

ROLE OF AUDIO-VISUAL AIDS IN PHYSIOLOGY LECTURE

Background: Physiology is the link between the basic sciences and medicine. Students learn Human Physiology by attending theory as well as practical classes. For a large group teaching, lecturing is the one of the oldest and commonest forms of delivery of information to the students. Lectures are often supported by Audio-visual Aids to make it effective.

Aims & Objective: To know the role of Audio-visual Aids in physiology lecture.

Materials and Methods: Cross – Sectional and Descriptive study was undertaken in 105 medical students, appearing for exam in the month of June and July 2013 by questionnaire method, which were validated by pilot study. Results were entered in Microsoft Excel Sheet and Analysis was done.

Results: For physiology lecture, students prefer lecturing of theory classes with mix of Audio-visual Aids (44.76%), with Microsoft power point (33.33%), with black board 18.09% and with Overhead projector (3.80 %).

Conclusion: Depending on the content and objective of the class, effective use of Audio-visual Aids during lecture classes, can make the students actively participate in learning process.

Key Words: Audio-Visual Aids; Lecture; Students; Physiology

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INTRODUCTION

Human Physiology, which deals with studying of functioning of human body, is mother of all subjects. Human Anatomy, Human Physiology and Clinical Biochemistry are taught to the first phase medical students in their medical course. Physiology is the link between the basic sciences and medicine. The great beauty of physiology is that it integrates the individual functions of all the body's different cells, tissues, and organs into a functional whole, the human body.^[1] The students should understand the Human Physiology for better understanding of paraclinical and clinical subjects.

The education process in medical colleges is aiming, in its broad term, to produce a competent general practitioner oriented to the health problems of the community.^[2] In fulfilling this, colleges are using various teaching methods and educational resources.^[2] Although some medical colleges are using advanced methods such as computer aided discussion of clinical cases, student discussion groups, integrated sessions and open seminars, traditional methods of teaching, namely lectures and clinical rounds, are still considered the backbone of this educational process and, clearly, the most feasible ones.^[2]

Lectures are the most traditional, old fashioned and didactic method of teaching which are meant for one way delivery of information, powerful techniques for getting across a large amount of theoretical information and are especially useful when a large number of learners must be taught at one time. Well organized lecture remains one of

the most effective ways to integrate and organize information from multiple sources on complex topics.^[3] Lectures are often supported by audio visual aids by emphasizing key points on a black board or white board, the projection of written or printed matter on transparencies via an overhead projector (OHP) or increasingly nowadays via a computer based system, notably Microsoft power point application.

Staffs in the medical college use different methods in the college to teach Human Physiology. So our study includes getting the feedback from the students, so that for future, we can use newer modality of teaching methods with available recourses. As in physiology, there are many feedback mechanisms for proper functioning of the human body; so, there is need of feedback from the students, for progressive improvement of a lecture in physiology.

MATERIALS AND METHODS

This study was conducted in the Department of Physiology, Navodaya medical college (NMC) Raichur. The study and its conduct were cleared by the ethical committee, NMC Raichur. The study was done by questionnaire method, from the first MBBS students, admitted to college for the academic year 2012 to 2013 and were for appearing for final exams in June and July 2013. The questions, which were framed for asking students were validated by pilot study.

One hundred and five (105) medical students, including

boys and girls were recruited for the study. All the students were attending theory classes regularly. After completion of syllabus, this study was conducted in the month of May 2013. Informed consent was taken. Questionnaire method was given for answering. Students were informed not to write their name to disclose their identity. They were informed, to tick the answers for given Questions legibly. Questions were related to their attitude towards Audio-visual Aids (overhead projector and Microsoft power point) in understanding of diagrams, content, flowcharts, taking notes, preferred media for physiology lectures. It also included the questions, related to which stimulates further reading and use of media depends on the content of topic and staff taking the lecture.

Information was taken about previous exposure to the use of Audio-visual Aids during lecture classes in their school studies before admission to medical course. The results were entered in Microsoft Excel Sheet. Analysis was done and expressed in terms of percentage.

