Feedback from Physiotherapy And Occupational Therapy Undergraduate Students On Teaching – Learning And Evaluation Methodology In Pharmacology

Dr. A. V. Karve*, Dr. Pramod Pujari, Dr. Amit Jadhav****

*Assistant Professor, ** Resident, Department of Pharmacology, Topiwala National Medical College, Mumbai 400 008

Abstracts: Background: "Students' Feedback" is an important tool to evaluate the teaching- learning and evaluation methodologies. It can identify strengths and weaknesses which can be used to strengthen methodologies. Objective: 1.To develop a tool to obtain feedback from Physiotherapy and Occupational Therapy undergraduate students. 2. To identify strengths and weaknesses in the current teaching-learning and evaluation methodology in pharmacology using feedback from Physiotherapy and Occupational Therapy undergraduate students. Materials and methods: Prevalidated Questionnaire consisting of questions pertaining to teaching-learning and evaluation methodology was designed. Students of 2nd and 3rd year Bachelor of Physiotherapy (B. P. Th.) and students of 2nd year Bachelor of Occupational Therapy (B. O. Th.) were requested to fill the questionnaire. The questionnaires were analyzed. Results: Students were satisfied with the current teaching-learning methodologies except they showed preference to introduce case studies and group discussions. According to them, power point presentation with chalk and board was the most effective A-V aid. Students opined that Chemotherapy and ANS should be covered in more detail. All the students felt that the questions with model answers asked in formative evaluations should be discussed with them. Conclusion: Current teaching learning and evaluation methodology could be strengthened by inclusion of case studies and group discussions and discussion of model answers with students post examinations.

[Pujari P et al NJIRM 2011; 2(4) : 45-48]

Key Words: Assessment, Survey, Questionnaire, Physiotherapy

Author for correspondence: Dr. Pramod Pujari. 2nd year Resident, Department of Pharmacology, Dr A L Nair Road, Topiwala National Medical College, Mumbai - 400008.e- mail: pramodpujari7@gmail.com

Introduction: Pharmacology, like any other branch of medicine, is progressing by leaps and bounds. It is generally agreed that reviewing the teaching and evaluation methods at regular intervals and modifications of methodologies is a must for improvement in undergraduate medical teaching[1]. Course assessment instruments such as feedback help the faculty to identify the strengths and weaknesses of their teaching and evaluation methods. Hence, in developing teaching and evaluation strategies, it is important for the teachers to obtain feedback that allows them to modify their methods to meet the needs of their students[2]. One important form of feedback comes from evaluation of various teaching/learning methods followed by students. Currently, student's feedback represents the primary means used by most programmes to assess their methodology[3].

Feedback from students about adopted teaching and evaluation methodology is considered to be the best method to bridge the communication gap between teachers and students. It is an inexpensive and invaluable tool to improve the quality of teaching. Though a lot of verbal and non-verbal feedback is conveyed to the teachers, but much of the work is not published. This inspired us to undertake this study and improve student and teacher awareness of this and make the teaching and evaluation more effective.

Students of Bachelor of Physiotherapy (B. P. Th.) and students of Bachelor of Occupational Therapy (B. O. Th.) are taught pharmacology in their 2nd year. They have 50 hours teaching time allotted in one year in the form of only lectures. The students have 2 formative examinations in a year (terminal and prelim). The summative examination at the end of 1 year is a theory examination. They do not have practical and viva. The therapists do not prescribe drugs when they practice. But knowledge of drugs, especially those acting on central nervous system and musculoskeletal system is very important for them. Because of the limited time allocated for teaching we have to cover vast syllabus in every teaching class. Thus is important

to find out from students about the usefulness of the teaching. Hence the study was designed to take the feedback from these students.

To the best of our knowledge this is first study involving feedback from occupational therapy and physiotherapy students in Pharmacology with keeping in mind following Objectives: 1. To develop a tool to obtain feedback from Physiotherapy and Occupational Therapy undergraduate students. 2. To identify strengths and weaknesses in the current teaching-learning and evaluation methodology in pharmacology using feedback from Physiotherapy and Occupational Therapy undergraduate students.

Material and Methods: The present study was conducted in department of Pharmacology of a Medical College attached to a tertiary care hospital, Mumbai. A questionnaire (see Appendix 1) for the students was designed[4]. It was consisting of 18 questions pertaining to teaching-learning methodology and evaluation system. It was be prevalidated by the senior faculty members of the department and 2 students each of 2nd B. P. Th., 2nd B. O. Th., 3rd B. P. Th. Depending on their feedback on the questions asked the questionnaire was modified and finalized. The institutional ethics committee permission was obtained. 10 students of 2nd year B. P. Th. and 5 students of 2nd year B. O. Th. (who have completed 2nd year training in the Pharmacology) and 7 students of 3rd year B. P. Th. students were requested to fill the questionnaire. (Maximum intake of students for both B. P. Th. and B. O. Th. is 10 per annum). The written informed consent of the student was obtained. Students were allowed to offer their own suggestions for certain important items in addition to the available options, e.g. what reforms would you like in lectures? Students were instructed not to reveal their identity in the questionnaire. The questionnaires were analyzed. The results were expressed as percentages.

Result: Total 15 students of 2nd year (B. P. Th. and B. O. Th.) and 7 students of 3rd year B. P. Th. participated in the study. 17 out of 22 students opined that they attended most classes in the department because of an optimal learning environment rather than to fulfil the mandatory attendance requirement. 15 students agreed that the whole pharmacology syllabus was covered during the year.

