

Student's opinion regarding teaching methods: A survey amongst MBBS and BDS students of a private Medical University in Karachi

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Abstract

A cross sectional study was conducted in a private medical university among undergraduate MBBS and BDS students, to ascertain their opinion regarding various teaching methods. Convenience sampling technique was utilized with data collection spanning over March to August 2015 on a sample of 398 students. A self-administered questionnaire was used for the purpose. Descriptive analysis was applied for numerical data while chi square was used for categorical data. P value under 0.05 was considered significant.

Our results showed that around 120 (30%) of the participants supported PBL as the most effective teaching method while 64(16%) considered clinical rotations, and 60(15%) voted for lectures.

According to undergraduate students Problem-based Learning is the most significant tool for learning. Integrated method of teaching was endorsed by both MBBS and BDS students.

Keywords: Teaching methods, Problem-based Learning, Clinical rotations, Lectures.

Introduction

Quality education is the base for any nation's development and when it comes to medical education, the importance increases many fold as precious lives depend on the quality of the doctors produced by a country. New unprecedented attention to critical thinking means that teachers and educationists must find new ways and strategies to inculcate critical thinking in students. As highlighted in "Tomorrow's doctors", a framework must be developed that ensures the quality of practitioners but evaluation on a regular basis is required. Goals are needed and should be achieved to ensure high standards of medical students.¹

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A study conducted on medical students revealed that 67% considered lectures as a useful mode of instruction.² Another comparative study between lecture based learning and problem based learning revealed that students preferred the latter.^{3,4} Another study showed that students preferred problem based learning due to a small class size.⁵ Lectures on the other hand still remain one of the most popular teaching methods though their effectiveness has long been debated.⁶ Another study reported use of models in subjects like Anatomy for more effective understanding.⁷ Yet studies have shown the two dimensional teaching method in the form of lectures, PowerPoint presentation or videos have been the easiest and most inexpensive but the adaption of modern technology like use of a third education software with dissection models has improved learning by students.⁷ It has been also felt that over the years, new electronic means or other ways like models must be found to further improve the standard of medical education beyond just descriptive based teaching.⁸

The quality of learning by students is also affected by their learning strategies which could be cognitive and self regulating strategies.⁹ The teacher's own oration and oral teaching skills also play a pivotal role in transferring their knowledge to the audience.¹⁰ Education is a process that should be continuously evaluated and improved upon in order to ensure an overall productive learning environment.¹¹ The aim of this study was to ascertain the viewpoints of students about the various teaching methods employed during the course of their medical career.

Methods and Results

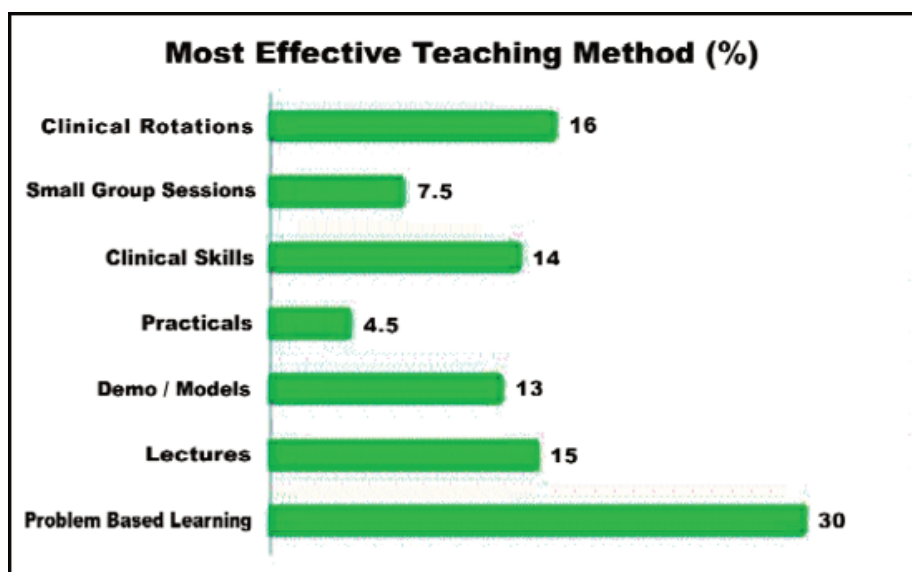
A cross sectional survey was conducted from March to August 2015 among students from all the years of the MBBS and BDS programmes of a private medical university. A sample of 398 was collected from all years of MBBS and BDS using convenience sampling technique. All students who were absent or chose not to participate were excluded from the study. After taking informed consent, data was collected using a self administered

Table-1: Opinion of students regarding Practicals.

	MBBS (n=307)		BDS (n=91)		P Value
	n	%	n	%	
Resources provided at university are adequate	105	34.2	46	50.5	0.015
Your attention is achieved during a practical class	102	33.2	39	42.8	0.416
Enhances clinical knowledge	99	32.2	45	49.4	0.071
Motivates you to study	78	25.4	36	39.5	0.044
Practical are very repetitive	107	34.8	41	39.5	0.718

Table-2: Opinion of students regarding Self Study.

	MBBS (n=307)		BDS (n=91)		P Value
	n	%	n	%	
Able to find a quiet place to study	84	27.3	28	30.7	0.176
Use your lunch break as self study	218	71	60	66	0.783
More self study should be scheduled/ week	82	26.7	42	46.1	0.009
Self study should be omitted from timetable	96	31.2	34	37.3	0.827
More effective study is done during self study	58	18.8	31	34	0.082

**Figure-1:** Students perception of the most effective teaching method (n=398).

questionnaire. Questionnaire focused on problem based learning (PBL), lectures, models, demonstrations, clinical rotation classes, case-based studies, self study, practicals and small group sessions (SGS). Data was analyzed using SPSS version 20. Descriptive analysis was done through frequencies and percentages while chi square was used to form associations between different categorical values. P value less than 0.05 was taken as significant and bound of error was taken at 5%. The study was approved by the University Ethical Review Board.

