

INTRODUCTION OF PREVIEW OF CLINICAL EXAMINATION VIDEO ON YOUTUBE IN PHYSIOLOGY PRACTICAL - A PILOT STUDY

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ABSTRACT

Background: It is observed that clinical examination skills in first year occupational therapy and physiotherapy students are poor in spite of hard efforts by teachers in Physiology. So, this method of preview of clinical examination video on YouTube before attending revision class was introduced by Department of Physiology to improve their clinical examination skills. **Materials and methods:** This pilot study was conducted in 18, first year occupational therapy and physiotherapy students. They were asked to study a video on clinical examination at home before coming for revision practical on the same topic. The revision practical class was conducted, in which maximum time was given to practice the skills under guidance of the teachers. Students' and teachers' feedback was obtained after revision practical. **Result:** 100 % of students agreed that preview of video on clinical examination was helpful to them during revision class and wanted more topics to be covered by this method. **Conclusion:** The preview of video on clinical examination before revision practical is preferable method to improve clinical examination skills.

KEYWORDS: Clinical examination skills, Clinical examination video, Teaching-learning tool, YouTube

INTRODUCTION

Teachers in Physiology take hard efforts to teach clinical examination skills to first year occupational therapy & Physiotherapy students. Department of Physiology conduct repeated revision classes for inculcating clinical examination skills in students. But in every revision class students do not come prepared for revision class. At the end teachers end up in teaching the skills again and students do not have sufficient time for practice of the skills. So, the overall goal of the study was to foster development of clinical examination skills in first year occupational therapy and physiotherapy students. To develop clinical examination skills in students they must have sufficient time for practicing these skills under teacher's observation. Multimedia learning has been shown effective in clinical skills training in many countries. (1,2) Some medical schools provide students with online clinical examination videos as

resource material to support their self-study of clinical skills. But students reported lack of communication in this method because their doubts could not be cleared by just watching videos.(1) So, we decided to take help of YouTube video as a teaching- learning tool which has comment section which can be used for communication.

MATERIALS AND METHODS

This pilot study was conducted in a class of 18 first year Occupational therapy and Physiotherapy students, after taking their informed consent and ethics committee permission. The topic of clinical examination of Cardio-Vascular System (CVS) was selected. Its content, Specific learning objectives and checklist were prepared and validated by experts in the Physiology. A video of clinical examination of CVS was recorded according to checklist in

department of physiology and uploaded on you tube. The video link was sent to students on WhatsApp group and they were encouraged to have discussion in comment section of video. They were asked to study the video and come prepared for revision practical of clinical examination of CVS. During revision class the students were divided in to two batches and allowed to discuss their difficulties and doubts. The teachers asked the students to demonstrate the skills one by one. The peer students were encouraged to correct their mistakes and clear the doubts. After that students were allowed to practice the skills under teacher's supervision. Students' feedback was taken with the help of google form & analysed on 3 point 'Likert Scale'. The teachers were interviewed for their feedback on this method of teaching. Qualitative analysis of open-ended questions and teachers' feedback was done to identify key themes.

RESULTS

Table I Students' feedback

Question	Yes	No	Not sure	% yes
1. Was the preview of video on clinical examination helpful to you during revision class?	18	0	0	100
2. Do you think that revision class with preview of video on clinical examination is more beneficial than traditional revision class?	17	0	1	94.4
3. After its use, do you think that 'you tube' is a good teaching-learning tool?	16	0	2	88.9
4. Will you prefer revision class with preview of video on clinical examination over traditional revision class?	16	0	2	88.9
5. Do you think that more topics in revision class of clinical examination should be covered by this method?	18	0	0	100
6. What did you like and dislike about this method?	Open ended question			
7. What are your suggestions for further improvement in this method of teaching?	Open ended question			

DISCUSSION

The trend in the use of technology has primarily developed in response to the challenges faced in medical education.(3) We in department of Physiology faced one of these challenges of students of not developing clinical examination skills in spite of hard efforts by teachers. We reflected on this issue and found the root cause of this problem. Students are not able find sufficient time for practicing the clinical skills. This was our challenge to give the students sufficient practice of skills and make revision classes interesting and interactive. Students are always interested in and good at newer technology. So, we introduced this method of preview of clinical examination video on you tube before revision practical. You tube is a good learning tool. (4,5) YouTube lets anyone with a free account to upload videos with option of social or private use. The teachers can create their own YouTube channels to share videos and showcase student work. It also has option of comments section through which students can have discussion on the topic related to video.

This method makes more time available for students to practice under teacher's guidance during revision class because students come prepared for revision after watching video. Because of practice during class it helps to retain the technique in memory. This works under the same principle of flipped class. (6,7). In this method self-directed learning helps to develop clinical skills with the help of facilitator. Also it gives instant feedback from teacher which is very good for their further improvement. So this teaching method goes in line with recommendations given by task force on clinical skills education of AAMC (Association of American Medical Colleges) for clinical skills education.(8)

In the study of Margaret Hansen et al. video I-pods was used to enhance the clinical skills competence in medical interns. They concluded that medical students' skill competency levels remained the same over time when they accessed the video demonstrations, via a video iPod, of the medical procedure. It means that videos help retention of skills in memory.(2) In the study of Jang H. et al they took feedback of students and majority of students found OSCE videos effective for learning of clinical skills and preparing for OSCE.(1) These students found learning with video more helpful than merely reading book. Some students found video learning helpful because in live class they are not able to see clearly demonstration given by

professors. In a study done in Chiropractic students, they found that the instructional video of the standard procedure improved ophthalmic physical examination skills.(9) In this study they prepared an additional video with common mistakes done by students during clinical examination which helped to improve skills further. In a study conducted in dental students for their perception about using videos in learning psychomotor skill, students liked video learning because of its controlled, on demand access. They said that it enhances their revision of clinical skills.(10) A study conducted in a developing country with resource constrained set up, went a step ahead and proved that video assisted clinical examination skill training is not inferior to bedside tutorials.(11)

LIMITATIONS AND FURTHER SCOPE OF STUDY:

This study was conducted in a small batch of Occupational therapy and Physiotherapy students as a pilot study only for perception of students and teachers. We intend to conduct similar study in a large batch of 200 M.B.B.S. students with actual assessment of performance of students.

CONCLUSION

The preview of video on clinical examination before revision practical is preferable method to improve clinical examination skills.

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