

LEVEL OF SATISFACTION AMONG MEDICAL STUDENTS REGARDING CURRICULUM AND TEACHING METHODOLOGY OF PHARMACOLOGY

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ABSTRACT

Background: Pharmacology is one of the most progressive and constantly changing basic medical science subject. The current curriculum of pharmacology lacks uniformity. Lectures, tutorials and practical classes are the common methods of teaching. The scientific and integrated curriculum and innovative teaching methodology fulfils the academic objectives. **Objective:** To know the students satisfaction and effectiveness of current teaching methods and curriculum in pharmacology. **Methodology:** This cross-sectional survey was conducted in Pharmacology Department, Sheikh Zayed Medical College, Rahim Yar Khan, from 1st November to 30th November 2017. A set of questionnaire was distributed among the 140, MBBS students of 3rd year who have studied pharmacology. Students were instructed to tick the best possible option of each question on the basis of their own perceptions. Analysis of data was done using SPSS version in 20. Descriptive analysis was used to assess different variables in the study. **Results:** 140 students of 3rd year MBBS class participated in this study. Male students were 59 and 81 were female students with mean age of 21.5±1 with minimum age of 19 and maximum age of 24 years old. All students answered the questions and gave their opinion. Regarding the current teaching methodologies, 66.4% students were satisfied with current teaching methodology in comparison with 23.5 % who were not satisfied and 10% has no idea. **Conclusion:** In present study, overall students were satisfied with current teaching curriculum and they were of the view that integrated teaching should be added to the curriculum and teaching should include problem based learning, small group discussion, self-directed learning and bed side teaching in pharmacology.

Key words: Teaching Methodology, Curriculum, level of Satisfaction.

INTRODUCTION

Pharmacology is the science of drugs that is concerned with the interaction between drugs and living systems.¹ It is one of the most progressive and constantly changing basic medical science subjects. It is the backbone of rational therapeutics.² For effective treatment of patients it is very important to have sound knowledge of the subject.¹ Most of the pharmacology text books are drug and body system oriented. In clinical practice drug management is disease oriented. Pharmacology course not only gives knowledge to students but also creates ability to apply pharmacology principles in medical practice. Students who receive their knowledge through lectures find it difficult to practice in clinic. So, educators should find methods to promote self directed learning through problem based learning (PBL), case based learning (CBL) and patient oriented problem solving system.² Lecture based traditional teaching is an effective way of delivering knowledge but it decreases the ability of independent thinking and learning of students.³ Lecturing is most common method of conveying knowledge since ancient times but it is a passive way of learning that promotes rote memorization

and taking notes to collect information.⁴ Most of the students perceive pharmacology as a boring and volatile subject. To improve the quality of medical education, involvement of student's opinion is considered to be a key component. For students and curriculum success effective evaluation provides useful information.⁵ Most of the times, students find it difficult to recall and memorize drug names, pharmacology terms and concepts.⁶ Advancements are taking place in most of the countries to improve standards of medical education. New methods of assessment and teaching are evolving to achieve the desired goal. The standards of medical education are extensively improving globally. Now a day's medical education is not restricted to text books and lectures. The concept of traditional lecture based learning is replaced by electronic journals, educational videos and online conferences due to easy accessibility to internet.⁷ The discussion can facilitate students to understand the basic principles and improves their thinking skills.^{8,9} It is very useful to take feedback from students about teaching methodologies to modify and improve standards of medical education. This feedback helps us to identify areas of strength or weakness so that steps can be taken to rectify deficiencies and modify the curriculum to achieve

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Received: 05-01-2018

Accepted: 05-02-2018

goals.¹⁰ The objective of this study was to assess level of satisfaction among medical students regarding pharmacology curriculum and teaching methodology.

METHODOLOGY

This cross-sectional study was conducted at Pharmacology department of Sheikh Zayed Medical College, RahimYar Khan, using non-probability convenience sampling. Study was conducted from 1st November to 30th November 2017. A set of specially designed questionnaire was developed after literature review. The questions were suitably modified according to the need of study. The content of questionnaire contained issues on current pharmacology curriculum with various aspects of theory, Pharmacy and experimental pharmacology. It also covered various aspects of assessment methods and role of current Pharmacology curriculum in patient care. The requisite permission was obtained from our Institutional Review Board. The students of 3rd year MBBS were given the questionnaire in pharmacology lecture. These students have completed their academic year and studied pharmacology thoroughly. Students were given a briefing about the objectives of the study and were directed to fill in the most correct appealing response to each question according to their independent perception regarding pharmacology. Descriptive statistics were applied to calculate the mean values. Opinion of students about various variables was counted and their percentages were calculated.

Inclusion criteria: 3rd year MBBS students at the time of their completion of curriculum. **Exclusion criteria:** New 3rd year students who were not exposed to pharmacology curriculum. Data was entered and analyzed by using SPSS version 20.

