

Undergraduate Medical Education: Comparison of Seminar-based Learning and Discussion in Groups

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ABSTRACT

Background: Problems in medical education have been clearly documented over many years, and efforts are being made to find solutions. Undergraduate medical curriculum includes seminars on Community Medicine topics. This project is an attempt to compare conventional seminar with group discussion in Community Medicine topics. Introducing better method in the curriculum can help in generating more competent Indian Medical Graduates.

Objectives: (1) To compare the effectiveness of “Seminar” and “Group discussion” on Community Medicine topics and (2) To assess the perception of students about seminar and group discussion.

Materials and Methods: Intervention study on 64 medical students posted in the Department of Community Medicine, Dr. SM CSI Medical College, Karakonam, during 6 months from October 2014. After sensitizing about the study and getting consent, the students were given pre-test and divided them into two groups of equal numbers after randomization. Group A was given seminar and Group B group discussion. All were subjected to post-test. After 1 week, Group B was given seminar and Group A group discussion on another topic and perception was assessed by focus group discussion. Analysis was done using SPSS 13.

Results: The mean score of the post-test on Topic 1 for seminar and group discussion is 71.78 (SD3.38) and 92.16 (SD2.58); and Topic 2 72.19 (SDb4.09) and 70.79 (SD 4.20), respectively.

Conclusion: Group discussion is a better teaching-learning method compared to conventional Seminar.

Key words: Group discussion, Medical education, Seminar, Undergraduate

INTRODUCTION

Problems in medical education have been clearly documented over many years, and efforts are being made to find solutions.¹⁻³ Medical education throughout the world is rapidly changing, and newer methods are being experimented to bring out more competent medical graduates who can cope up with the changes that are taking place in the medical field.^{4,5} A gap in medical education will reflect as gap in health services provided to the community. In India, undergraduate medical curriculum includes aims of the course, content, learning strategies and methods, methods of assessment of students, and how all these are organized. Solutions are suggested for the students how to “enhance attitudes to learning,” to “reduce overload,” and to “take greater responsibility for their own education.”⁶ As per the present curriculum, students are instructed to perform seminars on Community Medicine topics

as a teaching-learning procedure; but knowledge gained is found to be inadequate.

This project is an attempt to compare conventional seminar on Community Medicine topics presented by students with “discussion of the topic among groups” of students. Among these, better teaching-learning method can be chosen and may be included in the undergraduate medicine curriculum. This will help in generating more efficient Indian Medical Graduates (IMGs) who will be more competent enough to take care of community health care needs.

Objectives

1. To compare the effectiveness of “Seminar” and “Group discussion” on Community Medicine topics
2. To assess the perception of students about seminar and group discussion as teaching-learning methods.

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MATERIALS AND METHODS

Study Design

Intervention study

Study Duration

Nearly, 6 months from October 2014

Study Area

Department of Community Medicine, Dr. Somervell Memorial CSI Medical College, Karakonam, Kerala, India.

Study Population

Medical students posted in the Department of Community Medicine during the study period. Those students who were not willing to participate in the study were excluded from the study.

Sampling Method

A proposed sample size of 64 students was selected by random sampling method.

Consent form was prepared. Obtained Ethical Committee clearance from the Institutional Ethics Committee.

Pre-and post-test formats were prepared on two topics selected. Students posted in the Department of Community Medicine were sensitized about the project. After getting consent form the students, they were subjected to pre-test. The students were then divided into two groups: Groups A and B of equal numbers after randomization. Group A was given seminar and the Group B was given group discussion as teaching-learning procedures. Students included in both Groups A and B were subjected to post-test and students' knowledge on the topic given was assessed by post-test. After 1 week, Group B was given seminar and the Group A was given group discussion as teaching-learning method on another topic and knowledge on the second topic given was assessed by post-test. Their perception on group discussion as teaching-learning procedure was assessed by conducting focus group discussion among both the groups. For focus group discussion, 12 participants from both the groups were included.

Statistical Analysis

It was done using SPSS 13 computer package.

Mean scores of pre- and post-test were compared using "paired *t*-test." The post-test for both the groups was compared using "unpaired *t*-test." Percentage of perception was calculated. The difference in perception between the two groups was analyzed.

