

A QUESTIONNAIRE BASED STUDY OF FEEDBACK FROM UNDERGRADUATE MEDICAL STUDENTS REGARDING THE TEACHING-LEARNING METHODOLOGIES IN PHARMACOLOGY IN JLN MEDICAL COLLEGE, AJMER, RAJASTHAN (INDIA).

Medical Science

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ABSTRACT

Objectives: This study was designed to evaluate student's feedback on teaching-learning and assessment methods.

Material And Methods: This was a structured questionnaire-based cross-sectional study conducted on 155 students of 2nd MBBS who have completed 3 semester exam of Pharmacology participated in study. Informed consent was obtained before taking feedback on various teaching-learning methods.

Results: Majority of the students found Pharmacology to be an interesting subject and agreed that a sound knowledge of Pharmacology was useful during their clinical postings and for their clinical practice in the future. Most of them were satisfied with the content of the lectures taken. 78 % of them felt that enough stress has been laid on important topics during the lecture. 93.5 % found the images and flow charts used during the lectures relevant to the topic. Most students found the blackboard method, case based discussion, integrated teaching, and quizzes as good teaching-learning methods useful for learning and understanding Pharmacology. Written and viva test after completion of each system and their feedback within a week help them most to prepare pharmacology for university examination.

Conclusion: Our study showed that most students had a positive attitude towards Pharmacology along with various teaching-learning methods employed by the faculty of our department. Regular feedback from students regarding teaching-learning methodologies helps teachers to update teaching methods and help the students to find out their weakness and strengths.

KEYWORDS

Teaching-learning, Feedback, Pharmacology, students

Pharmacology is a unique subject being both a basic and applied science which forms the backbone of rational therapeutics. Doctors require its sound knowledge throughout their clinical practice. Pharmacology is often considered an interesting and valuable and also a difficult subject by the students of 2nd MBBS.¹

The primary objective of teaching pharmacology is to enable undergraduate medical students to solve problems in therapeutics, prescribe appropriate drugs for a disease condition, and delivering the drug- and disease-related information in a meaningful way to the patients. In India, the Pharmacology subject is taught in II year MBBS course, which is a fundamental stage in undergraduate education where they develop basics and fundamental concepts in the subject to be applied into their clinical postings and foster therapeutic decision-making^{1,2,3,4}. Therefore teaching-learning process in 2nd professional is crucial and the curriculum and trends in medical education are changing rapidly³.

Learning and teaching are inter dependant things and will be considered in an integrated manner. All teaching methods are oriented at facilitating learning, encouraging thinking, and increasing the practical applicability of any subject. The undergraduate curriculum in pharmacology have always been a topic of debate among pharmacologists.² The teaching of pharmacology in medical colleges of India has evolved from mere didactic lectures to audio-visual aid-based lectures and computer-based learning. Lecturing is essentially a passive learning method has been the most common form of teaching and learning since ancient time. A chalkboard is uniquely effective and has been used commonly in lectures, while the use of Microsoft PowerPoint is now the most popular amongst electronic presentations.⁵

The aim of this study was aimed at understanding the students perspective regarding Pharmacology as a subject and about the effectiveness of the various teaching-learning methods currently used by the faculty and improving the teaching quality in our institution as well as other upcoming institutions.

MATERIALS AND METHODS

This was a structured questionnaire-based cross-sectional study conducted in the Department of Pharmacology JLN medical college Ajmer. 155 students of II MBBS (regular batch) who were going to appear for the II MBBS university exams participated in study. Informed consent was obtained before taking feedback. To improve free and unbiased responses, the students were told not to reveal their

identities. The students were asked to select the responses as found appropriate by them. Data was collected using a predesigned, structured, pre-validated questionnaire⁶ after peer review, was used to gather information regarding student perception of Pharmacology and about the various teaching-learning methods currently used by the faculty. The questionnaire included 15 questions. The data were entered in Microsoft Excel and analyzed using SPSS version 16.

RESULT

A total of 155 students participated in our study and all of them completed the questionnaire. Amongst the 155 participants, 46 % were female students and 54% were male students.

