

A Study of Knowledge, Attitude and Practice of Teaching Methods amongst First Year Medical Students in Anatomy in Government Medical Colleges of Gujarat

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Abstract: Introduction: Admission to a particular institute cannot be considered as a measure of merit. In spite of hair split merits, in later stages of career, performances differ greatly from one student to another in same institution and the results of final exams differ from institution to institution. Apart from individual capacities to grasp and retain subject, something in teaching methods could be responsible for such diversity. Method: In view of above cited situation and to know the performance and evaluate the possible factors this modest study was formulated. A questionnaire was distributed amongst all willing students of all the Government medical colleges. Researchers explained about the need of anonymity in study. It was emphasized that they be honest and non-partial in answering all the questions. Discussion: This study brings out some salient features of current trends in teaching anatomy in government medical colleges of Gujarat. Conclusion: Planning of teaching methods should consider the reasonable and justifiable opinions of students. [Hirendra S NJIRM 2017; 8(4):99-102]

Key Words: methods of teaching anatomy, Govt. medical colleges, Students' opinion.

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Introduction: In Gujarat admissions in professional courses were controlled and governed by Central Admission Committee. Admission to a particular institute cannot be considered as a measure of merit.

Per year, in 2004, in B. J. Medical College of Ahmedabad, 250 admissions were provided; in M.S. University Medical College of Baroda, 200 admissions and in Government Medical College of Surat 100 seats were offered. In Government Medical College of Jamnagar(Guru Govindsinh Medical College) 200 admissions, in Pandit Din Dayal Upadhyaya Medical College of Rajkot, 50 admissions and in Government Medical College of Bhavnagar 50 students were given admissions to the Medicine.

Consistently B. J. Medical College of Ahmedabad was favored by top rankers of qualifying examinations. Followed by Baroda, Jamnagar, Surat, Rajkot and Bhavnagar in that order of preference the seats were occupied.

It has been observed in later stages of the career that performances differ greatly from one student to another in same institution and the results of final exams differ from institution to institution.

Apart from individual capacities to grasp and retain subject, something in teaching methods could be responsible for such diversity. We, at B. J. Medical College, conceived, formulated and conducted a study in all the government medical colleges of Gujarat viz, B. J. Medical College, Ahmedabad, Baroda Medical

College, Surat Medical College, Jamnagar Medical College, Rajkot Medical College and Bhavnagar Medical College. This study was carried out in 2004.

Aims & Objectives: To analyze the factors in teaching the subject of Anatomy that affect the performance of students in different colleges and students from same college. To establish need and existence of some form of uniformity in teaching methods.

To probe in to how far students could make use of the available resources, while we realized that there cannot be unanimity in opinion of mass of the students and resources available, Remaining unbiased, we hoped to achieve some solid conclusion.

Methods: This Study Was Carried Out In 2004. This was a cross sectional study. In Ahmedabad (at B.J. Medical College) about 229 students willingly participated in the practice out of 250.

In Bhavnagar about 50 students, in Rajkot 50 students, in Surat about 50 students and in Baroda 109 students willingly participated in the study.

All the students who were willing to participate in the study were addressed in their own colleges and almost all of the students belonged to second term of the first year of their professional curriculum, i.e. they were well in position to understand the depth of the questions and give their opinion unbiased.

The students were given a printed Performa in the form of questionnaire and were explained about the need of anonymity in study. It was emphasized that they be honest and non-partial in answering all the questions. Where needed they were provided help in understanding the question and were asked to categorize the answers in chronological order where required. The data collected was analyzed for percentage distribution (frequency distribution). For such queries that had sub-questions in them and were responded to by unequal number of respondents, we used method of "Mean Ranking". Students were asked to categorize their preferences in ascending order, i.e. selection of '1' as a choice would reflect their best preference. Hence, less the number in Mean ranking reflected higher preference. The results are summarized herewith.

