

Teaching and learning perception of anatomy by first MBBS (2014-15) batch students

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Abstract

Introduction: Anatomy forms the backbone of medical education for first year MBBS with maximum number of teaching hours allotted to this subject. Invariably Anatomy is best taught in dissection halls with the specimens but due to reduction in course duration of first MBBS to 1 year and limited number of cadavers available in present time's demands more innovative techniques to be utilized for teaching Anatomy. The lecture classes as perceived by most of students as boring does not under rule its importance. The adjustments and modifications made by the teachers of Anatomy to impart overall appropriate knowledge of the subject to the first MBBS student as per their requirements needs to be evaluated and assessed at regular intervals for best results.

Objectives: To evaluate the teaching and learning methodologies practiced in Department of Anatomy by feedback analysis from 1st MBBS students.

Material and Method: 147 first MBBS students were included in the study. Informed consent was taken and they were asked to answer a semi structured questionnaire previously prepared and verified. The questionnaires were collected back from them after 30 minutes. The response was analyzed thoroughly over a period of 6 months and represented in percentages.

Results: The responses of students were represented in graphs with percentages. Almost 42% of students preferred PowerPoint teaching and another 39% of students preferred both PowerPoint and chalk and board teaching of theory lectures whereas old conventional method of teaching with chalk and board was preferred by only 4% of students. Almost 64% of students preferred receiving handout of lectures before the class and ultra-small group teaching and demonstrations was favoured strongly for osteology rather than lectures for osteology. For effective learning methodologies almost 54% students preferred student's subject seminars at end of each region and 71% of students preferred judicious use of audiovisual aids in form of animation, dissection videos, and museum models for demonstration other than regular dissection hall teaching. Students felt clinical anatomy was not sufficiently taught and more emphasis should be given to applied aspects.

Conclusion: This study was an extremely useful tool for evaluating student's preferences for teaching and learning methodologies and thus a self-evaluation for the teachers and thus corrective measures can be taken in future batches.

Keywords: Questionnaire, Teaching, Learning, Perception, Students, Feedback.

Introduction

Medical education is a powerful tool for the future of the medical professionals. There is a change in medical education and the contemporary thinking in medical education lays emphasis on "teaching learning" rather than teaching alone.⁽¹⁾ Newer interactive teaching methodologies have paved into their way into medical teaching. The objective of teaching is now not merely giving information but to include more interactive sessions for early development of skill and attitudes in medical students.⁽²⁾ So there is a need in this hour to include more interactive and effective teaching modalities into the medical curriculum for the future doctors to meet the challenges ahead. There is a need to provide more reliable and competent doctors and it can only be possible by increasing the quality of medical education rather than quantity.⁽³⁾

Anatomy is the subject which gets maximum teaching hours in first MBBS thus holds a very important place in the medical curriculum. Invariably students in many previous studies have shown the practical teaching of Anatomy is best at dissection hall.⁽¹⁵⁾ Most of the students face difficulty in listening and understanding theory lectures and feel the lectures on gross Anatomy

extremely boring. This study was attempted to direct our attention on how to make the didactic lectures on Anatomy more interesting and productive and thus introducing newer interactive learning methodologies of the subject for better performance.

The best way to assess the requirements of students and their view point is by receiving students feedback at regular intervals these not only help us to introduce better techniques but also help the teachers to cater to the need of students effectively.⁽⁴⁻⁶⁾ Questionnaire forms a basis by which an objective evaluation of our teaching methodologies can be obtained. It is an extremely easy tool to assess the effectiveness of the newer techniques which are implemented and whether it is serving the purpose or not.⁽⁷⁾

Questionnaire has to standardized validated and reviewed multiple times before subjecting it on the subjects from whom the views are intended.⁽⁸⁾

Evaluating the teacher's performance have started all over the world to improve the standards of medical education. The students survey through verbal, written feedback on curriculum, teaching methodologies, time allotted have revolutionised the present system and thinking.⁽⁹⁾

Thus by implementing a time to time standard evaluation practices of the requirements of medical students the quality and accountability of medical education can improve remarkably.⁽¹⁰⁾

This present study depicts the first MBBS student's point of view regarding the changing trends of medical teaching practices of Anatomy and thus makes us to think ahead of revolutionising the curriculum and implementing newer methods and technologies in teaching medical Anatomy to MBBS students.

Aims and Objectives

1. To evaluate the feedback on teaching and learning methods implemented on first MBBS students in the Department of Anatomy of Saveetha Medical College.
2. To detect the areas of lacunae in our teaching and learning methods and thus bring about corrective methods.

