

Perception of Students for Teaching, Learning and Assessment Technique of Gross Anatomy

Savita Kadam¹, Minal Kadam², Smita Shinde³, Gautum Shroff⁴

Abstract

Objectives: An opinion regarding different teaching, learning and assessment techniques of gross anatomy taken from 147 first MBBS students at MGM Medical College and Hospital, Aurangabad, Maharashtra with the help of specially designed questionnaire. **Materials and Methods:** Cross sectional study was conducted in the Department of Anatomy MGM Medical College, Aurangabad, Maharashtra with the help of predesigned questionnaire to the interest of 1st MBBS students batch 2018-19 in different teaching, learning and assessment techniques of gross anatomy. **Results:** Out of total, 50.34% of them were male and all were between the age group of 18-22 years. Most of the students were from State Board (63.95%). 37.50% students preferred small group teaching, 54.91% preferred dissection hall teaching for practical. Textbook is preferred as a best source of study material by majority of students (45%). Most of the students consider LCD as the best teaching methodology. 61.11% students believe that multimedia teaching relies on scientific contents is not boring and does not cause lack of attention. According to majority of students (61.64%), multimedia teaching is affected by teaching method, skill of faculty and ability to imagine relationship. 51.68% students consider part completion test as the best assessment technique to measure knowledge in theory. **Conclusion:** Anatomy forms backbone of medical education for 1st MBBS students. This study assesses effectiveness of modern method versus old chalkboard method of teaching gross anatomy. Such studies give us an idea of our area of deficiencies and strengths of teaching methods which help in bringing corrective measures in future. Students welcomed PBL, horizontal and vertical integration and e-learning. Students preferred LCD (Lecture cum demonstration) over lecture with chalk and board. Surprisingly students preferred text book over teacher's notes. Students are interested in multimedia teaching. Students favoured part completion test over weekly tests.

Keywords: Teaching method; Gross anatomy; Students perception; Learning aids; Assessment techniques.

How to cite this article:

Savita Kadam, Minal Kadam, Smita Shinde, *et al.* Perception of Students for Teaching, Learning and Assessment Technique of Gross Anatomy. Indian J Anat. 2019;8(4):271-274.

Introduction

The medical education has been undergoing dramatic changes worldwide. The medical and health care in India are facing serious challenges in content and competencies. Newer interactive teaching methodologies have paved their way into medical teaching. Nowadays, objective of teaching

is not only to give information to students but also to make interactive sessions for early development of skills in medical students. There is need in this hour to include more interactive and effective teaching modalities in medical curriculum to meet the challenges ahead for future doctors. We should improve the quality of the medical education rather than quantity. Anatomy is supposed to be a difficult preclinical subject hence it has got maximum teaching hours in 1st MBBS. Teaching and learning anatomy in preclinical discipline is one of the most important challenges for both teachers and students.¹ Traditionally teaching the students of gross anatomy has been done through cadaver dissections and didactic lectures.² Many previous studies have shown that students prefer practical teaching of anatomy at dissection hall. Anatomy is an essential foundation for clinical

Author's Affiliation: ¹Associate Professor, ³Assistant Professor, ⁴Professor and Head, Department of Anatomy, ²Assistant Professor, Obstetrics and Gynaecology, MGM Medical College, Aurangabad, Maharashtra 431003, India.

Corresponding Author: Minal Kadam, Assistant Professor, Department of Obstetrics and Gynaecology, MGM Medical College, Aurangabad, Maharashtra 431003, India.

E-mail: minalkadamjadhav@gmail.com

Received 21.08.2019 | **Accepted** 04.10.2019

sciences. Main purpose of medical education is to create medical students with knowledge, skill and attitudes expected from a basic doctor—either in private practice or in government service. Students acquire fundamental skills and learning techniques that will serve them during their lifelong medical training.³ “The use of cadavers has been the chief pillar for learning anatomy.”⁴ Recent technologies like three-dimensional audio visuals, digital radiological imaging, and web-based study materials, use of models; plasticines; etc. have been introduced to make Anatomy more interesting and easier among the students as well as teachers.² In the modern concept of medical education, the role of the faculty member is to facilitate the learning process. It is important to use multiple techniques in order to reach as many different types of learners as possible.⁵ Student feedback is useful basis for modifying and improving medical education. Keeping this idea in mind recent study was conducted in MGM medical college Aurangabad to elicit 1st year student’s perception regarding teaching aids, learning and assessment techniques appropriate to gross anatomy