Of the 398 students included there were 307 from MBBS and 91 from BDS. When inquired about Problem Based Learning in detail 274(89.2%) from MBBS and 67 (73.6%) from BDS agreed that it enhanced clinical knowledge (p value 0.037). Of the MBBS students, 266 (86.6%) and 61 (67%) from BDS group opined that the session allotted for PBL are adequate (p=0.002). When asked if PBL serves as a motivating factor for studying, 229(74.5%) in MBBS and 60(65.9%) from BDS agreed to it. As compared to BDS 49 (53.8%), of BDS group and 243 (79.1%) of MBBS thought that cases of PBL given on a weekly basis are adequate. Almost similar proportion of students from MBBS and BDS course, 183 (59.6%) and 58 (63.7%) respectively stated that PBL marks should be added to the semester marks. Very few students in MBBS 110 (35.8%) and some more from BDS 51 (56%) thought that multimedia should be utilized for PBLs.

Most students were proponents of lectures as most MBBS students 197 (64.1%) and BDS students 64(70.3%) perceived that it provides a good summary of topics. Two teaching systems were considered, the current integrated one and the previous classical one. When assessed, the

majority from both courses 307(77%) were in favour of an integrated system of teaching compared to only 24(6%) for the classical teaching system, while 68 (17%) felt that the type of teaching system does not matter.

As the study was based on a convenience non-probability sampling with the entire class from every year being used, the results cannot be generalised.

Discussion

The results show that a majority of the students (MBBS: 89.2%, BDS: 73.6%) consider PBLs to be an effective method to enhance clinical knowledge. This correlates with other research studies.^{3,4,12,13} It is worthwhile to note that a larger percentage of MBBS students consider PBL as a good motivation to study compared to BDS students. This could however be due to the comparatively small number of dentistry students. Regardless of these differences, PBLs was selected as the most effective teaching method by more students (30% of MBBS and BDS combined) compared to lectures (15%), as seen in Medical schools of Saudi Arabia and the Caribbean.^{4,12}

Lectures on the whole are rather time consuming, however 64.1% of MBBS and 70.3% of BDS students agree that they provide a good summary of the topic.² BDS students on the whole rated the lectures higher compared to their MBBS counter parts. Compared to another study done at the Dow University of Health Sciences (a public sector medical university) Powerpoint Presentations (lectures) were preferred by 33% whereas 26% preferred PBLs.¹⁴ In contrast to another study in India, didactic lectures were found to be the least preferred method.¹²

BDS students valued practical classes higher than MBBS students; however, only 59.4% BDS and 32.2% MBBS students said practical sessions enhanced clinical knowledge which was in contrast to other studies from Spain and India.^{13,15} In a study conducted in Saudi Arabia students were introduced to integrated laboratory classes. These classes focused on knowledge retention and application of clinical knowledge, and as a result performance of students improved. These classes were also rated higher by the students.¹⁶

Regarding independent study techniques (Self Study), a very small percentage of students felt they used it for effective study (18.8% MBBS, 34% BDS), this is low compared to another study in which male students found it to be the second most effective teaching method.¹³ Almost twice as many BDS students felt that more Self Study should be scheduled compared to MBBS (46.1% to 26.7%). The limitations of Self Study could be due to a

variety of reasons ranging from availability of a place to study, to the lack of initiative on the part of the student to make full use of it. In our study the BDS students felt they were more resourceful with regards to Self-Study with 34% thinking they used it as an effective study tool, compared to 18.8% of their medical counterparts. Interestingly, a significant number of both BDS and MBBS students answered that they used it as a lunch break (66% and 71% respectively) and similar numbers voted that they could find a quiet place to study during that time (30.7% and 27.3% of BDS and MBBS respectively).

Students in their third year (53.5%) were asked whether clinical knowledge was enhanced during their third year clinical rotation. Out of these 40.2% were in agreement; this was similar to studies conducted in the USA.¹⁷ It is open to debate that whether students should be taught clinical skills during their pre-clinical years. A study done in an American medical school introduced a pre-clinical course to mostly students in the first two years of study and was found to benefit the students on a large scale.¹⁸ Another aspect of the research that was evaluated, was student's opinion towards the type of teaching system. Our results augment previous studies as an overwhelming number of students preferred the integrated method (77%) compared to the classical method as demonstrated by earlier studies.⁹

Our questionnaire covered all aspects of the teaching system however we got poor response from final year students. Further this was a cross sectional survey future studies should focus on interventions. The medical field overall is ever changing, and such changes are reflected in newer innovative teaching methods.^{16,19} However, our study was quite comprehensive covering all different techniques of teaching employed in clinical and preclinical years of medical curriculum. What remains open for future researches is identifying the reasons why students prefer PBLs compared to similar teaching methods as has been suggested by previous studies.⁵ Future research can be done upon identifying if students feel the need for changes in the curriculum using the new and old teaching methods such as dissection classes.²⁰ Also future studies should be conducted in public and private medical universities.

Conclusion

Problem based learning was considered as the most effective tool for imparting knowledge as expressed by undergraduate medical and BDS students. Integrated method of teaching was favored by both MBBS and BDS students.

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Conflict of Interest: None.

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