VOLUME - 9, ISSUE - 9, September - 2020 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Pharmacology

A STUDY ON THE EVALUATION OF SECOND YEAR UNDERGRADUATE MEDICAL STUDENT'S PERCEPTIONS AND THEIR FEEDBACK REGARDING TEACHING LEARNING METHODOLOGIES IN PHARMACOLOGY AT GOVERNMENT MEDICAL COLLEGE, SRINAGAR.

Sabahat Farooq* Resident, Department of Pharmacology GMC Srinagar. *Corresponding Author

Samina Farhat Professor And Head Department Of Pharmacology GMC Srinagar.

ABSTRACT The Medical education has been undergoing intense reforms globally. As a result numerous Teaching-learning (T-L) methods are adopted worldwide. Therefore, reforms in undergraduate teaching are of extreme importance. Understanding of current perceptions and opinions of medical students is important for the improvement of teaching-learning methodologies in pharmacology subject. This study completed with the objective to determine the perception and feedback of teaching learning methods in pharmacology.

KEYWORDS : Pharmacology, Student, Perception, Feedback, Teaching-Learning.

INTRODUCTION

Pharmacology is one of the most important subjects in medical prospectus, which is ever growing. The aim of pharmacology is that the student should develop transferable skills, which would help not only for undergraduate education but to learn throughout the medical career. Due to content overload, students often find it difficult to remember and recall the pharmacological terms, concepts and drug names in the subject (Achike et al, 2000). Teaching and learning of pharmacology is an endless stage of reformation. Teaching consists not only of mere instruction, but also of the systematic promotion of learning by the means that promote student retention and learning of the material conveyed during lecture (Rao, et al). As a result various teaching-learning procedures are used worldwide. Educational goals can be evaluated by assessment procedures and timely feedback to accomplish the learning goal. Understanding current scenario of medical undergraduates regarding teaching as well as learning pharmacology and understanding its vital role in academics, clinics and research may greatly help in cultivating the teaching of this discipline. It is generally agreed that reviewing the teaching program at regular intervals and modifications in the methodologies of imparting elementary knowledge about drugs and drug therapies is must. Many attempts have been made by various colleges all over India and abroad to make the teaching of pharmacology more interesting and relevant. Student feedback has been considered to be an effective methodology for modification of undergraduate curriculum and making pharmacology more interesting and practicable. The feedback would probably reveal whether the so called reforms are acceptable to them and their opinion for the betterment of teaching learning pharmacology subject. Questionnaires offer an objective means of collecting information about people's knowledge, beliefs, attitudes and behaviour (Oppenheim, 1992; Sapsord, 1999). Howiit D and Cramer D stated that Questionnaires should be validated, reliable and should be standardized. A standardized questionnaire is one that is written and administered, so all participants are asked the precisely same questions in an identical format and responses recorded in a uniform manner (Hughes et al, 2003).

MATERIALS AND METHODS

The research approach was exploratory in nature. The descriptive cross-sectional questionnaire based study was conducted at Government Medical College, Srinagar, India, among second year MBBS students of 2017 Batch. The questionnaire was based on previous studies undertaken on the evaluation of perception and feedback of teaching/learning in pharmacology. After explaining the aims and objectives of the study to the students, informed consent was taken and then the questionnaire were distributed to students. All students present in the class at the time of distribution were included in the study after informed consent. A total of 126 students participated in the study and completed the questionnaire. All the questionnaires were manually checked for the completeness and then coded for entry in Microsoft Excel sheet. Analysis was done using Statistical Package for Social Sciences (SPSS), version 20. The results were expressed using appropriate statistical variables.

RESULTS

Table 1: Student's Perception Regarding Teaching Methodologies.

S. No.	Items	Yes	No
1	Pharmacology lectures are interesting and stimulating	106 (84.1%)	20(15.8%)
2	I would like application of Pharmacology Knowledge to be more closely integrated with bed side clinics and problem-based learning and rationality of Drug Usage	113(89.6%)	13(10.3%)
3	I wish recent advances be included in Pharmacology curriculum	119(94.4%)	7(5.5%)
4	I would like assessment to be made with inclusion of Multiple-Choice Questions (MCQs)	118(93%)	8(6.3%)
5	ADR reporting increase our knowledge regarding Drug dosage and associated side effects	109(86.5%)	17(13.4%)