RESULTS

An intervention study was conducted among 64 medical students posted in the Department of Community Medicine during the study period to compare the effectiveness of seminar and group discussion.

1. There was a significant improvement in knowledge for both batches after the seminar and group discussion. There was a statistically significant difference between pre- and post-test scores in both seminar and group discussion groups. (Paired *t*-test)
2. The post-test score for both seminar and discussion groups was compared using the unpaired *t*-test (Table 1, Figures 1 and 2).

Table 1: Post-test scores-unpaired *t*-test

Topic	Teaching-learning method	Mean±SD	t	P<0.001 (significant)
Topic 1	Seminar	71.78±3.38	39.536	
	Group discussion	92.16±2.58		
Topic 2	Seminar	72.19±4.09	26.128	
	Group discussion	70.79±4.20		

SD: Standard deviation

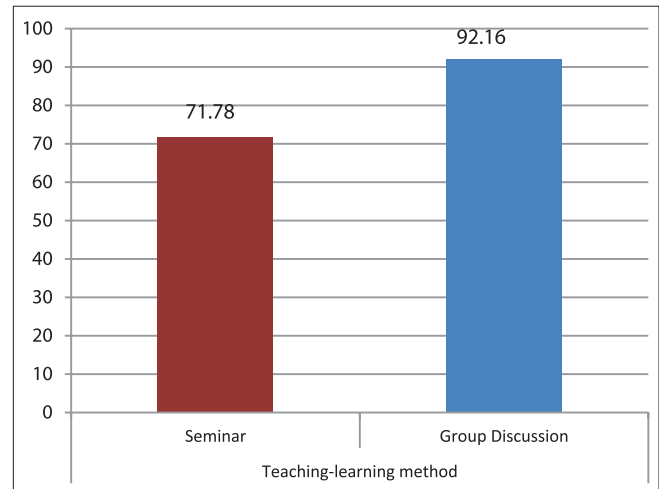


Figure 1: Post-test scores - Topic 1

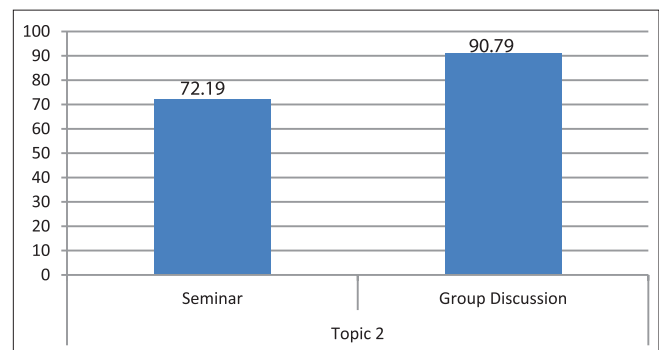


Figure 2: Mean post-test score-Topic 2

Post-test score for group discussion was higher in both Topics 1 and 2 than post-test score for seminar group, and this difference is statistically significant ($P < 0.001$).

Feedback from the students showed that group discussion is a better teaching-learning method, and it helps cognitive improvement, improvement in teamwork and it motivate to learn (Figure 3).

DISCUSSION

Quality medical education is the responsibility of the teachers, students, administrators, and management of all medical institutions. The ultimate goal should be to improve the quality of healthcare and that will happen only if the quality of medical education is taken care of. Quality of medical education is defined as state of reaching required standards as prescribed by the external agencies and it meets those standards time and