Results & Observations: Unconsciously we were comparing the scenario in private medical colleges with that in government medical colleges. In private medical colleges teachers are result oriented, time based and of different quality.

While we tried to question some of the senior members of teaching staff, we found some facts which were not brought to light by this study. The quality of students is deteriorating over time. There is no update with subject and time. Attendance in class room is reducing since they do not realize the need of 'Guru'. They are only exam oriented, so there is no depth in their knowledge. Enthusiasm regarding knowledge in students is lacking. Results and Observations. All the responses were collected and entered in Microsoft Excel to be analyzed. Summary Of Analyses Of Study In All Medical Colleges

Table 1:- describes frequency of percentage of students. Respectively 34.8, 34.3, 26, 62.5, 43.3 and 28 % of students in Ahmedabad, Baroda, Surat, Jamnagar, Rajkot and Bhavnagar opted that one calendar year duration of curriculum was enough.

One calendar year duration of curriculum is sufficient	Positive response %
Ahmedabad	34.8
Baroda	34.30
Surat	26
Jamnagar	62.50
Rajkot	43.30
Bhavnagar	28

Table 2:- showed that the time for dissection was enough Respectively 66.8, 55.6, 62, 67.7, 81.7 and 66 % of students in Ahmedabad, Baroda, Surat, Jamnagar, Rajkot and Bhavnagar opted that time was enough for dissection.

Time for dissection enough for understanding the subject	Positive response %
Ahmedabad	66.8
Baroda	55.6
Surat	62
Jamnagar	67.70
Rajkot	81.70
Bhavnagar	66

Table 3:- inquired if they followed practical volume of dissection. Respectively 62.7, 53.3, 70, 59.8, 88.3 and 78 % of students in Ahmedabad, Baroda, Surat, Jamnagar, Rajkot and Bhavnagar opted that they did follow dissection volume

practical volume of dissection is followed	Positive response %
Ahmedabad	62.7
Baroda	53.3
Surat	70
Jamnagar	59.8
Rajkot	88.3
Bhavnagar	78

Table 4:- Dissection table method was clearly preferred by students in Ahmedabad, Baroda, & Jamnagar, while small group teaching was preferred by those in Surat Rajkot and Bhavnagar.

Preferred Teaching method	Method
Ahmedabad	Dissection table
Baroda	Dissection table
Surat	Small group teaching
Jamnagar	Dissection table
Rajkot	Small group teaching
Bhavnagar	Small group teaching

Table 5:- Upon inquiring if they wished to have a short revision of lecture, whooping majority said YES. Respectively 93.4, 95.4, 94, 90.1, 93.3 and 96 % of Ahmedabad, Baroda, Surat, Jamnagar, Rajkot and Bhavnagar wanted a short revision.

Short revision of the lecture	Wanted %
Ahmedabad	93.4
Baroda	95.4
Surat	94
Jamnagar	90.1
Rajkot	93.3
Bhavnagar	96

Table 6:- Upon inquiring if they wished to have a short revision of the region, whooping majority said YES. Respectively Ahmedabad, Baroda, Surat, Jamnagar, Rajkot and Bhavnagar 93.9, 95.4, 90, 89.7, 99 and 90 % wanted a short revision

short revision of the region	Wanted %
Ahmedabad	93.9
Baroda	95.4
Surat	90
Jamnagar	89.7
Rajkot	99
Bhavnagar	90

Table 7:- Upon inquiring what was the activity of choice in order to increase the knowledge, respectively students in Ahmedabad, Baroda, Surat, Jamnagar, Rajkot and Bhavnagar said Viva, viva, spotting, quiz, quiz and spotting in that order

activities of choice	Activity
Ahmedabad	Viva
Baroda	Viva
Surat	Spotting
Jamnagar	Quiz
Rajkot	Quiz
Bhavnagar	spotting

Table 8:- Dissection hall teaching method was a method where most students in most colleges were most comfortable.