Student's Perception Regarding Teaching Methodologies

106 students agreed that pharmacology lectures are interesting and stimulating and 20 disagreed. 113 students agreed that application of Pharmacology Knowledge has to be more closely integrated with bed side clinics and problem-based learning and rationality of Drug Usage and 13 disagreed. Regarding the recent advances to be included in Pharmacology curriculum, 119 students agreed and 7 disagreed. Majority of students agreed that MCQs should be included in the assessment. 118 students agreed that practical sessions as well as the objectively structured practical examination (OSPE) and problem stimulated learning (PSL) more than didactic lectures and 8 agreed that pharmacology education had given them capacity for self-directed learning. 109 students agreed to the ADR reporting increase in knowledge regarding Drug dosage and associated side effects and 17 disagreed. (Table 1)

Table 2: Student's Opinions About Teaching/learning Methods In Pharmacology.

S.No.	Items	Your Opinion	Frequency
1	Ideal teaching and learning media for learning Pharmacology subject is:		
	a. LCD Projector	12	9.5%
	b. Black board	57	45.2%
	c. Both a and b	57	45.2%
2	The ideal teaching method for learning pharmacology is:		
	a. Didactic lecture	24	19%
	b. Tutorial	20	15.8%
	c. Group discussion	61	48.4%
	d. Seminar	6	4.7%
	e. Demonstration	15	11.9%
3	The most difficult system to understand in Pharmacology is:		
	a. ANS	20	15.8%
	b. General Pharmacology	29	23.0%
	c. Cardiovascular system	27	21.4%
	d. Endocrine system	6	4.7%
	e. Antimicrobials	33	26.1%
	f. CNS	30	23.8%
	g. Anti-cancer	1	0.79%

Student's Opinions About Teaching/learning Methods In Pharmacology

Majority of student (45.2%) agreed combination of both (LCD projector and blackboard) and Black board (45.2%) as ideal teaching-learning media for pharmacology while as only 9.5% preferred LCD projector as a learning media (Table 2). Group discussions for learning pharmacology were favoured by 48.4%, followed by Didactic lectures 19% and Tutorial 15.8% while Seminars were the least opted method (Table 2). The most difficult system to understand was anti-microbials (26.1%) followed by central nervous system, (23.8%) while as anti- cancer was the least difficult (Table 2).

Table 3: Perceptions And Practice Towards Pharmacology Teaching And Task-based Learning By The Students

S.No.	Items	Yes	NO
1	Fixed Dose Combination (FDC) exercise made us aware about rational combination with their advantages	115 (91.2%)	11(8.7%)
2	Prescription writing exercise helped us to know the importance of correct Prescription writing	123 (97.6%)	3(2.3%)
3	Therapeutic drug monitoring is must for clinician to make dose adjustments	121 (96.6%)	5 (3.9%)
4	Medical emergencies exercises make us aware about their management	121(96.6%)	5 (3.9%)

Perceptions and practice towards Pharmacology teaching and task-based learning by the students

Most of the students agreed that Fixed Dose Combination (FDC) exercise made them aware about rational combination with their advantages (91.2%) while as rest disagreed. Highest proportion of students (97.6%) agreed that Prescription writing exercise helped them to know the importance of correct Prescription writing while only 2.3% students disagreed. 96.6% students agreed that Therapeutic drug monitoring is must for clinician to make dose adjustments while only 3.9% students disagreed. Again 96.6% students agreed that Medical emergencies exercises made them aware about their management while only 3.9%students disagreed (Table 3).

DISCUSSION

Students feedback has been considered to be an effective practice for alteration of undergraduate curriculum and making pharmacology more interesting and practicable. Student feedback is thus considered a helpful tool for improving students' performances when suggestions obtained from students are applied. In general, the majority of students who contributed in this research expressed a positive perception of the teaching and learning of pharmacology.

In the current study it was observed that majority (84.1%) of the students have an opinion that Pharmacology lectures are interesting and stimulating which is comparable with the study done by Mahfoudh A.M. et al. It is probably due to inadequate knowledge about this subject matter which is vital for prosperous careers in the clinical research and pharmaceutical industries and due to students interests are biased toward clinical sciences rather than fundamental sciences with prospective earning far improved than pharmacology careers.

In the current study it was observed that 89.6% students agreed that pharmacology is more closely combined with the clinical sciences and real cases from hospitals should be used during stimulated learning problems. This is in agreement with the results from other studies conducted in New Delhi where 80.46% students and 87.50% were in favour of the bedside teaching of clinical pharmacology (Kela et al, 1993). Based on these findings we feel that students should be taken to wards for discussion of treatment conventions of various admitted cases. To make the subject more clinically oriented we need to introduce more therapeutic problems.