RESULTS

In this study, 140 students of 3rd year MBBS class were included. Male students were 59 and 81 were female students with mean age of 21.5 with minimum age of 19 and maximum age of 24 years. All students answered the questions and gave their opinion. Regarding the current teaching methodologies, 66.4% students were satisfied with current teaching methodology in comparison with 23.5 % who were not satisfied and 10% has no idea. (Table: I)

Table I: Students opinion regarding current teaching curriculum of pharmacology (n=140)

Questions	Agree	Disagree	No idea
Students are satisfied regarding current teaching curriculum	93(66.4%)	33(23.5%)	14(10%)
There is good student teacher interaction during the class	112(80%)	22(6.4%)	6(4.2%)
Multimedia tools as videos and animations should accompany the lecture	129(92.1%)	9(6.4%)	2(1.4%)
Laboratory environment is supportive for experiments	111(79.2%)	27(19.2%)	2(1.4%)
Problem based learning should be applied	124(88.5%)	10(7.1%)	6(4.2%)
Small group discussions should be applied	131(93.5%)	6(4.2%)	3(2.14%)
Self directed learning can be applied	67(47.8%)	59(42.1%)	14(10%)
Multiple modes of assessments help the students to excel	115(82.1%)	16(11.4%)	9(6.4%)
Satisfied with OSPE pattern	106(75.7%)	27(19.2%)	7(5%)
Bedside teaching can be helpful in pharmacology	99(70.7%)	19(13.5%)	22(15.7%)
Animals should be used in under graduate experiments in pharmacology	96(68.5%)	36(25.7%)	8(5.7%)
Viva system is effective mode of assessment	67(47.8%)	66(47.1%)	7(5%)
Integrated teaching can be helpful to understand pharmacology	113(80.7%)	17(12.1%)	10(7.14%)

Table II: Order of preference of different teaching methodologies (n=140)

Preferred duration of lectures	30 min	42(30%)
	45min	89(63.5%)
	1 hour	9(6.4%)
Preferred criteria to sit in exams	Attendance	82(58.5%)
	Internal assessment	47(33.5%)
	No idea	11(7.8%)
Preferred method of assessment	MCQs	73(52%)
	SEQs	47(33.5%)
	Descriptive	20(14.2%)
Preferred year to teach pharmacology	2 nd year	16(11.4%)
	3 rd year	107(76.4%)
	4 th year	17(12.1%)
Preferred teaching tool	Black/white board	50(35.7%)
	Multimedia	85(60.7%)
	Transparencies	5(3.5%)

More than 90% students wanted to have different multimedia tools like videos and animations. 88.5% were in favor of problem based learning and 93.5% were in favor of small group discussion.

Most of (80.7%) were in favor of the opinion that integrated teaching is helpful to understand pharmacology. As far as criteria for allowing students to sit in exams was concerned, according to students opinion preferred criteria was attendance (58.5%) and 33.5% were in favor of internal assessment while few had no idea.

DISCUSSION

Like other branches of medicine, pharmacology is also progressing by leaps and bounds. To improve standards of medical teaching, reforms must be taken frequently. Review of teaching programs at regular intervals and modifications in various teaching methodologies is frequently advised. In last few years, rapid changes are occurring in biomedical sciences. So, students and teachers are required to be updated with rapid advances. E-learning technologies are increasingly in use to develop interactive curricula, on key aspects of evidence based medicine. This method of learning is not limited to time and place and can be easily incorporated to clinical practice.^{11,8} The main objective of medical education is to present the vast amount of information to the students in a planned, organized and integrated manner. The integrated learning process is found to be a successful effort for perception of interrelating concepts in health and disease.^{12,9}

The study is important from the view point that majority of students were satisfied with current teaching curriculum (66.4%) and they found that there is good student teacher interaction (80%) during the class. A vast majority of students (92.1%) were of the view that multimedia tools as videos and animations should accompany the lecture and 60.7% students found multimedia as the most effective tool of teaching. White board was also favored by 35.7% students. An earlier study supported the similar trend.⁷ Majority of students (79.2%) were satisfied with supportive laboratory environment and 68.5% students were of the view that animals should be used in undergraduate experiments in pharmacology that was against a study in which most of students disagree with it.¹ As far as improvement in learning process was concerned, most of the students supported problem based learning (88.5%), small group discussion (93.5%), self directed learning (47.8%), bed side teaching (70.7%) and integrated teaching (80.7%). Regarding the modes of assessment, majority of students agreed with multiple modes of assessment (82.1%) and OSPE pattern (75.7%), as was found in a similar study, in which it was suggested that single mode of assessment could not fulfill all aspects of student's knowledge effectively.¹³ Most of the students were satisfied with OSPE pattern and MCQ's were found preferred method of assessment 52.1% ; as

compared to SEQ's 33.5% ; as was found in another study, in which MCQ was the best mode of assessment.¹⁴ In student's opinion the ideal duration of lecture should be 45 minutes.

CONCLUSION

In present study, majority of the students were satisfied with current teaching curriculum and they were of the view that integrated teaching should be added to the curriculum and teaching should include problem based learning, small group discussion, self directed learning and bed side teaching in pharmacology. They also suggested that multiple modes of assessing student's knowledge like viva voce, OSPE, MCQ's, SEQ's, descriptive all should be promoted.

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Article Citation: Atif MA, Tufail S, Hussain M. Level of satisfaction among medical students regarding curriculum and teaching methodology of pharmacology. JSZMC 2018;9(1): 1304 -1307