

PERCEPTION OF SECOND-YEAR UNDERGRADUATE MEDICAL STUDENTS ON SEMINAR AS A TEACHING-LEARNING METHOD

HOOLI TANUJA V¹, SURAJ B², RAJESHWARI¹, SRIKANTH^{3*}, SOMASHEKARA SC¹

¹Department of Pharmacology, ESIC Medical College, Gulbarga, Karnataka, India. ²Department of Pharmacology, ESIC Medical College, Patna, Bihar, India. ³Department of Pharmacology, ESIC Medical College, Alwar, Rajasthan, India. Email: pharmacsrikanth@gmail.com

Received: 25 June 2022, Revised and Accepted: 04 August 2022

ABSTRACT

Objectives: The present study was carried out to assess the perception of 2nd-year medical students on seminar as a teaching-learning method.

Methods: This was a questionnaire based and cross-sectional study, conducted in pharmacology department on 2nd-year undergraduate students at a medical college in South India. The study was conducted for a period of 1 month to assess student's perception of seminars in the teaching learning process. The questionnaire was pre-designed, pre-validated, and self-administered about usefulness of seminar in teaching-learning methods. The feedback was obtained from students immediately after the seminar and the responses received were analyzed using descriptive statistics.

Results: Of total 88 students, 82 students were of the opinion that seminars help in better interaction with both teachers and friends. About 97.7% of the students said that seminar is good and informative tool for learning. Eighty-one students (92%) preferred drugs acting on gastrointestinal tract as topic for seminar, followed by drugs acting on blood and blood formation (84%). When opinion on whether the seminar is helpful for theory topics or practical or both, 79.5% of the students said that seminar will more useful for theory topics than practical topics (5.6%).

Conclusion: The present study demonstrated that the most of the students found that seminars are more informative than didactic lectures. Seminar should be considered as a modern teaching-learning tool, as it analyzes all the domains of teaching (cognitive, psychomotor skills, and affective). Seminar can definitely be implemented as a modern teaching learning method on regular basis for higher education like medical education.

Keywords: Medical education, Questionnaire, Seminar, Small group teaching, Teaching learning method.

© 2022 The Authors. Published by Innovare Academic Sciences Pvt Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>) DOI: <http://dx.doi.org/10.22159/ajpcr.2022v15i11.45618>. Journal homepage: <https://innovareacademics.in/journals/index.php/ajpcr>

INTRODUCTION

In India, teacher-centered classrooms are a major way of teaching, the teacher gives lecture and students passively receive information and internalize it through memorization. In this lecture and other teacher-centered classroom methods, the important concepts such as flexibility in learning, problem-solving, critical thinking, and independent learning cannot be achieved [1]. The medical education system in India is based on various subjects and is a time-based curriculum.

At present, the teaching-learning activities prioritize on gaining more knowledge than on skills and attitude. Moreover, in this method, the evaluations are summative, with feedback opportunities being very less. Hence, the students will have extraordinary knowledge, but may lack the minimum basic clinical skills, skills required for communication, doctor-patient relationship, and professionalism which is necessary for practice. To overcome these concerns, competency-based medical education (CBME) has introduced recently by the Medical Council of India and this approach is expected to change the medical education system completely [2].

According to the new guidelines of National Medical Commission, most of the medical colleges have adopted new teaching and learning methods. As CBME is mainly student-centered learning, it has suggested adopting various other teaching learning methods, other than didactic lectures such as self-directed learning, small group discussions, case studies, seminar presentation by the students, role playing, problem-based learning, demonstrations through videotapes, and visiting to field trips. These methods focus on all the three domains of learning such as cognitive, skill, and emotion [3,4]. The seminar method is considered as one of the most advanced and technical teaching-learning methods, which is commonly used in professional education. It is an instructional

technique where on a particular theme; a situation is generated and given to group of students to have guided interaction [5].

