



International Journal of Medical Research & Health Sciences

www.ijmrhs.com Volume 2 Issue 2 April-June 2013 Coden: IJMRHS Copyright ©2013 ISSN: 2319-5886

Received: 8th Jan 2013

Revised: 2nd Feb 2013

Accepted: 10th Feb 2013

Original research article

ASSESSMENT OF PHARMACOLOGY TEACHING - A CRITICAL APPRAISAL BY MEDICAL SCHOOL LEARNERS.

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ABSTRACT

Background: Students feedback is an indicator of the success of any teaching methodology followed in a department. **Aim:** To identify strengths and weaknesses in the current teaching-learning and evaluation methodology in pharmacology using feedback from second MBBS students in Meenakshi Medical College and Research Institute. **Materials and Methods:** Questionnaire was designed and finalised after a departmental discussion in concurrence with the Medical Education Unit. The study subjects were 115 (2011batch) second-year medical students. They were requested to fill the questionnaire. A 10-item multiple choice questionnaires were used to explore the student's opinion on teaching. The questionnaires were analyzed. **Results:** 115 II M.B.B.S students participated and descriptive statistics was used for analysis of data. The analysis revealed 82.82%, 72.17% and 93.64% student's interest towards writing classification of drugs, weekly test and viva-voice respectively. **Conclusion:** The present study has helped us to elicit the student preference regarding pharmacology teaching and its outcome would be helpful in modifying undergraduate pharmacology teaching patterns.

Key words: Medical education, Pharmacology Assessment, Medical school learners.

INTRODUCTION

The primary aim of teaching pharmacology to medical students is to train them on rational and scientific basis of therapeutics. Pharmacology teaching is facing a major challenge in the medical science due to constant reformation. Generally, there is an opinion that teaching pharmacology in medical schools has failed to

keep in pace with the rapid changes in medical practice. Attempts have been made all over India to make the teaching of pharmacology more interesting and relevant¹. To make pharmacology teaching more innovative and interesting learning experience, efforts have been made by formulating new educational strategies to meet the

educational objectives. Educational objectives can be evaluated by assessment procedures and timely feedback to achieve the learning goal.

In Meenakshi Medical College and Research Institute, Pharmacology teaching comprises mostly of a series of didactic lectures using power point presentations covering general, systemic pharmacology and practical pharmacology which includes animal experiments and clinical pharmacology sessions spread over the academic year. To evaluate the student's progress we conduct monthly internal assessment tests consisting of multiple choice questions, essay questions, short notes and ultra short notes for 3 hr time duration including model practical exams conducted twice in a year. Regular viva voce exams follow the monthly internal assessment test to develop their communication and interaction skills.

Apart from this regular schedule of assessment, we also introduced a method of assignment on classification of drugs after each system. To reinforce the learning process, we implemented weekly test on the first hour of every week based on the lectures delivered over the previous week. The test was conducted for one hour which covered various portions of the chapter in detail testing the levels of knowledge.

After completing the above schedule meticulously, at the end of the year to understand the beneficiaries' opinion we planned to collect the student's feedback. Currently the student's feedback represents the primary means used by different programs to assess their methodology². Feedback helps in correcting mistakes, reinforcing good performances and incorporating students view in teaching methodology. It is accepted that reviewing the teaching and evaluation methods by feedback from students and modifying of methodologies accordingly is very important for the undergraduate medical teaching^{3&4}. Thus the present study is an effort to obtain and analyze critical appraisal on,

- The student attitude toward teaching and learning pharmacology in Meenakshi Medical

College and Research Institute, Enathur, Kanchipuram.

- Assessment of pharmacology teaching using student feedback.
- Methods to improve teaching Pharmacology.

MATERIALS AND METHODS

A questionnaire was designed to obtain feedback and finalized after a departmental discussion with the concurrence of Medical Education Unit. The study subjects were 115-second year MBBS students of 2011 batch studying in the Meenakshi Medical College and Research Institute, Enathur, Kanchipuram.

All the students enrolled in the study were requested to fill up the questionnaire. The study was conducted at the end of their academic year in the Department of Pharmacology. A ten-item multiple choice questionnaires and an open ended question for suggestion were provided to explore the student's opinion on teaching and learning methods imparted. The questionnaire was analyzed by two observers. The questionnaire was designed in such a way to assess the knowledge, their attitude and skills developed during their one and half year course in pharmacology. Both the theoretical and practical pharmacology practiced by different methods during their study period were evaluated from the feedback form.

