



INTERACTIVE INTERVENTIONS TO ENHANCE ATTENTION OF 1ST YEAR MBBS STUDENTS DURING PHYSIOLOGY LECTURE SESSIONS.

Physiology

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ABSTRACT

Background: Physiology is the core component of medical curriculum. It is usually taught using didactic lectures. But didactic lectures are usually monotonous. Interactive lecturing can be an effective strategy towards active learning by the students.

AIM: To introduce interactive teaching in Physiology to make learning more interesting.

Methodology: Few sessions of interactive teaching were conducted during lecture classes on a particular topic of Physiology. Responses of students and faculties were recorded on prevalidated feedback questionnaires on 5 point Likert scale

Results: Students showed positive response towards interactive teaching learning method. Faculty members were in agreement that interactive teaching increases active learning, confidence of students and help them in better learning of the subject.

Conclusions: It can be concluded from present study that interactive teaching is well accepted by both faculties and students.

KEYWORDS

Interactive Techniques, Lecture, Physiology

INTRODUCTION :

"Tell me & I'll forget; show me & I may remember; involve me and I will learn" --- Benjamin Franklin

Physiology is the core component of medical curriculum. Which provides the backbone of Health Science to a medical graduate. Physiology and clinical medicine are interrelated as principles of Physiology has become important in diagnosis and management of disease.^[1] But Physiology is usually taught to medical students by using didactic lectures and practical classes. Majority of the students read the subject without any retention and aim just to pass the Professional examination Lectures are an important aspect of the teaching learning process in medical education. It is an effective and feasible way for large group teaching where a vast curriculum has to be covered. By definition, the lecture is the formal presentation of content by the educator (as subject matter expert) for the subsequent learning and recall in examinations by students.^[2] It was established formally centuries ago as a teaching process that began with a literal reading of important passages from the text by the master, followed by the master's interpretation of the text. Students were expected to sit, listen and take notes.^[3] A lecture is an oral presentation intended to present information or teach people about a particular subject. While lecturing tends to be the easiest form of instruction, studies show that students absorb the least amount of information that way.^[4] Although the didactic lecture may be effective for disseminating a large body of information to a large number of students, it presents many challenges to both teachers and learners because it often promotes passive learning and fails to motivate students for active learning.^[5] It might be difficult for the learners to give attention as well as comprehend the knowledge in one hour long monotonous didactic lecture class. Lectures are generally described from the instructor's point of view and lack of interaction is considered one of the major limitations of the traditional lecture.^[5]

Medical education has seen major changes over the past decade. The advent of newer technology and innovations is redefining the role of conventional approaches. Conventional lecturing has been a means of instruction since even before printing was introduced^[6,7]. In the past, it was widely respected, but in recent times, lectures as a method of teaching and transmitting information have come under increasing criticism^[8,9]. As medical education has shifted from traditional teacher focused, didactic teaching to more student focused methods that actively engage students in the learning process in order to produce graduates with transferable skills, it is very important to implement ways of teaching that can simultaneously serve large number of students while more actively engaging them in learning process.

Interactive lecturing can be an effective strategy towards active learning and participation by the students. It breaks the monotony and

stimulates interest resulting in improved attention.^[7] Interactive teaching involves interchange of ideas between teachers, students and the lecture content. It refers to increased discussion among the participants and their active involvement. The purpose of teaching is to facilitate learning and encourage the learners to learn more effectively. Interactive teaching involves a two-way interaction between the presenter and the participants. It encourages and expect learners to participate. It values student's prior ideas and aims at empowering students to be independent learners.^[4]

Various methods that can be used in a large group for interactive teaching are: Question Asking and inviting questions, Think pair and share, brainstorming, case based examples, role playing, demonstrating, problem solving, directed listening, pre and post testing etc. [10,11]

With this background, this study was carried out to enhance attention of first MBBS students during Physiology lecture sessions by introducing various interactive interventions and to understand students' perspectives about it

AIM & OBJECTIVES

To introduce interactive teaching in Physiology to make learning more interesting by promoting active learning among the students.

METHODOLOGY:

A Cross sectional study was carried out in the Department of Physiology, Gauhati Medical College on 1st MBBS students (n=100) from May 2019 to August 2019. Oral informed consent was taken from the participants. Institutional Ethics Committee clearance was taken. A sensitization session on interactive teaching was conducted to prepare the students and faculties as well as feedback questionnaires were validated.

The students were explained about the purposes of the study and its use for academic purposes along with the scope of future intervention. A total of 100 students actively participated in this study. The interactive interventions were introduced in 4 classes of Physiology each of 60 minutes duration. Students of the class were divided into small groups consisting of 3 – 6 students. Groups were formed because in one of the interactive methods that I used was based on group activity.

Various interactive teaching learning methods that was introduced in the lecture classes in an appropriate sequence are buzz session, case based scenario, think pair and share.

Buzz Session (25minutes)-The class was divided into groups of 3 to 6 participants. Each group was given 5 minutes to consider a specific question. I walked around the class room to answer questions. One presenter from the groups was chosen who reported to the large group.

This activity encouraged active interaction and discussion among the students.