Aims and Objectives

1. To evaluate the feedback on teaching and

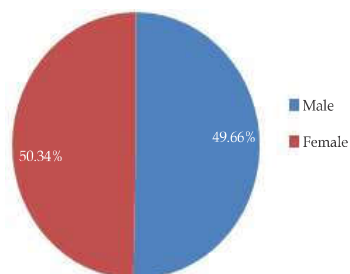


Fig. 1:

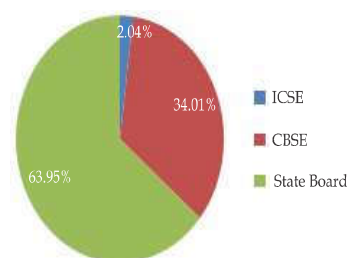


Fig. 2:

learning methods and assessment techniques implemented on 1st year MBBS students in the department of anatomy at MGM Medical College, Aurangabad, Maharashtra

2. To detect lacunae in our teaching and assessment technique and improve it
3. To identify the most favorite teaching and learning method of students

Materials and Methods

Study Type and Design

Cross sectional study was done on 147 First year 2nd semester students after completion of entire syllabus of gross Anatomy in the department of anatomy at MGM Medical College Aurangabad by using specially designed questionnaire related to teaching and learning methods and assessment techniques of gross anatomy. The students were briefed about the questionnaire and asked to respond freely and fearlessly. Anonymity and confidentiality was ensured to all students. The purpose of study was explained to students. They were asked not to put their names on questionnaire. They were also asked to go through the questionnaire thoroughly and to tick whichever option they choose. They were

Table 1: Best Teaching Method for Theory Class

Best teaching method for theory class	Number in favor	Percentage
Lecture	42	25.00
PBL	38	22.62
Small group	63	37.50
Interactive media	25	14.88

37.50% students preferred small group teaching (Table 1).

Table 2: Preferred Teaching for Practical

Preferred teaching for practical	Number in favor	Percentage
Dissection	95	54.91
Processection	1	0.58
Educational videos	39	22.54
Anatomical models	38	21.97

54.91% preferred dissection hall teaching for practical (Table 2).

Table 3: Best Source of Study Material

Best source of study material	Number in favor	Percentage
Classroom study	64	35.56
Text book	81	45.00
Reference books	12	6.67
E-resources	23	12.78

Text Book is preferred as a best source of study material by majority of students (45%) (Table 3).

Table 4: Best Teaching Methodology

Best teaching methodology	Number in favor	Percentage
Dissection hall teaching and chalk board	55	31.43
Chalkboard teaching and models	36	20.57
Only multimedia	8	4.57
LCD	76	43.43

Most of the students consider LCD as the best teaching methodology (Table 4).

Table 5: Multimedia's Teaching

Multimedia's teaching	Number in favor	Percentage
Relies on scientific contents	21	14.58
Does not cause lack of attention	19	13.19
Not Boring	16	11.11
All of the above	88	61.11

61.11% students believe that multimedia teaching relies on scientific contents, is not boring and does not cause lack of attention (Table 5).

Table 6: Factors Affecting Multimedia Teaching

Factors affecting multimedia teaching	Number in favor	Percentage
Teaching methods	20	13.70
Skill of faculty	17	11.64
Ability to imagine relationship	19	13.01
All of the above	90	61.64

According to majority of students (61.64%), multimedia teaching is affected by teaching method, skill of faculty and ability to imagine relationship (Table 6).

Table 7: Best Assessment Technique

Best assessment technique	Number in favor	Percentage
A weekly test	45	30.20
Part completion test	77	51.68
Six monthly test	14	9.40
A yearly test	13	8.72

51.68% students consider part completion test as the best assessment technique to measure knowledge in theory (Table 7).

also informed that they can choose more than one option. The questionnaires were collected back. The answers given by student were analyzed.

Results

Cross-sectional study was undertaken among the 147 First year MBBS students of MGM Medical College Aurangabad Maharashtra in the department of Anatomy after completion of entire syllabus of gross anatomy to access their perception regarding teaching, learning and method of assessment with

the help of prestructured questionnaire. Out of total, 50.34% of them were male and all were between the age group of 18–22 years. Most of the students were from State Board (63.95%) (Figs. 1 and 2).