Teaching-Learning Methodology:Majority of students (15 of 22) opined that teachers explained the slides during lectures rather than just read out them. 16 students agreed that teachers explained the use of pharmacology in clinical practice. 15 students opined that teachers solved their difficulties when asked. 11 Students reported that overhead projector with chalk and board is the most commonly used audiovisual method for lectures. However, 16 students opined that power point presentation with chalk and board is more effective audio visual method.

Most of the students (16 out of 22) agreed that case studies should be added as a part of regular teaching. Majority of students (16 out of 22) prefer both lecture notes and text books for studying pharmacology. Most of the students 13 of 22 opined that clear categorization of the knowledge pertaining to the topics in the subject should be conveyed as Must know / desirable to know / nice to know.

Topics covered: According to 10 students chemotherapy should be covered in more detail followed by CNS and ANS (7out of 22), followed by CVS, RS, General, GIT and endocrine. Most of the students 12 opted to increase the number of lectures, however majority of students thought that there should not be change in duration of lectures.

Evaluation: Majority of students (15 out of 22) agreed that questions in terminal and/or preliminary examination were not discussed subsequently with model answers. 11 students strongly agreed that questions of terminal and preliminary examinations held in the Pharmacology department should be discussed subsequently with model answers.

Suggestions from the students were 1. Important multiple choice questions should be discussed based on their syllabus while teaching.

2. Pharmaceutical preparations should be shown to them.

Discussion: Student's perceptions about the educational methodology are a useful basis for modifying and improving the quality of the educational environment[5]. Continuous quality improvement and innovation are very essential in medical education. It helps in making the subject more interesting for the students and students understand and memorize the subject in a better way. The ultimate aim is to identify areas of strength and/or weakness of the methodology used. The results of the present study reveal that students are satisfied with the present teaching methodology. Students are interested in learning Pharmacology as a subject and not because it is just part of curriculum. It may be due to the relevance of subject in clinical practice that is explained by teachers. The fact that students do refer to the lectures notes suggests that the notes written by them gives them the explanation and the extra points of the topic taught. They also mention that the teachers solved their difficulties whenever asked; it suggests that the teachers are approachable.

Students recommended combining lectures with audiovisual aids to improve the intellectual skills and to take away the monotony of lectures[8]. But they preferred the use of power point presentation with chalk and board instead of the current use of OHP with chalk and board as AV aid. Similar findings were obtained in a study conducted by Seth etal[7]. It can mainly be due to the poor quality of projector in the department and not so legible handwriting on the OHP slides used.

They opted for no change in duration of lectures but the number of lectures should be increased. Most of the students opined that Chemotherapy, ANS and CNS should be taught in more detail. The knowledge about the drugs covered in these topics is important for the therapy students.

Not surprisingly many of the students opted for inclusion of case studies as a part of regular teaching programme. A study conducted in New Delhi showed that 80.64% of the students favoured bedside teaching of pharmacology[9]. A report from University of Arkansas College of Medicine (USA) outlines changes in students' attendance from poor to high following changes in the teaching style[10]. These changes included encouraging independent learning, reduced lecture time and increased problem-solving exercises. We have made an attempt of alternative approach to this in our department by including short therapeutic problems. Student's interest in the subject can be understood as they have suggested pharmaceutical preparations should be shown to them while teaching. Students preferred that clear categorization of the topics should be conveyed to them[11]. Students preferred the discussion of model answers post examinations. It is agreed that having access to post examination feedback makes a significant contribution to the on-going learning process of students rather than just be viewed as a fixed measure of their performance. This bidirectional process between teacher and student fosters motivation, promotes understanding of goals and develops capacity for self assessment[12].
The main limitation of our study is small sample size however considering annual intake capacity it is complete. The feedback obtained from the students will be discussed with department staff and this feedback tool will be continued for subsequent batches.

Conclusion: Students are interested to learn pharmacology from their perspective of future clinical practice. Current teaching learning and evaluation methodology could be strengthened by inclusion of case studies and group discussions and discussion of model answers post examinations.

References:

1. Jill M. ABC of learning and teaching in medicine: Evaluation. BMJ 2003 Feb 15;326 (7385):385-7.
2. Linda S, Susan T, Steven H, Richard H, John N, Katinka P, Artur R, Richard R. A review of the evaluation of clinical teaching: new perspectives and challenges. Medical education 2000; 34:862-70
3. Richardson BK Feedback. Acad Emerge Med 2004; 11:1-5.
4. Petra MB, Trisha G. Selecting, designing and developing questionnaire. BMJ 2004; 328:1312-15.

5. Dinesh KB, Suman B, Prashant K. Student's evaluation of Teaching and assessment method in Pharmacology. Indian J Pharmacol. April 2010; 42:87-89
6. Garg A, Rataboli PV, Muchandi K. Students' opinion on the prevailing teaching methods in pharmacology and changes recommended; Indian J Pharmacol. June 2004; 36:155-58
7. Vikas S, Prerna U, Mushtaq A. Impact of various lecture delivery methods in Pharmacology. EXCLI Journal 2010; 9:96-101
8. Ernest K, Anand KN, Kanagasabapathy N, Chandy SJ, Kuruvilla A, Thomas M. Patient oriented problem solving (POPS) approach and audiovisual aided lectures in teaching pharmacology – A comparative study. Indian J Pharmacol. 1998; 30:97-101.
9. Kela AK, Mehta VL. Impact of inclusion of clinical projects in undergraduate teaching Indian J Pharmacol. 1993; 25:249-50.
10. McMillan DE, Wenger GR. Effects of curriculum and format changes in a medical pharmacology course. Acad Medicine 1987; 62: 836-41.
11. Maharashtra University of Health Science, Nashik Amended Syllabus for II BOTh and BPTh.
12. Cowie, B, Bell B. A model of formative assessment in science education, Assessment in Education 1999 6:101-16.