In this study, majority of the students (93.6%) prefer MCQs in the assessment, this is parallel to finding by Jai Krishna et al 61.4%, Mahfoudh AM et al, 58.6% and by Manjunath SM et al, 79.68%. The reason might be due to MCQs are one of the key ways of examination in different competitions like post-graduation selection, medical licensing examination, even though in qualifying university examination and also due to student somewhere uncomfortable facing long and short essay type questions, would prefer MCQs in their examinations.

In our present study 94.4% students wished that current advances to be included in the curriculum and this is similar to conclusions by Jai Krishna, et al. who reported 58% of the students showed same advances to be incorporated.

In this study 86.5 % students agreed that ADR reporting increased their knowledge regarding drug dosage and associated side effects.

Regarding, perfect teaching-learning media for pharmacology, 45.2% students preferred amalgamation of LCD projector and blackboard. This was supported by the study of Manjunath SM et al, which was 81.25%. Prasad et al (2005) advocates that audio-visual aids provide basic means of planning, organizing and invigorating the curriculum. The basic aim of education must be to lead students towards self- learning and lifelong learning and this aim can be achieved through the use of audio-visual aids as it improves the learning capacities of individual students i.e. learning experience that is worth memorable (Singh et al 2008).

About (48.4) % of students in our study suggested for introducing group discussion as teaching learning method this result are in favour of the study directed by Manjunath SM

et al where 82% students recommend group discussion, as it impart knowledge among faculties and student with easy feedback and discussion.

In the current study Antimicrobials (26.1%) followed by CNS (23.8%) and General Pharmacology (23%) systems were found to be difficult to understand by the students.

Additional feedback included that prescription writing exercises should be more regularly used for understanding the importance of correct prescription writing. Some of the students also orated that Therapeutic drug monitoring is must for clinician to make dose adjustments for enhanced understanding of the subject. The results obtained may not be relevant to all the medical students because these findings are based on a single centre study from Jammu and Kashmir. More multicentric studies need to be carried out among the medical students to draw more meaningful conclusions.

CONCLUSION

The study determined that in general, the perceptions of the majority of participants regarding teaching-learning pharmacology were constructive. Introduction of integrated teaching, case based, and cluster based discussion with clinical pharmacology was chosen by majority of the students. The study also revealed the substantial areas for advancement. It is important to know what our students need and whether they feel contented with the ever intensifying course. Regular comments may benefit teachers to design the curriculum and improve the teaching for undergraduate students.

REFERENCES

1. Achike FI, Ogle CW. Information overload in the teaching of pharmacology. J Clin Pharmacol., 2000; 40 (2): 177-83
2. Howitt D, Cramer D. First steps in research and statistics. London: Routledge, 2000.
3. Hughes I. Changes in the technological methods of teaching and learning in undergraduate pharmacology in UK higher education. BEE-j, 2003; 1: 1.
4. Jai K, Abhishek S, Shwetank G, Aakansha G, Priyamvada S, Mirza URB, et al. Students' current perceptions and feedback on teaching and learning Pharmacology from an evolving medical school. IAIM. 2015; 2 (7): 99-104
5. Kela AK, Mehta VL. Impact of inclusion of clinical projects in undergraduate teaching. Indian J Pharmacol., 1993; 25: 249-50.
6. Mahfoudh AM, Abdulghani, Redhwan A, Al-Naggar. Students' perceptions about learning pharmacology at a single private institute in Malaysia. Journal of Taibah University Medical Sciences. 2015; 10 (1): 40-4.
7. Manjunath SM, Nagesh Raju G, Srinivas TR, Someswara GM. A study on the evaluation of medical students' perception and feedback of teaching learning of pharmacology in a medical college. IAIM. 2015; 2 (9):102-10
8. Oppenheim AN. Questionnaire design, interviewing and attitude measurement. London: continuum, 1992.
9. Prasad J. Audio-Visual Education. New Delhi (India). Kanishka Publishers. 2005. pp 17-18, 20-21, 26-27, 143, 146, 150- 151, 166-167, 181183, 185- 186.
10. Rao SP, Di Carlo SE. Active learning of respiratory physiology improves performance on respiratory physiology examinations. Adv Physiol Educ. 2001; 25:127–133.
11. Sapsford R. Survey research. London: Sage, 1999.