Discussion

Medical education is a continuous process, teaching from undergraduate study of Anatomy to a call with a specialist when facing a difficult case as a practitioner. Learning in medicine is a lifelong process and needs deliberate practice

of desired educational outcomes.⁶ Study carried out by J. Thirunavukkarasu, shows that to gain knowledge, interactive lectures; i.e., tutorial and group discussions were more useful.⁷ To achieve this goal of undergraduate education program for medical education, teaching and learning methods should be learner oriented with focus on application of knowledge rather than mere acquisition of knowledge.⁸ In our study 50.34% were male and 49.66% were female. Mean age of students of present study is about 19.20 ± 0.64 . As students entering medical colleges are from different boards their ideologies are different due to their varying nurturing. In our study 63.95% students are from state board, 34.01% from CBSE and only 2.04% from ICSE. In our study 37.50% students preferred small group teaching method which is similar to study done by S.K Nagar *et al.* where 79.71% students preferred small group teaching as an important guide for learning gross anatomy. In our study 54.91% students felt that dissection hall teaching is best method for practical followed by educational videos (22.54%), Anatomical models (21.97%) and Procection (0.58%). In present study 45% students preferred text book as best source of study followed by teacher's notes (35.56%), e-resources (12.78%) and reference books (6.67%), which is in contrast with the study done by Rashmi Jaiswal and *et al.* where 48.83% students preferred teacher's notes followed by textbooks (36.43%). In our study best teaching methodology is LCD (Lecture cum demonstration); i.e., 43.43% followed by dissection hall teaching and chalk board (31.43%), chalk board teaching and models (20.27%) and only multimedia (4.57%), which is also in contradiction with study done by Rashmi Jaiswal and *et al.* where 52.71% liked dissection hall and chalkboard. In the study of Rashmi Jaiswal and *et al.* 48.06% students agreed that multimedia teaching methods depends on skill of teacher and ability to imagine relationship of various organs (11.50%) whereas in our study according to 61.64% students multimedia teaching method is multifactorial and depends on many factors such as skill of teacher, ability to imagine relationship of various organs and teaching methods such as videos, PPTs; etc. In the study of S. K. Nagar, majority of students were in favor of weekly test (70.80%) and part completion examination (63.50%) as a best technique of assessment to judge the theory knowledge of gross anatomy, whereas in our study 51.68% students favor part completion test and 30.20% student favor weekly test. In our study, 61.11% students want multimedia teaching as it is not boring, it does not cause lack of attention and relies on scientific contents.

Conclusion

Anatomy forms backbone of medical education for 1st MBBS students. This study assesses effectiveness of modern method versus old chalkboard method of teaching gross anatomy. Such studies give us an idea of our area of deficiencies and strengths of teaching methods which help in bringing corrective measures in future. Students welcomed PBL, horizontal and vertical integration and e-learning. Students preferred LCD (Lecture cum demonstration) over lecture with chalk and board. Surprisingly students preferred text book over teacher's notes. Students are interested in multimedia teaching. Students favoured part completion test over weekly tests.

References

1. Bandyopadhyay R and Biswas R. Students' Perception and Attitude on Methods of Anatomy Teaching in a Medical College of West Bengal, India. *J Clin Diagn Res.* 2017 Sep;11(9):AC10-AC14.
2. Benly P. Teaching Methodologies on Anatomy- A Review *J. Pharm. Sci. & Res.* 2014;6(6):2014, 242-43.
3. Nagar SK, Malukar O, Kubavat D, *et al.* Students perception on anatomy teaching methodologies. *National Journal of Medical Research.* 2012;2(1):111-112.
4. Aziz MA, Mckenzie JC, Wilson JS, *et al.* The human cadaver in the age of biomedical informatics. *Anat Rec.* 2002;269:20-32.
5. Jaiswal R, Sathe S, Gajbhiye V, *et al.* Students Perception on Methods of Anatomy Teaching and Assessment. *International Journal of Anatomy and Research.* *Int J Anat Res.* 2015;3(2):1103-08.
6. Kharkar AR, Salve SB, Dase RK. *et al.* A Comparative Study of Different Teaching, Learning Methods Amongst the MBBS Students. *International Journal of Current Medical And Applied Sciences.* 2013;1(3):05-08
7. J. Thirunavukkarasu *et al.* A Study on Effectiveness of Different Teaching Methodology in Pharmacology for under graduate students. *Asian J. Exp. Biol. Sci.,* 2011; 2(3):487-92.
8. Medical Council of India Regulations on Graduate Medical Education, 2012- www.mciindia.org