	-	3.66+1.05
40	38	60	2	10		

Table 1. Feed Back Questionnaire According to Likert Scale

Feed Back Questionnaire	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	5	4	3	2	1
1. Was it informative?	26.6%	66.6%	6.6%	-	-
2. Was it helpful in understanding the subject and self- study?	30.6%	52.8%	13.2%	2.64%	-
3. Was it interactive?	28%	42.24%	26.4%	2.64%	-
4. Did it interfere with your routine method of studying?	8%	33%	27.72%	25.08%	5.28%
5. Was it helpful in improving your communication skills and self-confidence?	53.3%	39.6%	5.28%	1.32%	-
6. Did it enhance team work among you?	17.3%	29.04%	34.32%	13.2%	5.28%
7. Was it helpful to use audio-visual aids effectively.	22.6%	55.44%	19.8%	-	1.33%
8. Was the selected topic appropriate?	36%	40.92%	19.8%	2.64%	-
9. Was teachers' feed- back helpful to you?	69.3%	26.4%	3.96%	-	-
10. Should seminars by students be included in the university curriculum?	26.6%	25.08%	39.6%	1.32%	6.6%

Table 2. Feed Back Questionnaire According to Likert Scale in Percentages

DISCUSSION

The study showed that more than 90% of students found that seminars were informative and said that it is easy to memorise the topic before exams. 70% of students felt that seminars are very interactive which increased student teacher relationship. 92% of students believed that seminars helped to improve communication skills and self-confidence, which is helpful at viva voice exam sessions and also during interaction with patients. 83% felt that though the time taken for preparation of seminar is more, it helps for in-depth understanding of the subject and also motivates self-learning. Gathering information for seminar preparation required lot of net surfing which increased their knowledge about the topic. 46% felt that they enjoyed the team work which created more interest to come up with new ideas for seminar preparation and also increased commitment among them. They learned the importance of team work and benefit of sharing ideas among the group mates. 78% students felt that they improved their knowledge in the usage of audio visual aids and would be able to use them more effectively. 95% students felt that they have acquired in-depth knowledge about the subject by the feedback they got from the teachers. It was observed that even teachers who attended the seminars felt that it was an effective tool for teaching compared to traditional method of teaching for undergraduate students. 77% students felt that the topic given to them was appropriate, as it is a vast chapter, confusing, requires repeated memorization, and is important from exam point of view.

52% students felt that, seminars should be conducted in the forth- coming years and it should be included in the university curriculum so that students become more confident, with no stage fear, face audience confidently and feel free to clarify their doubts from the teachers. Students felt positive and confident that their performance would be

much better in both theory exams as well as in practical exams. Finally more than 60% students felt that it was a good academic activity, and has to be carried out routinely. Our study correlates well with the study of Panda et al⁵ and other studies.

For seminars, students actively research a topic and prepare the PowerPoint presentation to teach the class. By doing this, a student thoroughly learns his own topic in depth. The student not only learns, but he also acquires other skills like preparing Power Point presentations and searching internet for online material, which helps him to learn in an easier and better way. Small group discussions where students work cooperatively, Problem-solving exercises, analysis of case reports, student presentations are recommended and beneficial active learning activities for teaching in medical colleges.⁶ The majority of college students are active learners requiring learning experiences that engage their senses.⁷ The seminar method appeared to have a positive effect on the trainees' assessment of their learning.^{8,9} A study by Costa et al¹⁰ and by Doucet et al¹¹ showed better knowledge retention after interactive teaching and better results in continuing medical education, respectively. In our study 41% of students felt that it was interfering with routine studies, as seminar preparation requires lot of time. Seminar groups are considered to be successful when there will be a great deal of discussion between the students and a teacher. It was emphasised that more interaction in the group resulted in more learning¹² White et al¹³ found no significant difference in knowledge uptake and retention in seminar format to disseminate guidelines among primary care physicians. For the comparison between small group teaching and large group teaching, we looked at studies comparing problem-based medical curricula and traditional lecture-based curricula. Conventional measurements of knowledge showed no large effects in favour of problem-based learning but they did suggest a positive effect of problem-based learning on

