



**ORIGINAL RESEARCH PAPER**

**Anatomy**

**STUDENTS PERCEPTION ON METHODS OF TEACHING ANATOMY –A QUESTIONNAIR STUDY**

**KEY WORDS:** Anatomy, Questionnaire, Teaching, Learning, Perception, Medical Student, Feedback.

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**ABSTRACT**

**Objective:** An opinion regarding curriculum, teaching methodology & assessment techniques in anatomy was taken from the first year MBBS students at J.L.N Medical College Ajmer with specially designed questionnaire.  
**Materials and Method:** Input from the students was collected (250 MBBS students of 2020 batch) who have completed 9 months in this department. It was done by using a specially designed questionnaire comprising of points relating to the curriculum & teaching methodology used in the Department of Anatomy J.L.N. Medical College Ajmer for its effectiveness and capacity to meet specific objectives need.  
**Results:** Majority of the students feel the best method of learning is the chalkboard and dissection hall teaching. Students agreed that multimedia teaching methods are for better understanding and their favoured descriptive & short essay questions with MCQ as examination pattern. Use of visual aids is the best solutions for problems in histology and embryology.  
**Conclusion:** The study concluded that chalkboard teaching and dissection hall teaching would be the best approach for Anatomy teaching and learning and the best method of assessment is part ending tests.

**INTRODUCTION**

The first MBBS students as they walk into the medical colleges are exposed to a totally new environment of teaching and learning as it is a professional course. The subject of medical Anatomy which forms a major part of the first year curriculum has to be dealt with at this point of time when the students have to adjust to a completely new surrounding just out from school. At this point of time it calls for addressing certain important values and mannerisms in the students and confidentiality in dealing with cadavers. It is not only the sole responsibility of Anatomist to impart skill and knowledge to the students but also calls for the development of right attitude in dealing with their problems in a professional way. The role of skilled Anatomy demonstrator has to stand the challenges of the ever changing medical curriculum to make the students not only compatible to face the clinics but also to develop right mannerisms in them.

Anatomy is one of the most essential and basic subjects in the field of medical education. Many of the other subjects are primarily based on the basis provided by the anatomy. Teaching Anatomy can be slightly different from various other human sciences subjects. It needs a particular method and appropriate tools such as atlases, cadavers, 3D animation models and various other e-learning tools . While talking about different teaching methods of anatomy, the traditional teaching method is based on giving lectures in front of a dense populated class, in this type of teaching method the student's needs to memorize a lot of new information and concepts without actually being able to relate and comprehend the given information . As a result, most of this concepts delivered in the lecture are either forgotten easily or the student may not have any interest in learning them which may result in poor understanding in the concepts of anatomy.

Medical students need critical understanding of anatomy, modification of its teaching methods makes it interesting for their to learn anatomy and on the other hand help them to improve their professional skills. The changes in teaching methodology and using advanced and modern methods of teaching may be effective for teaching and learning anatomy. It may also help improving students' attitudes towards the clinical importance and learning of anatomy .

With the changing world, the methods of teaching anatomy have been dramatically changed in 10 years. Gross anatomy

teaching methodology and resources over these past years have changed and the advanced learning methods now used include cadaveric dissection, plastinated specimens, anatomical models, whereas surface anatomy is learned with painting the body for several anatomical land markings, reciprocal teaching methods and several other e-learning tools and platforms such as interactive multimedia and simulations .

Anatomy as a subject in first MBBS has vast portions and many subdivisions which needs the student to know in detail about Gross Anatomy, Histology, Osteology, and Embryology to certain extent surface and Radiological Anatomy also. Among these Gross Anatomy and Histology deserve special mention. There are innumerable problems which are faced by the new comers in these subdivisions of Anatomy as they walk into the medical college.

**Aims And Objectives**

The Batch of 2020 - 21, 1st MBBS students were subjected to teaching of the equal subdivisions of the entire Anatomy syllabus.

Develop a standard questionnaire- to acquire the feedback of students on their opinion for teaching in Medical Anatomy.

This study was undertaken to gauge the perception of first year medical students towards Newer Methods of Teaching .

To evaluate the feedback on teaching and learning methods implemented on first MBBS students in the Department of Anatomy of JLN Medical College Ajmer.

**Materials And Method**

In the present study, a questionnaire was prepared mentioning different methods of teaching every head of Anatomy. This was given to 250 students of first year MBBS 2020 batch in our medical college in the department of Anatomy after they have completed 9 months in this department. They were asked to answer the questionnaire. Study was carried out batch wise over the period of eight days. Survey was carried out on their preferences given to the method of teaching. After completion of the survey, observation and result were tabulated.

250 MBBS students of 2020-21 batch in JLN Medical College

Ajmer were exposed to regular teaching pattern in Anatomy i.e. didactic lecture classes for theory, demonstration of specimens, bones in dissection hall and demonstration of slides in histology laboratory. Lecture classes were conducted primarily in Gross Anatomy, Embryology and Histology, in large group with power point presentation. In dissection hall, groups of 50 students were allocated in each table and demonstration of specimens were carried out. The study was conducted by providing structured questionnaire to 250 students irrespective of their performances in Anatomy throughout the year .

**RESULT AND OBSERVATION**

An opinion was taken from the first year MBBS students at J.L.N. Medical College Ajmer regarding curriculum, teaching methodology & assessment techniques in anatomy with specially framed questionnaire.