RESULTS

Cross – Sectional and Descriptive study was undertaken in 105 medical students appearing for exam in the month of June and July 2013. All the students were belonging to the age group 18 to 20 years. 53 (50.47%) male students and 52 (49.53%) female students were participated in the study. 29.52% of the students were exposed to different Audio- visual aids in the school studies. 85.71% (90) students were interested in taking notes during theory lecture classes. Attitude of students towards Audio-visual Aids in terms of understanding diagrams, flowcharts, content, listening and understanding, taking notes and preferred media for physiology lectures were represented in Table 1. In, 76.12% (80) of the students listening with Audio- visual Aids stimulated further reading. Students' attitude towards the use of Audio- visual Aids depending on the content of topic and also staff taking lecture is represented in Table 2.

Table-1: Preferred media for physiology lectures

Parameter	Black Board	Overhead Projector	Microsoft Power Point	Mix of Media
Understanding of diagrams	21 (20)	7 (6.67)	53 (50.47)	24 (22.85)
Understanding of flow charts	30 (28.57)	14 (13.33)	49 (46.67)	12 (11.42)
Understanding of content	38 (36.19)	4 (3.80)	35 (33.33)	28 (26.67)
Taking notes	35 (38.88)	4 (4.44)	38 (42.22)	13 (14.44)
Listening and understanding	39 (37.14)	10 (9.52)	35 (33.33)	21 (20)

Figures in paracentesis are percentages.

Table-2: Students attitude towards the use of audio- visual aids

Parameters	Yes	No
Audio- visual Aids depending on the content of topic	95 (90.76)	10 (9.52)
Audio- visual Aids depending on the staff taking lecture	97 (92.38)	8 (7.6)

Figures in paracentesis are percentages.

DISCUSSION

The study was conducted to get feedback from the medical students, appearing for exam in the month of June and July 2013, who took admission for the academic year 2012 -2013.

Human Physiology, which is a basic science, is taught to the 1st MBBS, students along with Human Anatomy and Clinical Biochemistry. Students learn Human Physiology by attending theory as well as practical classes. For a large group teaching, lecturing is the one of the oldest and commonest forms of delivery of information to the students. It involves a teacher or facilitator, who speaks to a large heterogeneous group, at least for an hour with or without help of Audio-visual Aids. Though there are many merits and demerits with didactic lecture, still it will remain a corner stone of the medical education. There are various techniques by which lectures can be made effective. One of them is the use of visual aids which should be clear and understandable.^[4] The use of various methods of teaching is dictated mainly by the structure of the curriculum, teacher preference, and the available resources.^[3]

As per Human Physiology concerned, students preferred mix of aids for Physiology Lecture. For understanding of diagrams and flow charts, they prefer Microsoft power point. For taking notes, and listening and understanding of content, they prefer both Black-board based teaching and Microsoft power point. The student attitude was that, black-board based teaching combined with Microsoft power point made them to understand concepts in physiology easier. Some concepts can be explained easily with black-board based teaching and some concepts can be explained easily with Microsoft power point. According to Baxi SN et al, in black board-based teaching, the students are active participants and are better able to cope with the teaching speed of the teacher. It motivates an interest in learning and helps in holding attention in the class.^[5] With, Microsoft power point – based teaching, even the last bench students, can be able read the content of topic, that is projected. The lecturing with use of Audio-visual Aids has stimulated further reading than without using aids.

Each teaching method has its own advantage and disadvantage. The method to be used depends on the teacher, learner and the objective of the content for that theory class. There is no one teaching method, which is considered best. Any teaching and learning method which places the learner in an active state is best for learning.

CONCLUSION

Depending on the content and objective of the class, effective use of Audio-visual Aids during lecture classes, can make the students to actively participate in learning process.

REFERENCES

1. Guyton AC, Hall JE. Text Book of Medical Physiology. 11th ed. Pennsylvania: Elsevier Saunders. 2006.
2. Milaat WA, El-Gamal FM. Factors affecting the use and attitude towards medical resources and educational methods in a Saudi medical school. Ann Saudi Med. 1994; 14(3):209-214.
3. Richardson D. Don't dump the didactic lecture; fix it. Adv Physiol Educ. 2008; 32: 23-24.
4. Golden AS. Lecture skills in medical education. Indian J Pediatr. 1989; 56: 29-34.
5. Baxi SN, Shah C J, Parmar RD, Parmar D, Tripathi CB. Student's perception of different teaching aids in a medical college. African Journal of Health Professions Education. 2009; 1(1): 15-16.

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