Most comfortable method	Method
Ahmedabad	Dissection hall teaching
Baroda	Dissection hall teaching
Surat	Slide projection
Jamnagar	Dissection hall
Rajkot	Chalk and Board
Bhavnagar	Slide projection

Table 9:- Respectively 45.3, 49.5, 32.0, 34.8, 35.0 and 28% students in Ahmedabad, Baroda, Surat, Jamnagar, Rajkot and Bhavnagar realized the importance of Internet as a method of self learning anatomy.

Internet as a source of self directed learning	Effective %
Ahmedabad	45.3
Baroda	49.5
Surat	32
Jamnagar	34.8
Rajkot	35
Bhavnagar	28

Table 10:- Almost unanimously Dissection hall was considered to be the place where the students understood the things maximum.

Place of maximum understanding	Place
Ahmedabad	Dissection hall
Baroda	Dissection hall
Surat	Dissection hall
Jamnagar	Tutorial class
Rajkot	Dissection hall
Bhavnagar	Dissection hall

Discussion: Only 33.28% of students opted that one calendar year duration of curriculum was sufficient. Except those in Jamnagar Medical College, majority of the students (66.72%) did not find that the duration of curriculum was sufficient in covering the curriculum and longed for longer duration.

While more than(68.68%) students followed the dissection volume during the dissection, except students in Baroda and Jamnagar¹, and 66.63% of the students found the time allotted to dissection to be enough for understanding the subject, still, (40.82%) they could not see all the structures that were taught in lecture or tutorials in dissection for themselves. Small group teaching and the teaching in dissection hall were first two of the teaching methods as per maximum students. It was the dissection hall where the students learnt a subject the best. They were most happy in and comfortable with the dissection hall.¹Dissection hall was elected to be the place of maximum understanding by students in five out of six colleges. While chalk and Board method was not liked by majority.¹Only Rajkot students were happy with chalk and board method.

The accessory teaching methods, where available, were weighed by the students and Multimedia Projection, Chalk and Board method, Over Head Projection method, Quiz and Audio visual Room methods were in that order opted to be good.

Majority of students wanted that a short revision be held at the end of the lecture and at the end of the region. Viva, spotting and quiz were equally appreciated by majority of the students. Majority of students in all colleges were not very happy with symposium and chart model competition as activity of choice.¹

37.4% of the students did not opine much happily about Internet as a source of self directed learning.

Students found that the time table of tutorials (80.5%) and demonstration (76.23%) was just enough to complete the topic but not of the lectures.(66.4%). The lectures were found to be too long and time allotted to the lectures should either decrease or the material delivered in a lecture be made more compact.

A whooping majority in all colleges (more than 90%) voted in favor of short revision of lecture and region.

Conclusion: The entire edifice of medicine rests on our understanding of the four foundations, listed in descending order of importance:

- The structure of human body.
- The function of the human body.
- Disease processes that ravage structure and function.
- Means for preventing or treating disease.

To understand function, we must first comprehend structure. We cannot hope to unravel the effects of disease processes without first learning the structure and function of man. Finally, our success in treating the patient is directly proportional to our mastery of the other three elements.

The hands on approach must be a more effective way of learning anatomy than trying to absorb information passively from a demonstration.

In our opinion, anatomy is a subject that requires adequate exposure to be learnt properly.

Dissecting and "self directed learning" in this way would probably increase the amount of anatomical knowledge medical students possess. So core anatomy should be taught properly and without compromise from the start.

In our view, dissection of the cadaver is the best way of learning anatomy. It helps the student remember better. A pre-dissection lecture would help the students greatly in the dissection.

In our study, we found that majority of students feel that one year was too short a duration for course and

the best method of learning is dissection hall teaching on cadavers. Many used Internet for self-learning.

We found that planning about the curriculum, teaching methodology and assessment methods should be modified by considering the opinion of students to bring out best in them.

As course becomes short and curriculum becoming more crowded, resources of teaching methods must maximize effectiveness of learning anatomy and most importantly to recall and apply anatomy knowledge in medical practice.

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