Statistics: Descriptive statistics was used for analysis of data. Frequency was shown as a percentage.

RESULTS

One hundred and fifteen students of II MBBS participated and responded in the questionnaire study. Based on the pattern of studying pharmacology, 48.69% studied pharmacology once or twice a week on a regular basis and 34.78% opted studying only for monthly tests and viva voce exams which reflects on their regular preparation for monthly internal assessment test (Fig.-1). 54.75% of students preferred lecture notes and textbooks as the source of studying pharmacology.

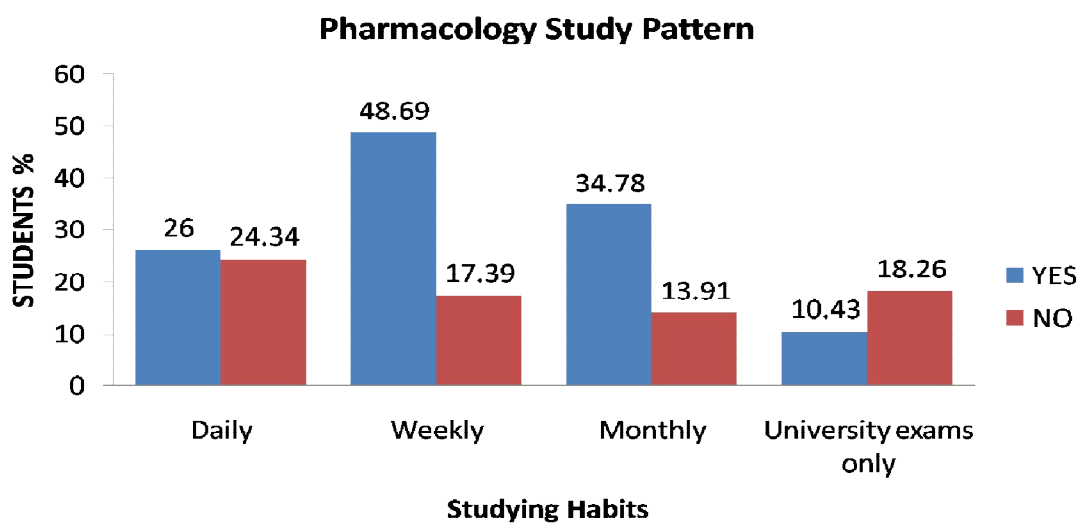


Fig. 1. Pharmacology Text Reading Habits

The majority (87.82%) of students approved writing and maintaining classification of drugs. 53.91% have opined that the assignments had improved in better understanding about the

different classes of drugs. 43.47% of them have reported its usefulness to memorize and reproduce in the test and also to apply in their clinical postings (Fig.-2).

