

Evaluation of Tutorials As A Teaching Learning Method In Pharmacology for 2nd Year MBBS Students

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Abstract:

Background:-The students are in the best position to comment on the effectiveness of any teaching system and they may be regarded as the best judges to assess the teaching and evaluation methods. The aim of this study was to elicit the perception and feedback regarding tutorials as teaching learning method in pharmacology along with their excellence in university examination.

Methods:-This cross sectional study was carried out by the department of pharmacology at osmania medical college, Hyderabad, Telangana, India. A total of 126 third year MBBS students who have appeared for second professional MBBS degree examination in February, 2016 participated in the study. Students were interviewed with a structured questionnaire on tutorials. Analysis was done on percentage wise distribution of various parameters used in the questionnaire.

Results:- Out of 126 students, 102 students completed questionnaire were included in the study. 97% of students agreed to have tutorials. 94% of students responded that tutorials helped them in understanding the topic better. 43 students have scored 75-85% marks in pharmacology, 56 students have scored 65-74% marks and 3 students scored less than 64%.

Conclusion:-With ever increasing strength of students in the MBBS classes a single lecturer may not be able to convey the content of the topic to all the students in an impressive way. So in order to impress up on the students the importance in clinical correlation of pharmacology, it is better to conduct tutorials so that it becomes more an interactive session.

Keywords:-Tutorials, Pharmacology, small group teaching methods, MBBS students.

I. Introduction

Pharmacology forms the backbone of rational therapeutics being both a basic and applied science. The primary objective of teaching pharmacology is to enable undergraduate medical students to take rational therapeutic decisions in clinical practice.¹ An enhanced education of medical students in clinical pharmacology and therapeutics is important to ensure an effective and safe drug therapy.² The training in pharmacology takes place by way of didactic lectures, audiovisual aids and practical curriculum including animal experiments, prescription

writing and the clinical problems. Various alternative teaching-learning methods are being used to reinforce didactic lectures.³ Tutorials form an important teaching-learning tool for smaller groups.⁴ Tutorial is an interactive session to a smaller group of 10-30 students. The Medical Council of India has emphasized the need to include tutorials in its latest reforms in medical curriculum. Considering the diversity in teaching, in this study we evaluated the third year MBBS students on tutorials as teaching-learning method along with their excellence in the second year university examinations.

II. Materials And Methods

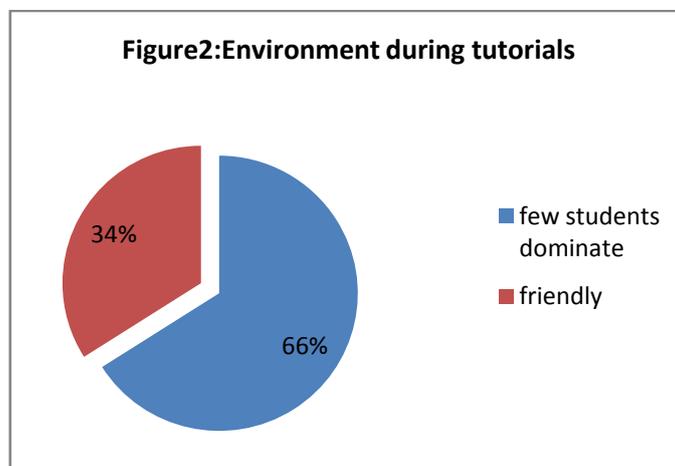
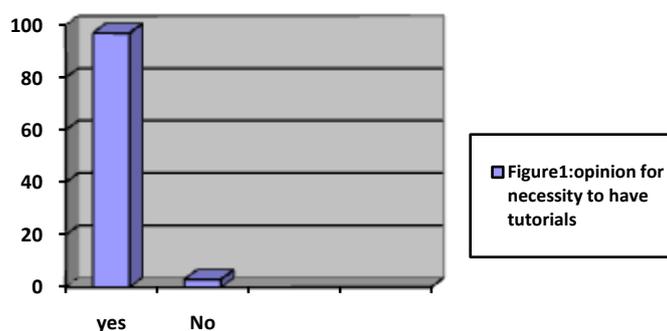
This is a cross-sectional study. A total of 126 3rd year MBBS students of Osmania Medical College Hyderabad, Telangana, India, who have appeared and passed in 2nd year professional MBBS degree examination in February 2016, participated in study. Oral consent was taken from the students after explaining the purpose of the study and giving any clarification where ever needed. A pilot study was done on 10 students to check for questionnaire validation. Data was collected with a structured questionnaire regarding use on tutorials. The questionnaire was adopted from previous studies that assessed feedback of second year medical students on teaching learning methodology in pharmacology. The Questionnaire contained a total of 21 questions pertaining to students experiences towards tutorials in Pharmacology. Some of the questions were close ended and the ones related to suggestions and comments on tutorials in pharmacology were open ended. Some questions have 3 to 7 options and they were asked to mark the single best option. The questionnaire is provided in appendix 1. Students were instructed not to reveal their identity in the questionnaire. Approximately