Material and Method

147 first MBBS students of 2014-15 batch were subjected to this observational study. The college medical education unit was informed about the study pattern and design and due permission was taken. Structured questions were obtained from previous studies^(11,16) which were done on MBBS students but changes were done to meet the purpose of the subject Anatomy and our University syllabus and curriculum (Table 1). The questions were reviewed repeatedly and modified to cater the needs of our students to get the best possible results.

Student's written consent was obtained and they were advised not to write their names and registration numbers on the questionnaire sheet. Students were briefed about the purpose of study and they were requested to work out the questionnaire freely and fearlessly. They were taken into confidence that the study was only for research purpose and would maintain utmost confidentiality. A total of 10 questions were put forward to them with direct answer option according to LIKART Scoring system.⁽¹²⁾ Except the 3rd question all questions needed the students to select the option of scoring according to Likart scale. They were given half an hour time to go through the questionnaire thoroughly and then they were asked to answer the questions. Any doubts regarding the questions by students were cleared by the faculty. The questionnaire sheets were collected back from all of them after 30 minutes.

The answers given by the students were analysed over a period of 6 months and percentages were obtained which was further statistically analysed and represented in charts. In random about 25 students who were previously subjected to the questionnaire were picked up and asked about their preferences and reasons for it. This helped in comprehensive analysis of the results.

Observation and Results

This present study was conducted on 147 students of 2014-15 batch of MBBS s after they completed their university exams at the end of first year and they had started their clinical postings.

The question numbers 1 & 2 were regarding the distribution of handouts at prior to scheduled lecture and whether this will lead to more number of absenteeism. About 64% of students strongly agreed that handouts should be given prior to lectures on the other hand about 32% students strongly agreed that this can lead to more absenteeism (Fig. 1 & 2).

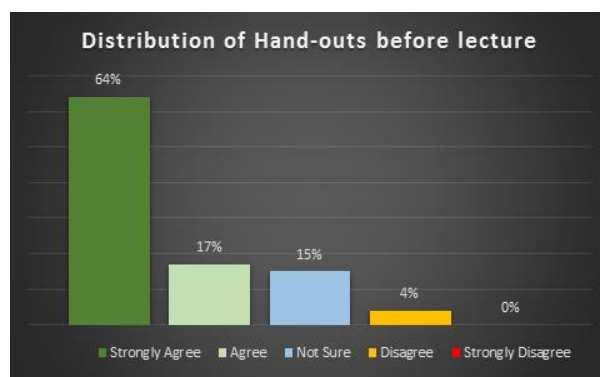


Fig. 1

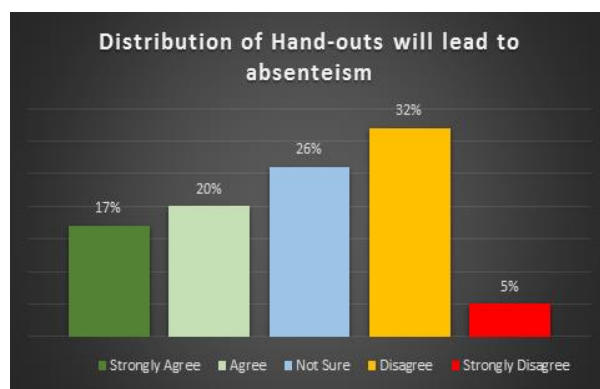


Fig. 2

In the questions based on teaching methodologies students highly preferred both PowerPoint and PowerPoint supplemented with chalk and board teaching almost 42% and 39% respectively. Only 4 % preferred chalk and board teaching solely as they felt they were unable to see and was getting distracted during lectures (Fig. 3). They also preferred gross Anatomy to be taught hand in hand with the systems in physiology during the same time frame and thus preferred horizontal integration of both these subjects (Fig. 5).