The traditional teaching methods such as lectures can only provide passive learning where there will be no interaction with the students and only teacher talks. However, in the seminar method, students can participate voluntarily, which increases interest in students and provide better learning experience. Unlike independent learning, seminars emphasize on interdependent learning by involving sharing of ideas and knowledge [6]. Consideration of student's opinion on novel teaching methods is very important to improve the learning outcome. Therefore, the present study was carried out to assess the perception of 2nd-year medical students on seminar as teaching-learning method.

METHODS

This was a cross-sectional and questionnaire-based study, conducted on 2nd-year undergraduate medical students in Department of Pharmacology at a Medical College in South India. The study was conducted for a period of 1 month to assess their perception regarding seminars in the curriculum. The present study was conducted on CBME batch of 2019-2020 which included 96 students in the batch. However, eight students were absent during the study and sample size was 88 students. The permission from the Institutional Ethics Committee was taken before initiating the study. The students were briefly explained about the study and informed consent was taken. The students were also instructed to provide unbiased responses and assured about confidentiality of the data.

A pre-designed, pre-validated, and self-administered questionnaire was designed about usefulness of seminar as teaching-learning method. The questionnaire included two sections, where the first section was of questions regarding demographic details and the second section was of questions regarding seminar as a teaching learning tool. The

questionnaire was given to each student and 15 min time was allotted to complete it. After 15 min, the filled questionnaires were collected and responses received were analyzed using descriptive statistics. The results are explained in frequency and percentage.

RESULTS

The responses of students to questionnaire are shown in Table 1.

In the present, study 97.7% of the students said that seminar is good and informative tool for learning. All the students (100%) agreed that conducting seminars would help them in their subject. Of total 88 students, 82 students were of the opinion that seminars help in interactions with teachers and friends and 73 students felt that such activities should be kept often to improve their subject knowledge as well as communication skill.

Even though many students agreed that seminar is good tool for learning, 36.3% of students found difficult in doing seminars due to inefficient use of laptops and internet, and 71.5% of students said that it interferes with routine studies as preparation of seminar require lot of time in collecting information from textbooks and internet browsing. Unlike traditional didactic lecture, seminar involves all the members attending seminar and teachers. Hence, 92% of students said that seminars would definitely improve the teacher-student relationship and critical appraisal by teachers would help them to get better knowledge on subject and to focus on key points of the subject (96.5%).

The opinion of students on advantages of seminar when compared to traditional lectures is shown in Table 2.

The highest percentage of advantages of seminar was that seminars create interest in subject (89.7%), seminar improves academic performance (87.5%), seminar inspires to learn (84%), and seminar helps in better student teacher interaction (81.8%).

The preferred topic for seminar is shown in Table 3.

Eighty-one students (92%) preferred drugs acting on gastrointestinal tract as topic for seminar, followed by drugs acting on blood and blood formation

(84%), miscellaneous drugs (82.9%), and drugs acting on respiratory system (81.8%) were most commonly chosen topics among syllabus. Only 15 students (17%) chose chemotherapy of neoplastic diseases as topic of seminar. The choosing of topic for seminar was totally dependent on the level of difficulty in understanding the topic from the student's perspective.

The student's opinion on usefulness of seminar in theory and practical examinations is shown in Table 4.

When opinion on whether the seminar is helpful for theory topics or practical or both, 79.5% of the students said that seminar will more useful for theory topics than practical topics (5.6%). Few students (11.3%) said that it will be useful for both theory and practical topics and 3.4% of the students chose none.

DISCUSSION

Based on the psychological principles, the higher learning process requires the interactive and integrated methodologies. The seminars are helpful in realizing the higher objectives of cognitive and affective domains. Cognitive objectives are to achieve the ability of observing the subject keenly and ability of responding. Affective objectives are to develop the ability to listen to ideas of others or audience and to develop the emotions of cooperation with other participants and acceptance of ideas and emotions of others. In the present study, 97.7% of the students said that seminar is good and informative tool for learning. All the students (100%) agreed that conducting seminars would help them in their subject. In a study done by Patil *et al.*, 75.5% of the students said seminars are interesting and good for learning [7].