Case based scenario: (5 min) Case based scenarios on the topic were administered and students were asked to make the diagnosis and provide the treatment on the basis of the case.

Think pair and share: (5 min) Questions were given. The student had to think about the task given for one min then share with the student next to and then discuss. It allowed them to discuss each other's idea and correct each other. Any doubts regarding the concepts were also cleared during this time.

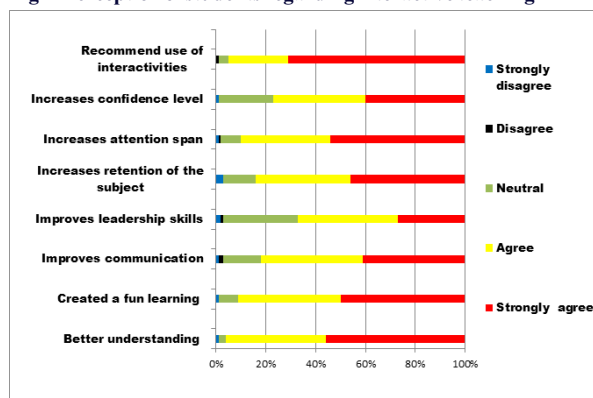
At the end of all the sessions 8 item prevalidated questionnaire was administered to all the students regarding their perceptions on interactive teaching. After searching various articles (13), questionnaires were planned and validated. It consisted of close ended questions. Similarly responses of faculties (n=6) were also evaluated by feedback questionnaires.

The data collected was analyzed for Descriptive Statistical Analysis using Microsoft Excel 2010.

OBSERVATIONS AND RESULTS

Out of total 100 students, 38 were females and 62 were males. The perceptions of the students regarding interactive teaching are shown in fig 1.

Fig 1- Perception of students regarding interactive teaching

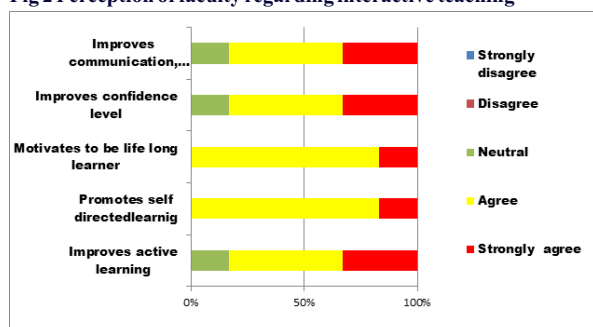


Perception of the students regarding different activities

Most of the Students strongly agreed that interactive interventions in Physiology theory classes improves their understanding and retention of the topic, increases their attention span and confidence level, created fun learning environment and improves their interpersonal communication. Most of them recommended use of interactivity in future lecture classes.

The perceptions of the faculties regarding interactive teaching are shown in fig 2.

Fig 2 Perception of faculty regarding interactive teaching



Perception of the faculty regarding different activities :

Majority of the faculties agreed that interactive interventions in Physiology lecture classes help the students in improving their leadership and communication skills and motivate them to be lifelong learners. They also agreed that it promotes students for self directed

learning and increases their confidence level. Interactive teaching learning methods promotes active learning of students leading to better learning outcomes.

DISCUSSION

In this study various interactive learning strategies were incorporated in traditional lecture hours. The students' responses about interactive teaching were evaluated using the feedback questionnaire, on a 5 point likert scale.

Educational research has shown that Interactive teaching helps in better understanding . Interactivity induces active learning in students thereby imparting its advantages such as a better understanding, more retention, better reproducibility, clarification of doubts and facilitating problem solving, decision making and communication skills.^(12,13)

Studies has also shown that who are actively involved in the learning activity, learn more than students who are passive recipients of knowledge⁽¹⁴⁾. Active involvement enhances the student's level of understanding and ability to integrate and synthesize material⁽⁶⁾. In a study by Anshu Gupta et.al. interactive teaching was found to be useful and feasible as adjunct to didactic lectures. Different activities of interaction during lecture were recommended for active participation, more attention, and motivation of students.⁽⁴⁾ Studies in education have demonstrated that increased attention and motivation enhance memory.⁽¹⁵⁾ In a study, Interactive teaching: Understanding perspectives of II MBBS students in Pathology, researchers concluded that a paradigm shift toward interactive sessions during lectures is required to make them effective.⁽¹³⁾

Feedback is an essential part of learning. Active learning allows teachers to receive feedback on student's needs, perceptions and on future teaching- learning directions.⁽¹⁶⁾

In our study also we have seen that students gave positive response regarding better understanding, retention of the topic as well as increase in confidence level. This is particularly important in medical education, where the application and use of information is as important as the retention and recall of facts.

CONCLUSIONS

The results of the project clears that the students prefer interactivity in addition to the didactic lectures. It helps to create a vibrant atmosphere and an enjoyable learning experience in the class. It motivates them to participate in the class and helps to retain better for exams. We should plan different methods of interactivity before hand to be used in a large group to break the monotony of conventional lecture practices. If students are to learn desired outcomes in a reasonably effective manner, then the teachers need to get the students engage in learning activities.

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