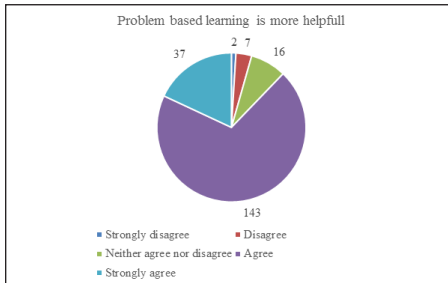
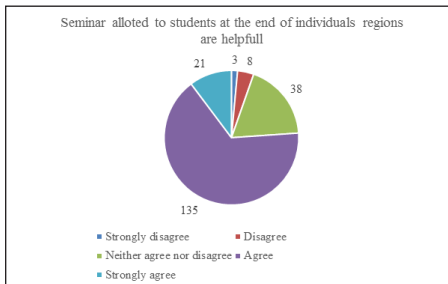
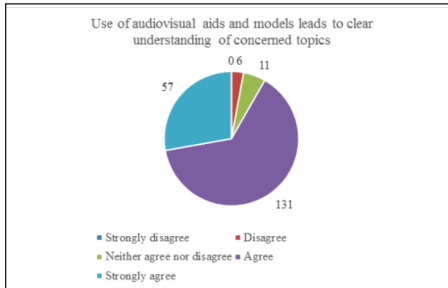
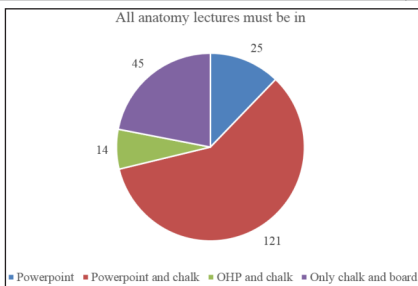
Gross anatomy if taught integrated with physiology is more helpfull		
1	Strongly disagree	2
2	Disagree	7
3	Neither agree nor disagree	21
4	Agree	141
5	Strongly agree	34
		205

Osteology was better taught in small groups with hands on training on bones by demonstrators rather then didatic lectures		
1	Strongly disagree	2
2	Disagree	8
3	Neither agree nor disagree	10
4	Agree	118
5	Strongly agree	67
		205

Clinical anatomy must be given more importance		
1	Strongly disagree	0
2	Disagree	2
3	Neither agree nor disagree	4
4	Agree	103
5	Strongly agree	96
		205

Anatomy is very important before going to clinics		
1	Strongly disagree	4
2	Disagree	3
3	Neither agree nor disagree	6
4	Agree	117
5	Strongly agree	75
		205

Which teaching method is preferred by students		
1	Black board and chalk	53
2	OHP	2
3	PPT	10
4	PPT and chalk	72
5	OHP and chalk	9
6	Interactive board	9
7	Interactive and chalk	44
		199



**DISCUSSION**

Extensive changes have taken place globally to improve the standards of education. The concept of medical education has changed as knowledge is no longer restricted to textbooks and lectures. Nowadays access to internet, electronic journals, educational videos and conferences are the newer concepts of teaching. To achieve goal, teaching and assessment methodologies have evolved. Assessment is an essential part of medical education. It gives evidences of how the students are learning and indicates teaching standards.

A medical curriculum develops in response to requirement of students, institution and communities. Student's feedback about the curriculum is a useful basis for modifying and improving medical education. Through feedback we can identify areas of strength and/or weakness of teaching methodology used so that steps can be taken to rectify deficiencies and to evolve the curriculum and achieve intended goal. The present study is important because majority were satisfied with various aspects of lectures being delivered, explanatory lectures, relevance of displayed material and languages used.

The present study reported that the best method for teaching class is the Chalk & Board method ,it was more interesting than Power Point Presentation. We also found the best method for theory classes was teaching in small groups with interactive media ,followed by lecture .

The best method of learning in the dissection hall was teaching on the cadaver. Cadaveric dissection is a favourable approach for achieving important learning objectives in the field of anatomy . In present study, students preferred teaching for practicals in form of dissection hall teaching on the cadavers .

The best form of assessment was Multiple choice questions with true/false type . In present study, most of students favoured descriptive & short essay questions with Multiple

choice questions as a pattern of examination and only few students agreed for multiple choice questions with true/false type questions.

### Summary And Conclusion

An opinion regarding curriculum, teaching methodology & assessment techniques in anatomy was taken from the first year MBBS students at J.L.N Medical College Ajmer with specially framed questionnaire. Majority of the students felt that the curriculum can be taught in present one year duration with present system of lecture, practical timetable. The best method of learning is the chalkboard teaching and dissection hall teaching. Students agreed for multimedia teaching methods as it relies on scientific content and able to understand better. Majority students opined that the best method of assessment to assess knowledge in theory is part ending tests. Majority students find best possible solutions for problems in histology and embryology was to use more visual aids including 3 D models. Students favoured teacher's notes as a best source of study material, followed by textbooks. Majority students felt that class attendance and internal assessment should both be taken in to consideration for allowing students to sit in university examination .This study shows that the planning about the curriculum, teaching methodology & assessment techniques can be modified considering the opinion of the students to bring out the best in them and how teaching can address their contemporary learning needs. As courses become shorter and curriculum more crowded, the resources of teaching methods must maximize the effectiveness of Anatomy learning and most importantly to recall and apply anatomy knowledge in medical practice.

As we agree with the concept that “physicians with a thorough knowledge of anatomy limit the use of expensive technique of diagnosis” and improved education of doctors in basic of the anatomy could be the most effective approach to improved diagnosis, rather than use of new diagnostic methods. In the end, the two approaches cadavers and computers (used as symbols of practical and theoretical models) are best seen as complementary. We believe that computerization will begin to make enormous contributions to the learning of basic anatomy. Overall at this initial stage of medical profession computer assisted learning system offer flexibility, enabling students to choose the place, time, pace and process of learning, the use of computer rooms can also be useful in learning outside the classroom, such as the review of anatomical subject matter required by students in the later stages of the training in the health care area.

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