



ORIGINAL RESEARCH PAPER

Community Medicine

ASSESSMENT OF EFFICACY OF TEACHING METHODS AND IT'S EVALUATION AMONG MBBS STUDENTS IN MEDICAL COLLEGE.

KEY WORDS: Teaching Methods, Medical Education, Demonstrations, Practical.

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ABSTRACT

Introduction: Evaluation of effective teaching methods is main focus amongst teaching faculty of medical colleges. So, for effective performance of teaching faculty evaluation of better teaching methods is required, so that medical education can be made easy for students.

Objectives: To assess efficacy of teaching methods and it's evaluation among MBBS students in medical college.

Materials and Methods: Study was conducted from all the students randomly selected from four semesters of MBBS in Shyam Shah Medical College, Rewa. A total of 200 respondents were selected by random sampling. Statistical analysis was done.

Observations and Results: Most of the students preferred demonstration as the most effective aid of teaching (42.5%) followed by use of OHP (40.5%). Most of the students preferred practicals as the most effective method of teaching (41%).

Conclusion: It was concluded from the study that demonstration and use of overhead projectors was most effective teaching aid.

INTRODUCTION:

Evaluation of effective teaching methods is main focus amongst teaching faculty of medical colleges. So, for effective performance of teaching faculty evaluation of better teaching methods is required, so that medical education can be made easy for students. (1-3) This evaluation is helpful in improvement of teaching performance and better understanding among medical students about the education.

Due to increasing advancement in scientific knowledge and innovations there is a constant need to change and upgrade curriculum. Therefore various methods have been adopted for the purpose, example – integrated teaching, problem based learning, self directed learning and orientation of community. (4) Integrated teaching means way of connecting skills and knowledge from various sources or applying skills and practice in various settings. Thereby bridging the academic knowledge and practicals by appropriate connections. (5) Course is organized around organ systems for example – CVS (cardiovascular system), GI(gastro intestinal) system, respiratory system etc. in an intergrated curriculum (6)

Basic aim of medical education is to produce medical personnel with efficient clinical knowledge and oriented to community with good skills of communication. These things are essential to solve the health problems in better possible ways. (7)

So the evaluation of teaching depends basically on the student assessment and understanding of teachers and courses. There has been evidenced in last 2 decases a rapid rise of Indian medical education system. To impart successful and good communication, teachers in medical system are increasingly using learning media for teaching. It is well known that the students learn when they are involved actively in learning than when they are passive recipients of instruction. (8) Active learning strategies can be designed to target visual learners through models and demonstrations, auditory learners through discussion, debates, games and kinesthetic and tactile learners through models and role playing. There is very little documentation of the effectiveness of various active learning strategies, and often faculty are reluctant to incorporate such new strategies into the teaching curriculum. (9) There has been a growing concern among medical educators about the quality of medical graduates trained in medical colleges in our country.

Learning style is defined as the manner and conditions under which the learner most efficiently and effectively perceive, processes, stores and recalls what they are attempting to learn (10). It is said that students learn best when they are engaged by different materials of learning presented in variety of ways and formats (11).

Various institutions have recommended to again structure syllabus of the undergraduate so that health needs of community can be assessed and addressed. But due to certain reasons, significant changes are difficult to be established. (12) So there is a requirement to assess the methodology of teaching which suits better to students for good performance and better understanding of syllabus.

OBJECTIVES:

To assess efficacy of teaching methods and it's evaluation among MBBS students in medical college.

MATERIALS AND METHODS:

Study was conducted from all the students randomly selected from four semesters of MBBS in Shyam Shah Medical College, Rewa. All the students willing to participate in the study were given well structured self-administered questionnaire.

A total of 200 respondents were selected by random sampling after having obtained their informed consent. The students were advised to select the option to each question which they felt was most correct. Students were also instructed to give unbiased opinion.

Their personal information and identity were not revealed or asked in questionnaire. Individualized comment about the faculty members or their way of teaching were prohibited to be written in questionnaire by students. Statistical analysis was done by entering data in Microsoft excel and thereby analysis is done using SPSS version 20.

OBSERVATIONS AND RESULTS:

The study population comprised of 200 students. Most of the students preferred demonstration as the most effective aid of teaching (42.5%) followed by use of OHP (40.5%). Only 17% students preferred chalk and board as the effective teaching aid. Most of the students preferred practicals as the most effective method of teaching (41%), followed by lectures (34.5%) and small group discussion (24.5%). 49.5% preferred tutorials as the effective learning method compared to seminar (35.5%) and quiz program (15%).

On studying the quality of teacher influencing students, it was found that 39.5% students were influenced by knowledge of teacher while 32% were influenced by their personality and remaining 28.5% were influenced by ability to teach. On assessment of pattern of evaluation, multiple choice questions (26%) and brief notes (23.5%) were more popular methods. Significant association was found between teaching aid with preferred methods for learning, qualities of teacher influencing students and pattern of evaluation.