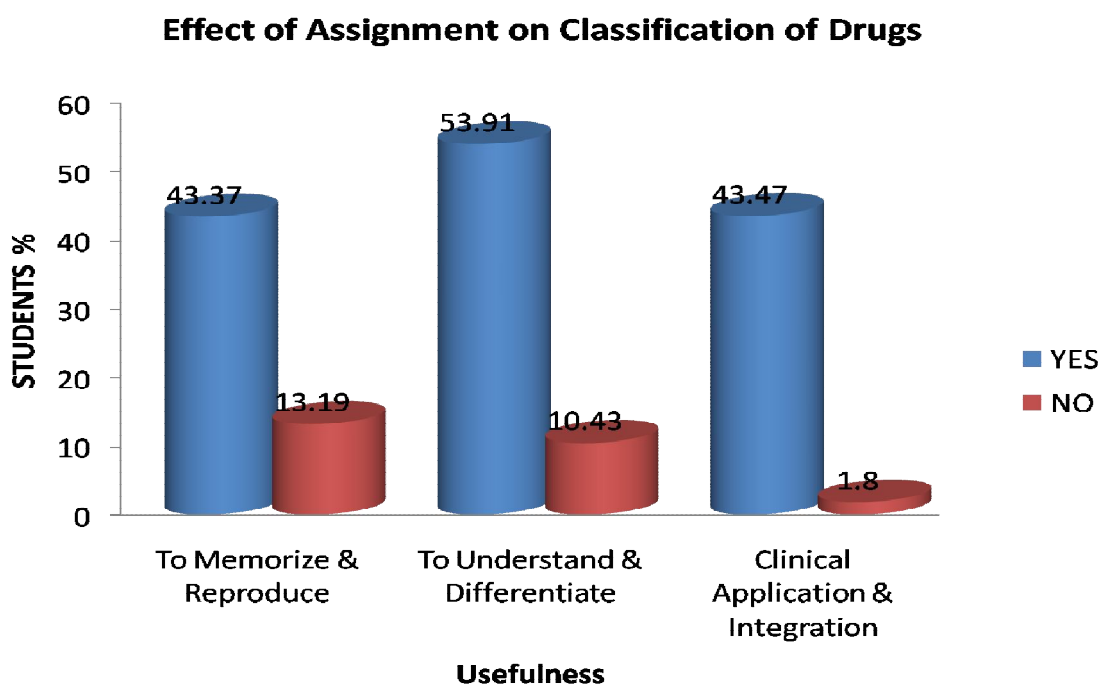


Fig. 2. Student Assignments

Among the assessment methods, 54.78% of students favoured monthly internal assessment test for their significant improvement in their academic performance. In the weekly test

conducted, 72.17% of students found weekly lectures correlating with weekly tests, 51.30% of students mentioned that the true or false part of the weekly test created interest (Fig.3).

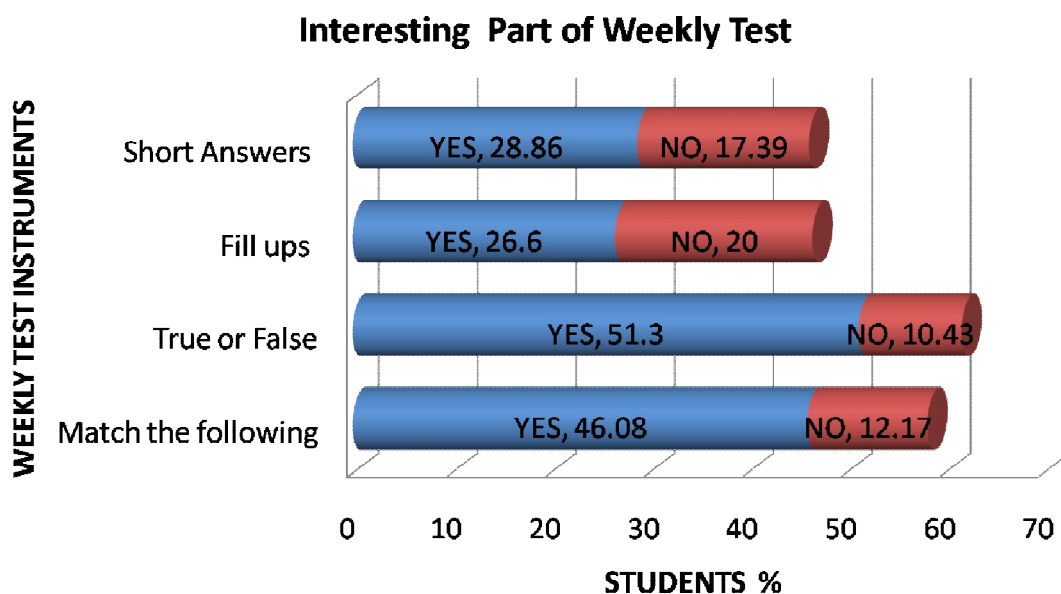


Fig: 3. Weekly test instruments

The majority (66.95%) of students preferred regular tests in clinical pharmacology sessions when compared to the experimental pharmacology. Most (93.64%) of the students have mentioned regular viva-voce exams

following monthly internal assessment test had improved their communication skills.

Among the teaching – learning methods practiced, 52.17% of students preferred theory lectures followed by clinical pharmacology sessions 46.95% and group discussions 45.12% (Fig.4).