In the present study, the highest percentage of advantages of seminar was that seminars create interest in subject (89.7%), seminar improves academic performance (87.5%), seminar inspires to learn (84%), and seminar helps in better student teacher interaction (81.8%). The lowest advantage was for helps in additional information (67%) and creates enthusiasm/creates excitement (71.5%). These findings are similar to

Table 3: Students' preferences on seminar topics in pharmacology

Topics in Pharmacology	Number (n=88)	Percentage
General pharmacological principles	65	73.8
Drugs acting on autonomic nervous system	53	60.2
Autacoids and related drugs	46	52.2
Respiratory system drugs	72	81.8
Hormones and related drugs	58	65.9
Drugs acting on peripheral (somatic) nervous system	49	55.6
Drugs acting on central nervous system	28	31.8
Cardiovascular drugs	31	35.2
Drugs acting on kidney	61	69.3
Drugs affecting blood and blood formation	74	84
Gastrointestinal drugs	81	92
Antimicrobial drugs	68	77.2
Chemotherapy of neoplastic diseases	15	17
Miscellaneous drugs	73	82.9

Table 4: Percentage of opinion of students on usefulness of seminars in theory and practical exams

Seminar will be more useful for	Number (n=88)	Percentage
Theory	70	79.5
Practical	5	5.6
Both	10	11.3
None	3	3.4

Table 1: Responses of the students for questionnaire (n=88)

Questions	Yes (%)	No (%)
Was it informative?	86 (97.7)	2 (2.27)
Did it help you in your subject?	88 (100)	0 (0)
Was it interactive?	82 (93.1)	6 (6.81)
Did you find it easy?	56 (63.6)	32 (36.3)
Did it interfere with your routine studies?	25 (28.4)	63 (71.5)
Do you think seminar should be conducted regularly?	73 (82.9)	15 (17)
Did it improve teacher-student relationship?	81 (92.0)	7 (7.9)
Did the feedback given by teachers help you?	85 (96.5)	3 (3.4)
Do you think topics were appropriate?	88 (100)	0 (0)
Was seminar helpful to improve your skill?	87 (98.8)	1 (1.1)

Table 2: Advantages of seminar when compared to traditional lectures

Advantages of seminar	Yes (%)	No (%)
Create interest in subject	79 (89.7)	09 (10.2)
Inspires to learn	74 (84)	14 (15.9)
Improves communication skills	69 (78.4)	19 (21.5)
Better student teacher interaction	72 (81.8)	16 (18.1)
Improves academic performance	77 (87.5)	11 (12.5)
Breaks the monotony of lectures	66 (75)	22 (25)
Helps in additional information	59 (67)	29 (33)
Helpful in personality development	68 (77.2)	20 (22.7)
Creates enthusiasm/excitement is more	63 (71.5)	25 (28.4)

other studies [3,7,8]. In the present study, most of the students (93.1%) believed that seminar is interactive and student centric method and are more interesting and non-boring which also aids in good learning.

The present study also showed that education methods must be modified and improved. The traditional teaching methods like lecture are widely adopted till today, even though it is engaging, lecture method is largely passive. The findings in study done by Patel *et al.* where 76% of the students agreed that seminars are interesting methods of learning [1]. In a study done by Patil *et al.* [7], 69.29% of the students gave positive response that seminar should be conducted often to improve their communication skills.

In the present study, for the question "Do you think such activities should be carried on?" 82.9% of the students said "yes." In a study conducted by Patel *et al.*, out of 110 students, only 36 students strongly agreed that seminars helpful in learning and eight students strongly disagreed for the same [1]. In the present study, 79.5% of students said that seminars are helpful for theory examinations rather than practical examinations. In the present study, 36.3% of students found that presenting seminars is difficult as it is time consuming process. However, the majority of students (63.1%) who participated in a study conducted by Mutalik agreed that seminar is time spending process [9]. In a study conducted by Bhagyalakshmi *et al.* [10], all the participated students (100%) strongly agreed that the presenting seminars have significantly increased their communication skills. The similar opinion was discovered in our study also; where 98.8% of the students said that their communication skills would improve by seminars.

