

Short Communication

Assessment of innovations in tutorial method of teaching among medical students

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ABSTRACT

Background: The main focus of a tutorial is to make learning more interactive. Enthusiasm and innovations of tutors make tutorials more effective. This study was done to assess the usefulness of few innovative approaches applied during a tutorial session among medical students.

Methods: A total of 84 medical undergraduate students were divided into seven groups with 12 students in each group with a faculty as a facilitator. A pretest was conducted among the students to assess their knowledge and understanding on the topic of discussion. Then the students were given a review article on the topic of discussion to read followed by group discussion. After this each group was assessed by the way of a quiz programme and individually by a post test.

Results: The mean scores obtained in the pretest increased significantly in the post test from 53.6% to 83.7%. Most of the students agreed upon the various advantages of this method of teaching. About 97% of the students rated this method of teaching as good and above.

Conclusions: Tutorials are effective methods of teaching medical graduates. The innovations used in this study were well appreciated by the students.

Keywords: Assessment, Innovations, Medical students, Tutorials

INTRODUCTION

Tutorial is a class or short series of classes, in which one or more instructor provides intensive instruction on some subject to a small group.¹ Today the most common teaching learning method used in medical education is a didactic lecture which doesn't encourage a fruitful participation of students and doesn't promote interaction among teacher and students. However, the main focus of a tutorial is to make learning more interactive. Understanding student's perspective, group discussion, and inculcating self-directed, reflective learning skills are important components of an effective tutorial session.² Similarly enthusiasm and innovations of tutors are

essential to make tutorials more effective. Many studies have assessed the effectiveness of tutorials or small group teaching and concluded it as an effective method.^{3,4} In addition to that, this study was intended to assess the usefulness of innovative approaches in small group teaching like relevance in teaching analytical topics, circulating a review article as handouts, evaluation through quiz programme.

METHODS

A total of 84 medical undergraduate students attended this tutorial session in June 2016 on the topic of "Understanding Diagnostic Tests". They were divided in

to seven groups with 12 students in each group with a faculty as a facilitator. A pretest containing 10 MCQs including a problem was conducted among the students to assess their knowledge and understanding on the topic of discussion. After that, all the students were distributed with a review article on this topic published in the journal of "Acta Paediatrica" wherein the contents were lucid and pictorial explanation was given. The students could read the material for 20 minutes followed by group discussion by the concerned faculty for 20 minutes. After this the coordinator of the session assessed each group by the way of a quiz programme for about 30 minutes with a total of 20 questions and answers were discussed simultaneously with the students.

To assess the individual performance, a post-test was conducted among them and a feedback was taken about the method of teaching the topic, relevance in teaching difficult topics, handouts given, assessment by quiz programme etc. The tutorial session lasted for about 2 hours. The mean scores of the pretest and posttest were compared as percentages. Paired t test was used to find if the difference was significant. Agreement to the various advantages of this method of teaching were assessed by a

likert scale stating from strongly agree to strongly disagree. Other parameters used frequency and proportions for measurement.

RESULTS

The mean scores obtained in the pretest increased significantly in the post test after the tutorial session (Table 1). The difference in the mean score was about 3.01 which is 30% increase in mean marks obtained by all students. This was even reflected during Quiz programme where assessment was made at group level.

Table 1: Mean scores of the students before and after the tutorial session (n=84).

Pretest	Post test	
Mean score out of 10 = 5.36 (53.6%)	Mean score out of 10 = 8.37 (83.7%)	t = -14.864 p=0.00

Most of the students agreed upon the various advantages of this method of teaching. There were hardly few who disagreed and none of them strongly disagreed (Table 2).

Table 2: Students feedback on various advantages and the innovations tried during the tutorial method of teaching (n=84).

Feedback of the tutorial session					
Components	Strongly agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly disagree n (%)
Able to understand the topic better	36 (42.9)	40 (47.6)	8 (9.5)	0 (0)	0 (0)
Attention span is increased	40 (47.6)	34 (40.5)	8 (9.5)	2 (2.4)	0 (0)
Student participation is more	34 (40.5)	40 (47.6)	8 (9.5)	2 (2.4)	0 (0)
Handouts are useful	39 (46.4)	40 (47.6)	5 (6.0)	0 (0)	0 (0)
Tutorial is better way to teach difficult topics	41 (48.8)	39 (46.4)	4 (4.8)	0 (0)	0 (0)
Review article used instead of text material was useful	32 (38.1)	44 (52.4)	6 (7.1)	2 (2.4)	0 (0)
Assessment by quiz	30 (35.7)	42 (50.0)	11 (13.1)	1 (1.2)	0 (0)

When asked about the most interesting part of the tutorial session, 38% felt it was Quiz while 27% felt group study more interesting. About 24% liked discussion by the faculty and 11% said that hand outs were interesting. Regarding the overall rating for this method of teaching 41.7% said it was very good, 31% said it was good and 25% said it was excellent.

DISCUSSION

The results of the present study clearly imply that tutorial method of teaching in small groups increases the knowledge and understanding of the topic discussed. The significant increase in scores obtained in pre-and post-tests are evident. Studies by Kumar P et al, Singh K et al,

Mishra et al showed similar results wherein post test scores were significantly higher than pretest scores.³⁻⁵

The parameters like ability to understand the topic better, increase in attention span, increase in student participation and usefulness of handouts were accepted by most of the students (Table 2). Some of these parameters were studied by Kumar P et al and had similar results.³

In addition to that this study also intended to know about feedback on innovations like circulating a review article as a handout material, assessment through quiz programme, relevance of tutorials in teaching difficult topics which are analytical in nature. All these

innovations were perceived as interesting and useful by most the students and hence can be adopted in small group teaching methods among medical students.

CONCLUSION

Hence, it is concluded that small group teaching methods like tutorials are effective methods of teaching medical graduates especially if the topic is analytical in nature. The innovations used in this study was well appreciated by the students and hence could be adopted by others during such sessions.

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REFERENCES

1. Srivastava TK, Waghmare LS. Tutorial in medical education: a review of contextual modifications. National J Physiol Pharm Pharmacol. 2016;6(6):494-9.

2. Ravens U, Nitsche I, Haag C, Dobrev D. What is a good tutorial from the student's point of view? Evaluation of tutorials in a newly established PBL block course "basics of drug therapy". Naunyn Schmiedebergs Arch Pharmacol. 2002;366:69-76.
3. Kumar RP, Kandhasamy K, Chauhan RC, Bazroy J, Purty AJ, Singh Z. Tutorials: an effective and interactive method of teaching undergraduate medical students. Int J Community Med Public Health. 2016;3(9):2593-5.
4. Singh K, Katyal R, Singh A, Joshi HS, Chandra S. Assessment of effectiveness of small group teaching among medical students. J Contemporary Med Edu. 2016;4(4):145-8.
5. Mishra AK, Manikandan M, Kumar R, Chauhan RC, Purty AJ, Bazroy J, et al. Concomitant use of handouts and group and panel discussions as a teaching technique for undergraduate medical students. Int J Innov Med Educ Res. 2016;2(1):0-4.

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