

Evaluation Of Objective Structured Clinical Examination (OSCE): Physiotherapy Student's Perception

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Abstract: Context: Learning skill of physical diagnosis is critical part of physiotherapy curriculum. Measuring skill acquisition objectively is the essential first step in improving clinical competence. **Need for innovation:** Acquisition of skills of performing physical examination by undergraduate students, which help in reaching correct diagnosis, is an important objective of curriculum designed for bachelor of physiotherapy course. Assessment of skill acquisition by students objectively, is an essential step in evaluation of improved clinical competence. **Method:** The ethical committee approval was obtained. Written consent obtained from students participated in the study. The Masters (observers) and bachelor students attended the OSCE training sessions and role play was enacted. There were 14 stations including 3 rest stations, 7 and 4 stations were observed and non-observed respectively. The performance of students is evaluated independently at each station, using checklist. Validated questionnaire feedback form was used for feedback both from students and observers. **Lessons learnt:** This programme has been a learning process for both master's students and bachelor students as they strive to achieve better outcomes in the provision of higher quality education to students, and enhanced skills required for differential diagnosis to understand pathology better. An OSCE can be used as effective learning tool besides being assessment tool. [John S NJIRM 2014; 5(3):98-101]

Key Words: evaluation of OSCE, medical education, objective assessment, physiotherapy students.

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Introduction: The assessment of student's clinical competence is of paramount importance, and there are several means of evaluating student's performance in medical examinations. The Objective Structured Clinical Examination (OSCE) is an approach to student assessment in which aspects of clinical competence are evaluated in a comprehensive, consistent and structured manner, with close attention to the objectivity of the process¹.

The OSCE is now a commonly used method of assessing clinical competence of medical students and practicing physicians in areas such as history taking, physical examination, diagnostic reasoning and management.

Need for study: Learning skill of physical diagnosis is critical part of physiotherapy Curriculum. Measuring skill acquisition objectively is the essential first step in improving clinical competence. Undergraduate students at the end of III yr are expected to take history, elicit physical signs and perform special tests. During the assessment technique, to elicit and interpret the response of special tests are very important. The

student's knowledge and skills are tested in compartments.

The intent of the study is to develop OSCE for Osteoarthritis of knee (OA) measuring the clinical (behavioural) skills. In India, few studies have been done for physiotherapy students.

Objectives:

- To develop various OSCE stations for III yr physiotherapy students for OA knee.
- To assess the performance of the student's at the various OSCE stations in the observational skills, communication skills, physical examination techniques and the skills of differential diagnosis.
- To evaluate the OSCE stations with the help of feedback from students and from observers.

Material and Methods: Study group-The study is conducted at K J Somaiya College of Physiotherapy, Mumbai. III B P Th (n=24) students participated in the study. This study had a cross-sectional design. Master's students participated as observers (n= 7) and Sp's² (n= 9). Checklist and blueprinting of the stations was prepared for Osteoarthritis of knee joint and validated from senior faculty members of

the institute. Institutional ethics committee approval was obtained. Written consent is taken from Illyr undergraduate and also from the master's students.

OSCE training sessions were organized for both masters and bachelor students. Role plays were enacted to get a better idea of OSCE, since it was first time students were exposed. The performance of student is evaluated independently at each station, using checklist. Validated questionnaire feedback form was used for feedback both from students and observers. After the OSCE, a feedback is provided to the student with a breakdown of how they have performed at each station. Feedback is also given on the non-observed stations and model answers were provided. The theme and aims of individual stations is outlined, correct response and/or procedure is informed and common mistakes committed by students are emphasized. The student's feedback and suggestions included for future improvements.

OSCE Format: This OSCE comprised of fourteen stations, of which seven stations were observed and four non-observed stations (written answers) and three rest stations.

The examiner stations were- one for history taking, two for pain assessment, one for communication skill, two for special tests, and one for knee examination. The non observed stations were two radiograph interpretations, two differential diagnosis. The observers had a checklist of stations that the students were expected to elicit or demonstrate. The individual stations marks were totalled to provide an overall score expressed as a percentage. The mean score of all examiner stations were calculated for each student, provided with feedback of their performance and areas of improvement were emphasized. Following completion of the OSCE the students were asked rate their opinion.