TABLE 1- Distribution According To Teaching Aids And Methods.

Teaching aid preferred by students	Number	Percent
Chalk and board	34	17.00%
Demonstration	85	42.50%
OHP	81	40.50%
Teaching methods preferred by students	Number	Percent
Lectures	69	34.50%
Practicals	82	41.00%
Small group discussion	49	24.50%
Preferred for learning method	Number	Percent
Quiz programme	30	15.00%
Student seminar	71	35.50%

Qualities of teacher influencing students	Number	Percent
Ability to teach	57	28.50%
Knowledge	79	39.50%
Personality	64	32.00%
Pattern of evaluation	Number	Percent
Brief notes	47	23.50%
Short essay questions	27	13.50%
Long essay question	31	15.50%
Multiple choice questions	52	26.00%
Combined form of all the above	43	21.50%

TABLE 2- Association Of Teaching Aid Preferred By Students With Teaching Methods And Qualities Of Teachers.

Teaching aid preferred by students	Chalk and board		Demonstration		OHP	
Teaching methods preferred by students	No.	Percent	No.	Percent	No.	Percent
Lectures	32	94.10%	0	0.00%	37	45.70%
Practicals	1	2.90%	80	94.10%	1	1.20%
Small group discussion	1	2.90%	5	5.90%	43	53.10%
Chi square	214.525		P value		0.00	
Preferred for learning method	Chalk and board		Demonstration		OHP	
Quiz programme	0	0.00%	0	0.00%	30	37.00%
Student seminar	34	100.00%	0	0.00%	37	45.70%
Tutorials	0	0.00%	85	100.00%	14	17.30%
Chi square	194.063		P value		0.00	
Qualities of teacher influencing students	Chalk and board		Demonstration		OHP	
Ability to teach	0	0.00%	6	7.10%	51	63.00%
Knowledge	0	0.00%	79	92.90%	0	0.00%
Personality	34	100.00%	0	0.00%	30	37.00%
Chi square	241.011		P value		0.00	
Pattern of evaluation	Chalk and board		Demonstration		OHP	
Brief notes	0	0.00%	0	0.00%	47	58.00%
Combined form of all the above	0	0.00%	43	50.60%	0	0.00%
Long essay question	30	88.20%	0	0.00%	1	1.20%
Multiple choice questions	0	0.00%	42	49.40%	10	12.30%
Short essay questions	4	11.80%	0	0.00%	23	28.40%
Chi square	324.513		P value		0.00	

DISCUSSION:

According to study by Kaushik Bhowmick et al. assessment of perception of first professional MBBS students in India about a teaching learning activity in Biochemistry was evaluated and it was found that students are most effective source of providing teacher feedback. These studies have found that there is association between students opinion with measurement of teacher's effectiveness and their assessment.⁽¹³⁾ In a study by D'Lvernois, evaluation by students of programmes, teaching techniques and teachers was done and many biases have been reported which proved to be of negligible importance.⁽¹⁴⁾

In our study it was found that demonstrations and OHP are effective methods of teaching which corresponds to the study conducted by Kaushik Bhowmick et al in which audio visual aids were proved equally effective in making topics interesting to the students. While chalk and board method was not much popular among the students participating in our study, which was contrary to study done by Kaushik et al. They found chalk and board method equally effective for better understanding of the topics among medical students. Audio visual aids are more popular due to elaboration of the topics by use of photos and animated slides, making topic more interesting.⁽¹³⁾

In the study conducted by Bhavsar et al,⁽¹⁵⁾ the use of computer assisted learning was more focused as a popular method among students and was effective if properly introduced and there were significant advantages evaluated by the method. So computer assisted learning can be better method for undergraduate

students in long term teaching. In study conducted by Garg A et al⁽¹⁶⁾ students preferred for more hours to be given for practical classes and clinical teachings. These results were corresponding to our study in which practicals, demonstration and tutorials were more popular methods among students and they preferred these methods to be more effective in increasing their understanding of the topics in medical education.⁽¹⁶⁾

Multiple choice questions and brief notes were preferred methods of evaluation which was similar to results obtained in study conducted by Shreemanta K Dash et al in which multiple choice questions were preferred method of evaluation due to post graduate entrance exams preparation done by MBBS students.⁽¹⁷⁾

CONCLUSION:

It was concluded from the study that demonstration and use of overhead projectors was most effective teaching aid. Practical and tutorials were also popular methods because these help students to understand clinical aspects of subjects and making implementation of these study topics better. Knowledge of teacher was of more value than personality and other aspects.

So these can help teachers for adopting better planning methods to uplift medical education and thereby producing good quality students. Training programs can be launched to fulfill the purpose. This study was successful in encouraging teachers about their methods of teaching and praising them for their efforts in making medical education well interesting among students and community.

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