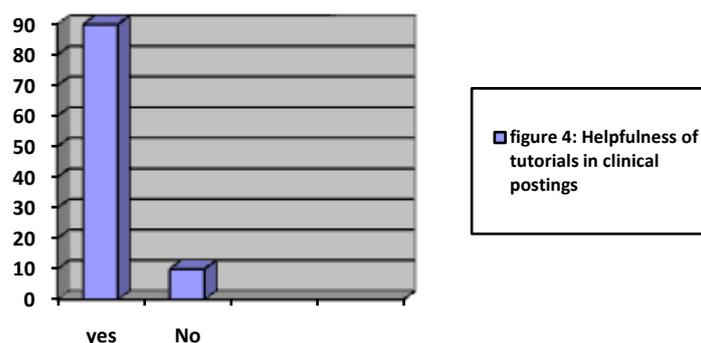
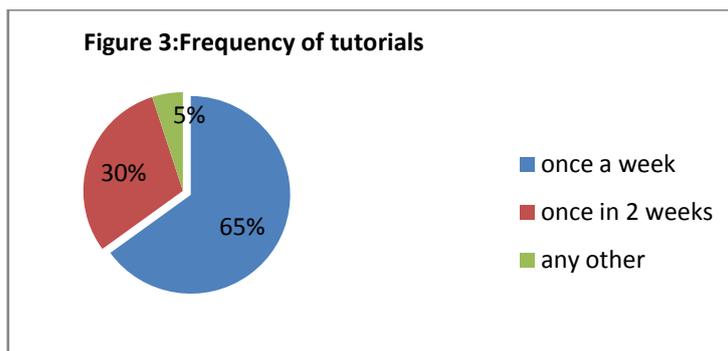
25 minutes was the time allotted for answering the questionnaire. At the end of questionnaire format space was provided to students for their comments and suggestions. Questionnaire with more than three unanswered questions or multiple options marked were regarded as invalid and discarded.

Tutorials for second year MBBS students were conducted once a week , for one hour in the department of pharmacology at osmania medical college, Hyderabad,Telangana, India. Each teaching faculty gets a batch of 12-15 students with whom the topics chosen primarily by the teachers was discussed during tutorial. Students are notified about the topics of the tutorial at least two weeks prior so that they have sufficient time to prepare.

III. Results

Analysis of responses to questions were expressed as percentage of total number of participants. Descriptive statistics was used for analysis of data and the results were expressed as a percentage. Out of 126 students who were interviewed with questionnaire, 102 students completed questionnaire were accepted and included in the study.Regarding the opinion for necessity to have tutorials in pharmacology , 97% students agreed to have tutorials (figure1). 94% of students responded that tutorial helped them in understanding the topic better. Regarding the decision of topic, 89% students agreed that both students and teachers should mutually decide the topic . 60% said that topics covered in tutorial were important, and 37% said that a few topics were important and remaining 3% are of opinion that tutorials was a repetition of the lecture. Regarding the standards of teaching method in tutorial , 74% of students agreed as good and 20% of students opinioned as average. 66% of students said that few students dominate during the tutorial, while remaining said that environment during tutorial is friendly (figure2). Regarding the frequency of tutorial, 65% of students said that they should be conducted once a week and 30% opinioned that they should be conducted once in 2 weeks (figure3). 60% of students agreed that duration of tutorial to be one hour and 38% said that duration should be less than one hour. 90% of students claimed that tutorials were helpful in clinical postings (figure4) . Apart from tutorials, 47% of students said that case study and treatment discussion may be added as a part of regular teaching. 43 students have scored 75-85% marks in pharmacology and 56 students have scored 65-74% marks and only 3 students got marks less than 64%.





IV. Discussion

Various teaching methods have come into play for benefit of the students improves learning and there by their performance in university examinations.⁵ Evaluation is a systematic process that consists of finding out the extent to which educational objectives have been achieved by the students which can provide the teachers with useful feedback information, obtained through informal mutual communication or preferably by a designed questionnaire.^{6,7} Therefore the present study has been designed in the form of questionnaire with the objective to elicit the perception of the students regarding the utility of the prevailing system of teaching and to evaluate the extent to which students are benefited by the tutorials as teaching-learning method. In our study the opinion for necessity to have tutorials in pharmacology was agreed by 97% of students and 94% of students responded that the tutorials help them understand the topic better. This was also supported by Beedeimani RS et al, that small group teaching method is better for interaction among themselves and also with the teachers. And teaching learning therapeutics in small groups that is “tutorials” deserves a serious consideration in medical curricula⁸.