students' satisfaction and ability to solve clinical problems.¹⁴ This seems to be consistent with the results of our study. Post Evaluation with exam conducted on the chapter vitamins showed an increased scores in the students which is in agreement with studies. Assessment is an important component of the learning process in students. It is also a powerful motivator for learning. Students' experiences of assessments can affect their learning styles (Leung et al., 2008).¹⁵ Seif and Khayer's (2007)¹⁶ study on medical students in Shiraz, Iran, showed high scores for deep learning approach in both groups. Deep learning approach is seen in highly expected success rates. Students, who are confident that they would be successful, pay more attention to their lessons and are eager to learn new topics even they take much time to learn. The results support the suggestion, by Seif and Khaier (2007) that students with deep learning approach, try to investigate the relationship and integration of different parts of the lessons and assignments. Results showed that role of seminars in student learning was effective, with reference to gaining information, improving communication skills, self-confidence and encouragement to give their opinions and clarify their doubts.

Limitations

Few students gave suggestions that seminars should be conducted in all the departments, more students should be involved as presenters in the seminar, and requested for provision of a well-equipped library for easy access to internet, with no wastage of time for preparing seminar in a smarter way.

CONCLUSIONS

From the results obtained from the present study, it is concluded that seminar teaching method is more effective for in-depth understanding of the subject and critical thinking than didactic lectures. It helps the students to improve the communication skills. Seminar presentations can be considered as an active learning technique. Students' attitude was very decisive for an active learning method like seminar and it should be promoted in routine practice.

REFERENCES

- [1] Mamede S, Schmidt HG, Norman GR. Innovations in problem-based learning: what can we learn from recent studies? *Adv Health Sci Educ Theory Pract* 2006;11(4):403-422.
- [2] Dolmans DH, Schmidt HG: What do we know about cognitive and motivational effects of small group tutorials in problem-based learning? *Adv Health Sci Educ Theory Pract* 2006;11(4):321-336.
- [3] Dolmans DHJM, De Grave W, Wolfhagen IHAP, et al. Problem-based learning: future challenges for educational practice and research. *Med Educ* 2005;39(7):732-741.
- [4] Allen IE, Seaman CA. Likert scales and data analyses. *Quality Progress* 2007;40:64-65.
- [5] Panda SP, Bharathi DV, Babu RTS, et al. Perception of 2nd year MBBS students towards student-led seminar as small group teaching page method. *Int J Cur Res Rev* 2016;8(1):6-8.
- [6] Preece R, Dickinson EC, Sherif M, et al. Peer-assisted teaching of basic surgical skills. *Med Educ Online* 2015;20:27579.
- [7] Vella F. Medical education: capitalizing on the lecture method. *FASEB J* 1992;6(3):811-812.
- [8] Twigg CA. The need for a national learning infrastructure. *Educom Rev* 1994;29:4-6.
- [9] Skeff KM, Stratos G, Campbell M, et al. Evaluation of the seminar method to improve clinical teaching. *J Gen Intern Med* 1986;1(5):315-322.
- [10] Costa ML, van Rensburg L, Rushton N. Does teaching style matter? A randomised trial of group discussion versus lectures in orthopaedic undergraduate teaching. *Med Educ* 2007;41(2):214-217.
- [11] Doucet MD, Purdy RA, Kaufman DM, et al. Comparison of problem-based learning and lecture format in continuing medical education on headache diagnosis and management. *Med Educ* 1998;32(6):590-596.
- [12] Spruijt A, Jaarsma ADC, Wolfhagen HAP, et al. Students' perceptions of aspects affecting seminar learning. *Med Teach* 2012;34(2):e129-e135.
- [13] White M, Michaud G, Pachev G, et al. Randomized trial of problem-based versus didactic seminars for disseminating evidence-based guidelines on asthma management to primary care physicians. *J Contin Educ Health Prof* 2004;24(4):237-243.
- [14] Dochy F, Segers MR, Van den Bossche P, et al. Effects of problem based learning: a meta-analysis. *Learning & Instruction* 2003;13(5):533-568.
- [15] Leung SF, Mok E, Wong D. The impact of assessment methods on the learning of nursing students. *Nurse Educ Today* 2008;28(6):711-719.
- [16] Seif D, Khayer M. The relationship between motivation believes and learning approaches in some engineering and medical students in Shiraz Universities. *Journal of Educational Sciences and Psychology* 2007;3:57-82.