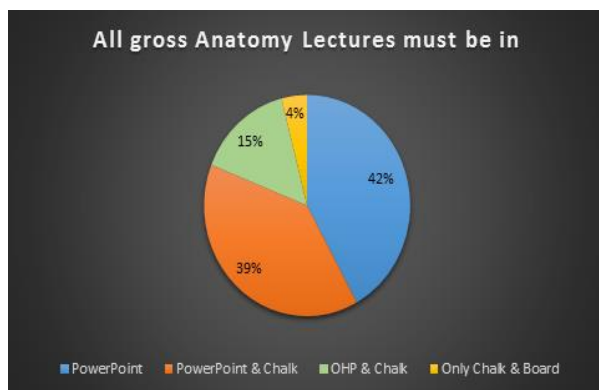


Fig. 3

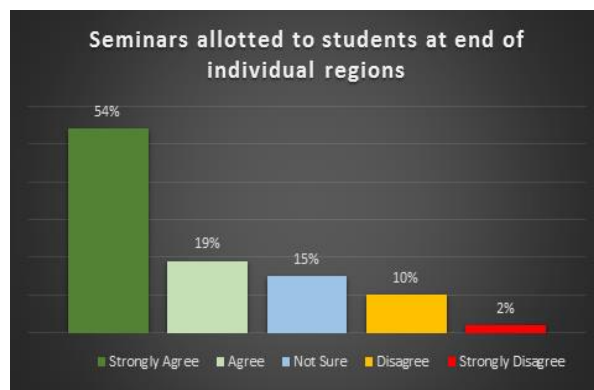


Fig. 6

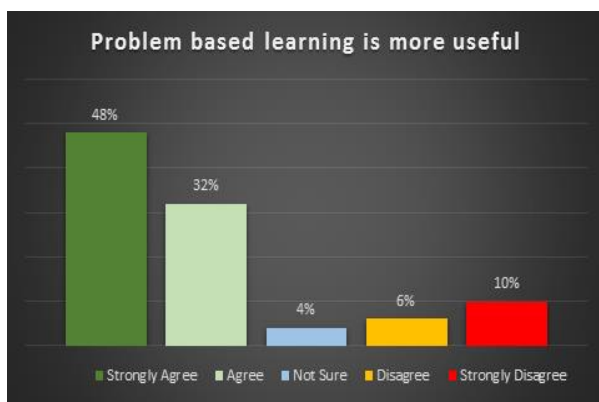


Fig. 4

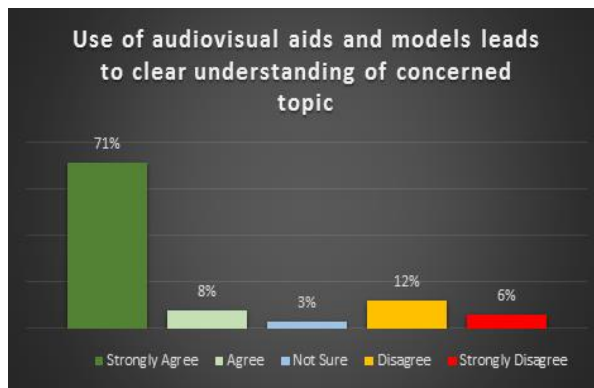


Fig. 7

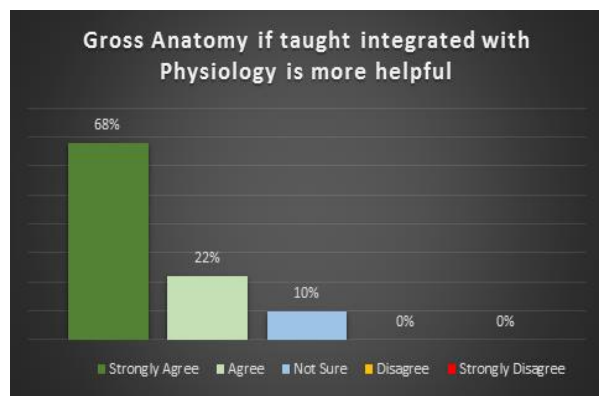


Fig. 5

In the questions based on learning methodologies other than the regular learning methods which were judicious use of dissected specimens in dissection hall, they preferred strongly subject seminars by randomly allocated students and at the end of each regions (Fig. 6). They also strongly agreed on problem based learning as it helped them to recollect the subject easier Fig 4. Students strongly agreed the use of audio visual aids in form of dissection videos, museum models, animation videos etc. as they were highly useful for clear understanding and learning of the portions concerned (Fig. 7).

As the batch of MBBS students in this study was facing difficulties in learning osteology an innovative technique was implemented for them by teaching osteology in short groups of 10 students in each group. Hands on training with bones for a particular class were given to them by demonstrators rather than didactic lectures on osteology. Students were briefed about the particular bone or bones for a specific class for 10 minutes. Then the students were asked to self-study about the bone or bones for 30 minutes at end of which demonstrators went to individual groups discussed and asked questions to students about the bones concerned. This method was highly appreciated by students and 76% of students strongly agreed on this methodology of training osteology rather than lectures (Fig. 8).

In this study students felt clinical anatomy teaching was not sufficient and more importance should be given to applied aspect of gross anatomy and embryology (Fig. 9).

48% of students strongly agreed that Anatomy is very important before going to clinics (Fig. 10).