A majority of the students, 98.9%, found Pharmacology to be an interesting subject. 92.5 % of them agreed that a sound knowledge of Pharmacology was useful during their clinical postings and for their clinical practice in the future. 86 % were of opinion that an integrated model of teaching Pharmacology along with other clinical specialty subjects will help in a better understanding of various diseases. 89.5 %, were satisfied with the content of the lectures taken. 88.3% felt that the number of lectures taken on each topic was adequate, while only 11.7% felt this was inadequate.

86.4 % felt that a duration of 1 hour per lecture was adequate. 78 % of them felt that enough stress has been laid on important topics during the lecture classes and important points have been highlighted adequately with more focus to be increased on mnemonics and diagrams. 93.5 % found the images and flow charts used during the lectures relevant to the topic.

90% of the students were satisfied with the explanations given while clarifying doubts asked during the lectures. 88.5 % said that they were satisfied with the style of delivery and pace of the lectures, while 11.5% said they were not. Most students found the blackboard method, case based discussion, integrated teaching, and quizzes as good teaching-learning methods useful for learning and understanding Pharmacology (Table no 1). Regarding the modes employed for assessment of the students, 86.45% of the students agreed that written exams were a very effective assessment tool. 87 % felt viva and while 76.7% felt practical exams were also a useful tool in assessing the knowledge of the students (Table no 2) Multiple Choice Question (MCQ) practice tests and theory viva after completion of a particular system and periodical written tests were mentioned as effective evaluation methods. Standard textbooks (86%) were a major source to study pharmacology followed by self-notes (5%), e-material available

online (5%), and teacher's notes (4%).

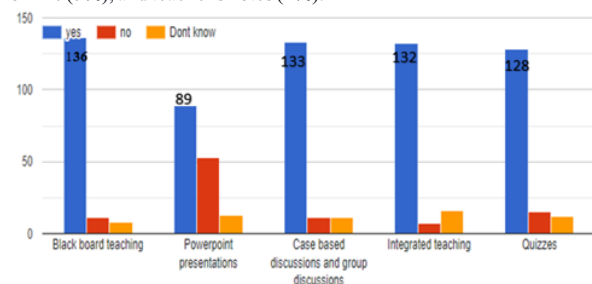


Table No 1- Teaching Learning Methods Useful For Learning And Understanding Pharmacology

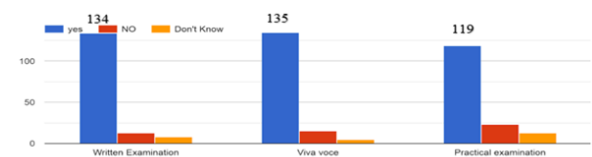


Table No 2-. Modes Of Assessment In Improving Knowledge And Application Skills

DISCUSSION

Reforms in undergraduate teaching are widely advised to improve the standard of teaching, this can be done by reviewing the teaching programs at regular intervals and modifications in the various methodologies. The feedback from students, through questionnaires, can be used for improving the quality of the teaching program. Because of this, the present study was conducted to determine the perception and feedback of teaching/learning pharmacology using a prevalidated questionnaire among II M.B.B.S students by the Department of Pharmacology.

Pharmacology teaching during the second MBBS course is aimed at improving skills needed for optimal patient care. Lecture sessions introduce various drug classes, pharmacokinetics, and pharmacodynamics. Since ancient times, various teaching and learning methods are being presented, modified, and adopted. Amongst these, chalkboard (CB) teaching is the oldest and most effective way of teaching and learning. The student must be allowed to apply acquired knowledge in analysis, synthesis, evaluation, and problem-solving.⁸

Studies have shown PBL to be effective in comparison with lecture-based learning (LBL). PBL also conforms to the principles of adult learning and cognitive science.⁷ Although discussion methods in small groups seem to be a superior method of accomplishing a higher level of intellectual learning, in India, it is almost not practical as the number of students attending college is too large in comparison to the teaching staff available. Hence, the lecture is here to stay, so it is immensely important that it should be as effective as possible.⁵ The importance of pharmacology is well-acknowledged by the majority of the participants who consider pharmacology an interesting subject in the second year MBBS and admit that knowledge of pharmacology is necessary for future clinical practice for prescribing drugs rationally. Some other studies also have the same results and opinions in their study.^{9,10,11,12}