Limitations of the study

Limitations of our study are, the study was conducted on only one batch of students and sample size was small. The questionnaire was validated only with departmental subject experts and study would have been more effective if it was analyzed with pre-test and post-test method. Moreover, we did not include the other type of teaching-learning methods.

CONCLUSION

The present study demonstrated that the most of the students found that seminars are more informative than didactic lectures and they also feel that presenting seminars would improve their communication skills and student-teacher relationship. The more definitive outcome can be achieved by choosing proper topics for the students which are more useful for them in theory exams and by creating interaction between other students and teachers as well. Seminar should be considered as a modern teaching-learning tool, as it analyzes all the domains of teaching (cognitive, psychomotor skills, and affective). Seminar can definitely be implemented as a modern teaching-learning method on regular basis for higher education like medical education.

ACKNOWLEDGMENT

We authors thank all the participants of the study.

AUTHOR CONTRIBUTIONS

Dr. Hooli Tanuja V and Dr. Suraj B designed and conceptualized the study. Data collection was done by Dr. Rajeshwari and Dr. Srikanth. Dr. Srikanth and Dr. Somashekara S C analyzed and interpreted the data. Dr. Rajeshwari and Dr. Srikanth were involved in drafting of the manuscript. Dr. Hooli Tanuja V and Dr. Suraj B were involved in critical revision of the article. All authors reviewed the results and approved the final version of the manuscript.

CONFLICTS OF INTEREST

All authors declare that they have no conflicts of interest.

AUTHORS FUNDING

None.

REFERENCES

1. Patel JR, Patel DS, Desai R, Parmar J, Thaker R, Patel ND. Evaluation of student seminar in medical education: Students' perspective. *Int J Curr Res Rev* 2015;7:6-9.
2. Shah N, Desai C, Jorwekar G, Badyal D, Singh T. Competency-based medical education: An overview and application in pharmacology. *Indian J Pharmacol* 2016;48:S5-9. doi: 10.4103/0253-7613.193312, PMID 28031599
3. Hariitha V, Madhavi KV, Madhavi BD. Perception about student-led seminars among undergraduate students of a government medical college in Visakhapatnam: A cross-sectional study. *Int J Community Med Public Health* 2019;6:789-92. doi: 10.18203/2394-6040.ijcmph20190208
4. Bonwell C, Eison J. Active Learning: Creating Excitement in the Classroom. 1991 AEHE-ERIC. Higher Education Reports. Washington, DC: ERIC Publications; 1991. p. 121.
5. Singh R. Seminar Method of Teaching. p. 5pm. Available from: https://www.academia.edu/41929767/seminar_method_of_teaching [Last accessed on 2022 Jun 01].
6. Sharma D, Gupta R. Evaluation of usefulness of seminar as a learning tool at medical undergraduate level. *Int J Basic Clin Pharmacol* 2016;5:2143-5. doi: 10.18203/2319-2003.ijbcp20163251
7. Patil AN, Pande BN, Borade NG. Learning to learn and teach: Student seminar as a teaching-learning method in undergraduate medical physiology through students' perspective. *Natl J Physiol Pharm Pharmacol* 2018;8:1356-61. doi: 10.5455/njppp.2018.8.0518002062018
8. Zeng HL, Chen DX, Li Q, Wang XY. Effects of seminar teaching method versus lecture-based learning in medical education. A meta-analysis of randomized controlled trials. *Med Teach* 2020;42:1343-9. doi: 10.1080/0142159X.2020.1805100, PMID 32795244
9. Mutalik MM. Student perceptions and learning outcome on a "fishbowl" strategy-based pharmacology seminar on drug dependence. *Int J Basic Clin Pharmacol* 2016;5:879-83. doi: 10.18203/2319-2003.ijbcp20161539
10. Bhagyalakshmi A, Sridevi D, Dambal AA, Ravibabu K, Chaitanya GL. Effectiveness of seminar as an educational tool among the undergraduate medical students: A study. *MRIMS J Health Sci* 2020;8:43-6. doi: 10.4103/2321-7006.301999