



EFFECTIVENESS OF TUTORIALS FOR TEACHING OF OTORHINOLARYNGOLOGY FOR UNDERGRADUATE MEDICAL STUDENTS

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ABSTRACT

Teaching curriculum for Otorhinolaryngology [ENT] for undergraduate medical students includes lectures, tutorials and clinical postings with bedside clinics. Lectures and clinical postings are time tested methods of teaching clinical subjects like ENT. Tutorials is comparatively new and has a significant impact on academic achievements of students. Tutorials or small group learning consists of 10- 12 students and one teacher discussing one study topic in depth including anatomy, pathophysiology, clinical presentation, medical management, surgical management and recent advances. While the importance of traditional lectures and clinical postings is irrefutable, tutorials are an important supplement to these methods. There is improved understanding, student involvement and higher motivation for self-learning and research. It also encourages positive interpersonal interactions and has better retention of study material. Conclusion: Tutorials in ENT are beneficial for undergraduate medical students and help them acquire knowledge, fine skills to solve clinical problems, get confidence in social interactions and develop interest in research.

Key words:-undergraduate medical teaching, ENT teaching, tutorials, small group teaching.

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INTRODUCTION

Otorhinolaryngology or Ear, Nose & Throat [ENT] is a clinical subject in undergraduate medical curriculum. Basic knowledge of ENT is essential for a medical graduate. ENT is one of most neglected subjects in medical curriculum internationally [1] and general practitioners have a poor knowledge of ENT related diseases. Modern teaching curriculum in our institute that is a part of Maharashtra University of Health Sciences, Maharashtra, India has 70 hours of ENT theory teaching

of which 48 hours are for lectures, 22 hours are allotted for tutorials. Along with this there are 8 weeks of clinical postings -4 weeks in 2nd year of training and 4 weeks in 3rd year of medical training consisting of 3 hours a day for 6 days a week i.e. 144 hours [2].

With only 70 hours of theory teaching available to cover subject of ENT, it is essential that each hour spent is effective, efficient and evidence based [3]. Tutorials are frequently used in professional courses like medicine, engineering, management studies. A well-planned tutorial session improves student knowledge about the subject, improves aptitude to deal with clinical problems and practical application of the knowledge. It also improves communication skills of students with their

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peers and patients as well as their confidence in presenting topics. It motivates students to read standard subject material thoroughly as well as latest published literature focusing on recent advances. This leads to improved retention of knowledge of that particular topic. The introduction of 'small-group teaching' in gross anatomy which is a preclinical subject has emerged as noteworthy and has had a constructive impact on the academic achievement of students in anatomy [4] in our institute. We attempt to design a small group activity or tutorial structure for the subject of ENT to be used in our academic curriculum with this study.

The advantage of tutorials is that learning tools like surgical videos, simulation tools, e- Learning via online platforms can be integrated into the tutorial structure as a part of preparation and presentation for the tutorials. Electronic technology infrastructure and services are an integral part of the medical schools in north America with 97% north American medical schools offering online course materials [5]. E-Learning is still at its infancy in India. Their use is limited in lectures and bedside clinics while tutorials provide the opportunity to medical students to be up to date with technological advances as well.

DISCUSSION:

Tutorials consist of short groups of students 10-12 who are mutually dependent on each other. Each member contributes to the success of the team and has a common goal to accomplish. Individual and team scores are maintained. Individual scores are kept to make sure each member is accountable and contributes to the assignment and group scores to make them work together. This improves interpersonal and team skills of each member of the group. Medical education is at present a cut throat world with excessive focus on individual development and too little on team dynamics. Doctors need to be team leaders; guiding and supporting a health care team consisting of his/ her peers, nursing staff and hospital workers for the extent of their career. Working as a team gives students an opportunity to develop these skills [6] Groups are generally allotted to prevent ostracization of weaker students and any bias based on gender/caste/ previous academic performance. Group members are given a particular task either understanding a concept or problem solving. For example – we conduct tutorials on topic of Epistaxis – with team members contributing anatomy, blood supply, pathophysiology, assessment of a patient with epistaxis, emergency management, investigations, treatment, nasal packing techniques, modern nasal packs available, endoscopic cautery procedures, embolization techniques in angiofibroma. This is easier for students to follow than completely self-directed learning as the study objectives are clear. Students are encouraged to learn and teach their colleagues with audiovisual aids and simulation techniques. Instructor is usually an observer and

circulates between the different groups and only actively participates if there is an unanswered question or the group is unable to proceed/complete a given task [7]. The group members are encouraged to resolve any conflicts that may arise on their own without intervention of the instructor [8].

Collaboration does not come naturally to each student. Some students are uncertain about the significance of working together, some believe they gain will more knowledge from the instructor than from their peers and others find it difficult to collaborate with a team with individuals with different working styles and calibers than themselves [9]. Students learn essential skills like problem solving, leadership, critical thinking, communication and team work and there is increase in academic achievement seen [10]. Students study the subject of Otorhinolaryngology in their 2nd and 3rd year of medical education, along with paraclinical courses of pathology, pharmacology, microbiology, forensic medicine and toxicology and clinical courses of community medicine, ophthalmology, medicine, surgery, pediatrics, obstetrics and gynecology. For them to retain and remember the subject, the teaching method must be attractive, stimulating and be an experience they won't forget soon. Even topics traditional taught as lectures for example, anatomy of the middle ear can be repeated in brief while dealing with the relevant clinical topic discussed- complications of cholesteatoma. A colorful 3D model of the ear is also useful in such a scenario. Small group teaching is also used for teaching interpretation of audiograms and X-rays and Computed tomography scans both as stand-alone topics and along with relevant topics.

CONCLUSION:

Tutorial and small group teaching causes positive interactions among students from different backgrounds, leads to exchange of productive information, development of new skills, improves ability to handle clinical challenges and motivates them to learn. There seem to be no adverse effects of tutorial-based learning. While each student may not learn as much detailed information as they would in a lecture, they learn critical thinking, leadership, communication skills and practical skills as well. We recommend tutorial or small group learning as an effective tool to impart knowledge of Otolaryngology for undergraduate medical students.

COMPETING INTERESTS:

The authors declare that they have no competing interests.

AUTHORS' CONTRIBUTIONS:

DV drafted the manuscript, SR and AT performed the literature review & BK assisted with writing the paper.

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