Results: In this study students found that OSCE arouse interest and motivated them to learn the clinical skills. OSCE had shown to increase the confidence and provided opportunity for self assessment. Students have perceived OSCE as

fairest means, since all the students have to perform same examinations, match clinical situations as closely as possible.

It is observed that, since all the students were exposed to same set of examiners and patients, thus is found to be unbiased method of assessment and learning. All the components of assessment were compartmentalised they could focused equal attention to every stations thus performing better. The presence of observer made some of them felt anxious.

OSCE Evaluation By Students And Observer: OSCE station were evaluated on scale of agree, neutral, disagree and no comments.

All observers & majority of the students (70.8%) agreed that this type of examination were fair and also covers wide area of knowledge and skill, highlighted areas of weakness.

All observers and 45.8% students agreed that exams well structured and sequenced, well administrated. Most of the observers (77.7%) & students (70.8%) agreed that these types of examinations can minimize chance of failing. Although this was first time OSCE was introduced to students, most of students (75%) and observers (66.6%) found less stressful than other examinations e.g. long case.

More than half (58.3%) of the students and observers (66.6%) said that this examination allowed them to compensate in some areas.

Feedback From Observers: Feedback obtained from observers graded on 7 point global rating scale, 0 being not done and 7 is outstanding.

Most of the observers agreed upon that OSCE have good ability to assess cognitive (33.33%) & psychomotor domain (55.55%) respectively. Where as most them are of opinion (44.44%) said that this method is good whereas few of them (22.22%) found it excellent to assess affective domain. 33.33% said that it is very good method of unbiased assessment and agreed that it provided equal time to all candidates.

Student's performance at OSCE stations:**Table 1: Performance of students at each station of OSCE**

OSCE Stations	No. of students with <50% marks	No. of students with 51 – 75 % marks	No. of students with 76 - 100% marks
Pain Assessment (12 marks)	4 (16.7%)	14 (58.3%)	6 (25%)
Procedural station (13 marks)	1 (4.2%)	13 (54.2%)	10 (41.6%)
History taking (8 marks)	2 (8.3%)	20 (83.3%)	2 (8.3%)
Communication skills (85 marks)	6 (25%)	17 (70.8%)	1 (4.2%)
Radiograph Interpretation (5 marks)	0	0	24 (100%) All students scored (80%)
Differential Diagnosis (2 marks)	0	0	24 (100%)

Comments made by students were: "I stopped to ask if the patient had any questions and if she understood what I had said"

Personal gains: Communication skills training built confidence, created better organization to the consultation and better prepared them for the final examination and clinical practice.

"I have understood the meaning of *professionalism*", "Real patients is far better than simulated patients"!!!

Discussion: Students have perceived OSCE as fairest means, since all the students has to perform same examinations, match clinical situations as closely as possible, train all together, resolve inconsistsncies,even sees examples station, compliance and discipline.Throught this study students are become more disciplined, learned professionalism. Both students and observers agreed that this tool was less stressful than traditional method for training and evaluation.

Introducing the OSCE for first time has been challenging, however student participation and their overall acceptance of the instrument has been encouraging. Feedback from students and observers has been useful in effecting

improvements to the process and greater emphasis has been placed on the teaching and evaluation of history taking, communication and technical competencies. It is also sending a clear message to students that the achievement of overall competence is imperative to clinical practice in the current environment. Ultimately, these provide the loop necessary to drive the continuum of curriculum development.

OSCE provides an efficient use of resources eg- real patients, simulated patients, x-rays, although candidates are tested on the same set, they all do it at different point in time. The scoring and marking infrastructure used in these enables specific and useful feedback to given to each candidate³. Deficits in specific areas can be pointed out and student can correct these deficits easily. It can thus be used very effectively as a teaching/learning method.OSCE can be combined with other type of clinical examinations eg-a long case.

Assessment of students at OSCE shows(table1) that they need to improvise at pain assessment, procedural station, history taking, and communication skills to reach to correct diagnosis of the patient. In this students get to know their individual areas of deficits which otherwise does not happen in traditional method.

Conclusion: This study/project has been a learning process for both master's students and undergraduate students of bachelor of physiotherapy, as they strive to achieve better knowledge and enhanced skills required for arriving at correct clinical diagnosis. It is generally agreed that OSCE tests competency in fragments and is not entirely replicable in real life scenarios. OSCE can be used as effective/innovative teaching-learning tool, besides being standard assessment tool.

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