According to Tripathi et al, more students felt comfortable and were satisfied with the tutorial mode of teaching than with active learning strategies. In addition the students felt that all pharmacology topics should be taught as “tutorials” might be due to the perceived advantages of small group teaching that is better addressed how exam questions were oriented and students comfort with this mode of learning⁴. Regarding the use of tutorials in clinical posting 90% of students claimed that tutorials were helpful in clinical postings in our study also 47% of students said that case study and treatment discussion may be added as a part of regular teaching. This is acknowledged by that many studies have shown that small group teaching method is better for understanding different aspects of therapeutics like analyzing the clinical case scenario and applying clinical pharmacology knowledge in writing prescriptions⁹. Tutorials as a method of teaching learning is more interactive and specific than book or lecture.

The Ananthkrishnan et al, has also stressed the importance of microteaching session for teachers as a preparatory vehicle for imparting quality education¹⁰. A similar finding has also been reported by Garg A et al where 34.92% of the respondents opted for introduction of group discussion in the teaching programme¹¹. As per a study by Advani et al more students want clinically oriented lectures¹². In our study 43 students have scored 75-85% marks and 56 students have scored 65-74% marks and 3 students got marks less than 64% supporting that tutorials definitely helped the students to improve their performance in university examination.

V. Conclusion

Pharmacology in medical science is an ever changing medical subject. It is accepted that reviewing the teaching and evaluation methods by feedback from students and modification of methodologies is very

important for undergraduate medical teaching. Attempts have been made all over India to make the teaching of pharmacology more interesting and relevant. And the students feedback serves as an array of effective methodologies in pharmacology teaching and studies like this may help in knowing students preferences and a definite need for modification about preconceived notion about teaching learning principles and its outcomes and would be helpful in modifying undergraduate pharmacology teaching pattern. It is possible to gain benefits from tutorials for the students in learning of fundamental concepts of pharmacology as well as their application in clinics.

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Appendix1

1. Do you think it is necessary to have tutorials in Pharmacology?

- a) Yes b) No

2. What is your opinion about the topics covered in the tutorials?

- a) Important
b) Repetition of the lecture
c) A few are important

3. How is the tutorial conducted?

- a) Only the teacher talks
b) Only the students talk
c) Both the teacher and students talk

4. How is the environment during tutorials?

- a) Friendly
b) The teacher is strict
c) A few students dominate
d) Anyother

5. Do you think students and teachers should mutually decide the topic?

- a) Yes b) No

6. What should be the frequency of tutorials?

- a) Once in 2 weeks b) Once a week c) Any other

7. What should be the duration of one tutorial?

- a) <1 hr b) 1 hr c) >1 hr

8. i) Is it important for students to read the topic before the tutorial?

- a) Yes b) No

ii) If yes, why do students fail to prepare for tutorial?

9. Should it be made compulsory to attend tutorials?

- a) Yes b) No

10. State any 2 important reasons for not attending tutorials.

1.
2.
3.

11. If students fail to prepare for the tutorial, do you think the purpose of the tutorial is served?

- a) Yes b) No

12. Which of the following teaching-learning method was most interesting?

- a) Lectures b) Clinical pharmacology problems
c) Prescription writing d) Animal simulator practical
e) Tutorials f) Students' seminar g) Multiple choice questions (MCQs)

13. Does the tutorial help you in understanding the topic better?

- a) Yes b) No

14. Standards of teaching method in tutorial?

- a) Excellent b) Good c) Average d) Poor

15. Which topic do you think will be useful in tutorials?

- a) General Pharmacology
b) ANS c) CVS d) CNS e) GIT
f) Respiratory system g) Endocrinology
h) Chemotherapy i) Autocoids
j) Others-----

16. Do you think tutorials are helpful in clinical postings?

- a) Yes b) No

17. Which of the following method did you find most interesting in second year?

- a) Lectures in whole class b) Lectures in batches
c) Interactive classes (strict bilateral communication)
d) Demonstration / Tutorials e) Student seminars
f) Audiovisual (computer / projector) aided Lecture
g) Clinical (patient related) Pharmacology
h) MCQ based study i) Others (specify)

18. Would you like the following topics to be added as a part of regular teaching to make it more interesting and useful?

- a) Student seminar b) Group discussion c) Quiz
d) Case study and Treatment discussion e) Others (specify)

19. From where did you prefer studying Pharmacology ?

- a) Textbooks b) Keys/ handy books only
c) Teachers class notes d) Other notes

e) Self prepared notes f) Combinations g) Others (specify)

20. What is your pattern of studying Pharmacology?

a) Regular because of interest

b) Regular for gaining more knowledge

c) Regular because of tests/ viva and interactive classes

d) Only during tests and exams

e) Shall study only for final exam

21. what are the marks scored in pharmacology in university examination?