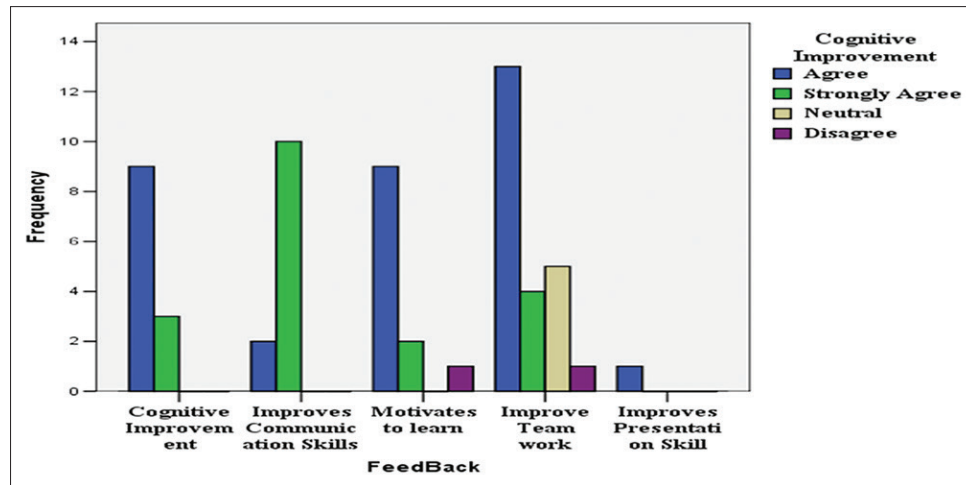


Figure 3: Feedback from the students on group discussion

again.⁷ Quality in education is quality as deemed fit for research and teaching in educational institutions.⁸ In medical education, quality can be considered in the creation of the next generation of appropriate medical graduates and in the maintenance of the values and principles of the medical educational institutions.⁹

The goal of the medical curriculum, as stated by the Medical Council of India, is to generate IMGs who would serve as physicians of the first contact.¹⁰

The Medical Council of India, in its regulations on Graduate Medical Education, 2012 clearly states the necessity to integrate (both vertical and horizontal integration) the curriculum to the maximum extent possible to enrich the student learning. Integration during the course period gives the students a better insight into the subjects and improves their outlook toward medicine.¹¹ Vertical and horizontal integration forms the key to achieve the optimum in the outcome based curriculum.¹²

Medical teachers have the responsibility to direct the medical education, research, and service activities toward addressing the priority health concerns of the community and nation.¹³ Hence, the medical teachers should help the medical students to learn all the subjects including Community Medicine efficiently and help them to be competent IMGs maintaining the values and principles of the medical educational institutions.¹³

The IMGs must become competent enough to get the history from a patient, examine them in a scientific manner, make correct diagnosis, provide appropriate treatment and communicate effectively, and make timely referral whenever required.

Various teaching/learning methods include lectures; small group learning which can be problem-based, case-based, tutorial, case scenario with discussions and debate, e-learning, web-based, computer-assisted; self-directed learning, etc.¹³

Community Medicine curriculum includes seminar by the students; however, the knowledge acquired by the students is not adequate by this teaching-learning method.

Seminars are educational events that include one or more subject matter experts delivering information primarily via lecture and discussion. A seminar is a lecture or presentation addressed to an audience on a particular topic or set of topics that are educational in nature. It is usually held for groups of 10-50

individuals. Delegates are given information and instruction in the subject. The speaker highlights on various aspects of the respective topic. As the speaker finishes, audience asks questions.

Group discussion is a teaching-learning technique very suitable for small numbers, where everyone is known to each other and where the group has some knowledge of the subject. Questions can be raised, analyzed, discussed, and perhaps answered during interplay of personal relationships. Everyone has the chance to raise questions. However, questions may take much time, and it can be difficult to keep a planned program. The group needs an introduction. This is best done by a member who can act as “group leader” or “resource person” by knowing the subject or as “recorder” to note the problems, issues, ideas, facts, and decisions on which to develop an oral or written statement of the proceedings.¹⁴ In the present study, group discussion is found to be a more effective teaching-learning method when compared to seminar. Similar findings are recorded in some studies.^{15,6,16}

Some other authors found that there were no significant differences between the two educational methods in students test grades.¹⁷

Limitations

- Small sample size
- Group discussion was more time-consuming.

Implications

Group discussion was found to be a better teaching-learning method compared to conventional seminar in Community Medicine topics.

It might be worthwhile to conduct further studies for different batches of students posted in the Department of Community Medicine by several faculty members on different topics in Community Medicine. Then, group discussion can be accepted as more effective alternative to conventional seminar and included in the undergraduate medical curriculum.

CONCLUSION

From the mean score of the post-tests and from analysis of the feedback, it is seen that group discussion is a better

teaching-learning method compared to conventional seminar in Community Medicine topics. The difference in the mean score values is very highly significant.

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