Students expressed interest in microteaching and problem-based learning, whereas seminars, demonstrations were mentioned as good adjuvants to routine teaching.¹³

A combination of written and viva test, assessment after completion of each system will help students the most to remember and prepare pharmacology for university exam at the end. A significant number of students mentioned one and half year duration is enough for learning and teaching pharmacology.^{14,15}

CONCLUSION

Our study showed that most students had a positive attitude towards Pharmacology along with various teaching-learning methods employed by the faculty of our department. Regular feedback from students regarding teaching-learning methodologies and helps teachers to update teaching methods find out their weakness and strength.

REFERENCES

- Chincholkar A, Wagh R. Teaching pharmacology prescription writing and criticism-commenting on fixed-dose combinations by assignment-based method: learning outcome in II MBBS students. *Int J Res Rev*. 2016; 3(7):56-60.
- Dhanya TH, Valoth G. Students' feedback of revised pharmacology record book as a teaching-learning method. *Natl J Physiol Pharm Pharmacol*. 2019;9(12):1230-1233.
- Goyal M, Bansal M, Gupta A, Yadav S. Perceptions and suggestions of 2nd professional MBBS students about their teaching and learning process: An analytical study. *Natl J Integr Res Med*. 2010;1(4):20-24.
- Badyal DK. Evolution of pharmacology education in India: Past and future. *Indian J Pharmacol*. 2018;50(4):159.
- Rani V, Tekulapally K, Shyamala R, Simpson GB. Assessment of effectiveness of different teaching methodologies and perception about pharmacology among 2nd year dental students: A cross-sectional study. *Int J Health Allied Sci*. 2017;6(2):64.
- Vijayan P, Ponniah A. A survey study based on undergraduate medical students' feedback regarding pathology and the teaching-learning methodologies employed. *Trop J Path Micro*. 2017;3(2):149-154.
- Gurudeva C, Kulkarni P, Ravin Vijay R, Chinnathambi T, Ravi I, Roy R, Kuruvilla A. Perceptions of Medical Students Regarding Learning during Practical Sessions in Pharmacology – A Cross Sectional Questionnaire Based Study. *Int J Med Sci Educ*. 2019;6(4):12-20.
- Ranjanasushil dk, shrivastavatripti d, dipankar dc, eknath bs. Evaluation and comparison of chalkboard teaching, power point teaching and combination of chalkboard-power point teaching in pharmacology subject for second year mbbs students in medical college. *Innoriginal International Journal of Sciences*, July-Aug, 2020;7(3): 1-3
- Hirpara HN, Sondarva DB, Amare HS. Evaluation of feedback from 2nd professional medical students on various teaching-learning and assessment methods in Pharmacology. In *Indian Journal of Pharmacy and Pharmacology*, October-December, 2019;6(4):126-131
- Sawhney V, Bhat MY, Farhat S. A questionnaire based study of pharmacology curriculum in undergraduate students. *Int J Res Pharmacol Pharmacother*. 2014;3(4):382-6.
- Chavda N, Yadav P, Chaudhary M, Kantharia ND. Second year's student feedback on teaching methodology and evaluation methods in pharmacology. *Natl J Physiol Pharm Pharmacol*. 2011;1:23-31.
- Ruckmani A. The role of pharmacologists: present and future. *Indian J Pharmacol*. 2006;38(2):145-6.
- Bhosle UA, Yegnanarayan R, Yadav GE. Attitude, perception and feedback of second year medical students on teaching-learning methodology and evaluation methods in pharmacology: a questionnaire-based study. *Niger Med J*. 2013;54(1):33-9.
- Tikoo D, Gupta M, Geeta S. Students feedback on teaching-learning methodology and evaluation methods in pharmacology. *IJBCP*. 2015;4(6):1260-6.
- DEo SK. Under graduate student feedback on teaching and evaluation method in clinical pharmacology. *J Coll Med Sci Nepal*. 2016;9(3):31-4.