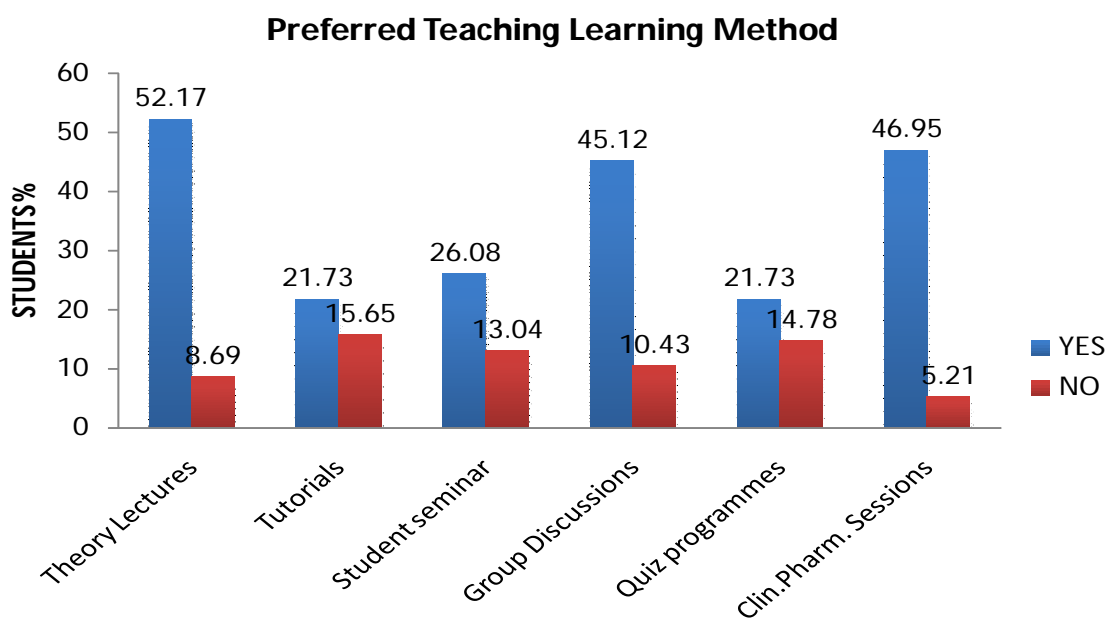


Fig: 4. Teaching Learning Methods

DISCUSSION

Feedback is defined as a response within a system that influences continuous activity or productivity of that system. In the present study on educational context, it would mean a response from the learner about the teaching learning process. Feedback is essential to find out the effectiveness of the process, the need to change it, as well as, to evolve strategy for its improvement.

From the feedback evaluation obtained, it is observed that students like to study pharmacology by regular test / viva and interactive classes so by these way students understand the subject properly⁵. This very much correlates in the present study feedback results.

It was found that students preferred writing and maintaining classification of drugs throughout their academic year, which were corrected periodically by the faculty, who played the role of mentor for the given group of students to cultivate and sustain the habit. Writing classification of drugs by medical school learners has helped them to understand the different classes of drugs and also to systematically memorize and reproduce in the written test as well as the knowledge application in clinical rotations.

Students opined that monthly internal assessment test was mostly useful than the weekly written test for their academic performance in theory exams, the reason for the following may be a monthly internal assessment pattern is similar to that of university examination. The weekly written test has definitely kept the students in pace with the portions being completed every week. By answering the weekly test their preparation, facing and performing a monthly internal assessment had become extremely comfortable and confident . The weekly test had various parts, students considered true or false part of the weekly test has created interested in them, the fact to get such a feedback may be the chances of getting the wrong answer is only 50%. Also they have mentioned that, Match the following with extended responses have stimulated their thought process to find the

correct response. The feedback also emphasized the student's interest towards more interactive sessions on Clinical pharmacology exercises and felt it should be given regular emphasis than the animal experiments. According to Gibbs G et al, 1987⁶ active review during the lecture, involving students in structured discussions, using questionnaires and asking them to summarize are the three most important things to be followed and practiced for a effective teaching-learning process.

To conclude though the teaching learning method implemented in the present study required a lot of strenuous hard work from the faculty particularly preparing questions, organizing test and more importantly correcting all the papers in a week period, it has created an interest in learning pharmacology among students. The feedback from learners has clearly exhibited their likeliness for the variety or different methodological approach instead of regular didactic lectures offered by the department of Pharmacology.

ACKNOWLEDGEMENTS

We sincerely thank our II M.B.B.S Students of Meenakshi Medical College & Research Institute for the participation.

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