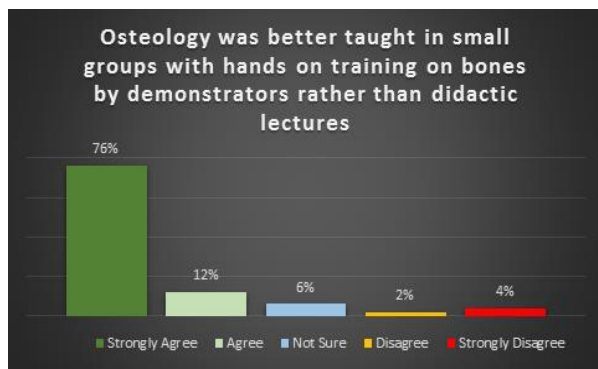


Fig. 8

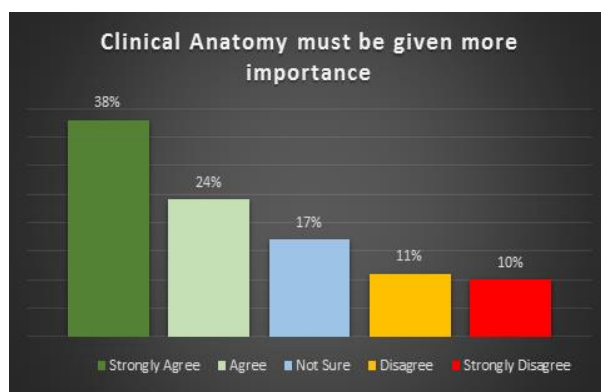


Fig. 9

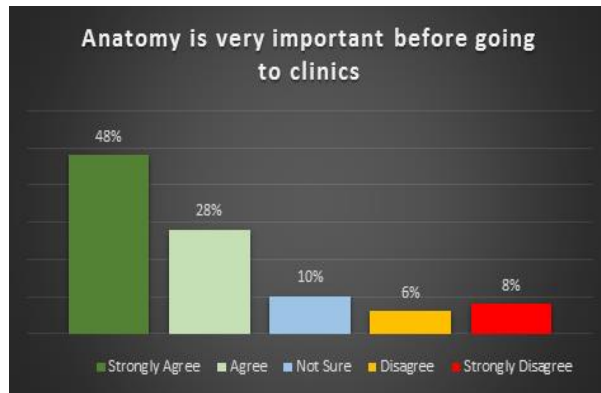


Fig. 10

Discussion

The questionnaire in this study is analysed based on mainly 2 criteria's i.e. teaching methodologies and secondly learning methodologies preferred by the students.

In the study conducted by S K Nagar 54.6% of students liked to get a handout of material before the lecture as compared to 64 % students in the present study who strongly agreed that handout should be given prior to lectures.⁽¹⁵⁾

The teaching technique followed in this present study in osteology in form of ultra-short groups deserves a special mention since it was not attempted before in previous studies. The hands on training of students on individual bones facilitated by demonstrators were

highly favoured by students. Similarly in the study conducted by R S Khane et al. also showed that students preferred small group discussions.⁽¹⁾

In a study conducted by Kharkar A R et al combined method of teaching which includes old traditional method of teaching and modern computer assisted learning methods was preferred by MBBS students which was seen in the present study as students preferred a combination of power point teaching along with chalk and board for lectures.⁽¹³⁾ Classic chalk and board teaching in lectures was preferred by almost 34 % of students and combined method of teaching i.e. chalk and board and OHP and or LCD was preferred by 56% of students in the study conducted by Dr. Yadav Abhijeet. In this same study student did not prefer students seminar and tutorials as a part of teaching which was strongly preferred in our current study.⁽¹⁶⁾

In the study by Reenu Kumari et al. 70% of students preferred LCD with chalk and board while only 8 % preferred traditional chalk and board methodology. This is very similar to the finding in the present study where only 4 % of students preferred traditional chalk and board teaching and about 39 % of students preferred both LCD and chalk and board.

In the same study by Reenu Kumari et al about 56% preferred use of 3D models, videos and other audio-visual aids and 22% preferred problem based learning and only 3 % preferred students seminar. In present study 71 % of students preferred audio visual aids and 48 % preferred problem based learning and students strongly agreed that students seminar was extremely useful for learning.⁽¹⁴⁾

Conclusion

Anatomy forms the backbone of medical education for MBBS students. This study helps us to assess the performance of teachers and the effectiveness of the modern method of teaching. Such studies are also helpful for detecting the areas of our deficiencies and strength, thus bringing about corrective measures in future. This also serves to cater the needs of the ever changing medical curriculum by updating and innovating the teaching and learning methodologies.

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