

ORIGINAL RESEARCH

Study of Usefulness of Objective Structured Clinical Examination as A Tool for Evaluation of Postgraduate Medical Students

Prashant Nigwekar¹, Shubhangi Nigwekar²

ABSTRACT

Introduction: With traditional clinical examinations, broader range of skills like formulation of a working diagnosis, data and image interpretation, requesting and interpreting investigations can be tested. However through complex stations of OSCE we can evaluate communication skills, management problems, administrative skills, handling unpredictable patient behavior and data interpretation in a postgraduate student. So this study was conducted to see effectiveness of Objective Structured Clinical Examination as a tool for evaluation of postgraduate students at rural medical college.

Material and method: In this teaching institution based, interventional study, we studied the effectiveness of OSCE as a tool for evaluation of postgraduate students at rural medical college. There were total 25 stations. Six faculties conducted the OSCE for the observed stations. Total marks allotted were 100. At every station 3 minutes were allotted. Feedback was taken about the examination pattern. The outcome measures included total time for the examination, marks obtained by the students and remarks of the students and faculties about the examination.

Results: Out of 7 postgraduate students, 4 were degree students (JR III) and 3 were diploma (JR II) students. Only 3 degree students passed and all 3 Diploma students and 1 degree student failed. All students gave positive feedback due to uniform evaluation at one time and it was bias free and demanded conduct of OSCE every 6 months.

Conclusion: OSCE is an effective tool to assess postgraduate students. It is precise, objective, and allows uniform testing of students for a wide range of clinical skills.

Keywords: Objective, Examination, OSCE

How to cite this article: Prashant Nigwekar, Shubhangi Nigwekar. Study of usefulness of objective structured clinical examination as a tool for evaluation of postgraduate medical students. *International Journal of Contemporary Medical Research* 2015;2(5):1373-1375.

¹Professor, Department of Paediatrics, ²Professor, Department of Ophthalmology Rural Medical College, Loni, District-Ahmednagar, Maharashtra, India

Corresponding author: Dr. Prashant Nigwekar, Professor Department of Pediatrics, Rural Medical College, Loni, Maharashtra, India

Source of Support: Nil

Conflict of Interest: None

INTRODUCTION

Traditional clinical examination basically assess the narrow range of technical skills as patient history, demonstration of physical examination. It could be largely unreliable in testing students performance and has variability between one examiner and the other.^{1,2} Also lengthy, time taking judging of students performance is done by two or three examiners and may get affected by prejudice. Objective structured clinical examination (OSCE) was introduced by Haden and Gleeson in 1975.³ Nowadays it has become a standard method of assessment in both undergraduate and postgraduate students. The OSCE is a multipurpose versatile evaluative tool that can be utilized to evaluate competency, based on objective testing through direct observation.⁴ It allows evaluation of clinical students at varying levels of training within a relatively short period, over a broad range of skills and issues. It consists of several "stations" in which examinees perform a variety of clinical tasks in a specified time period against the criteria formulated to the clinical skill and thus demonstrating the competency of skills and attitudes of the students. Judging is done by a team of many examiners in-charge of the various stations of the examination and thus it is advantageous to both the examinee and teaching standard of the institution. Outcome of the OSCE examination is not affected by prejudice. As many teachers are involved, each looking at a particular issue in the training, OSCE takes much shorter time to evaluate more students in any given time over a broader range of subjects.⁵ Till today no examination method is flawless. OSCE is more difficult to organize and requires more materials and human resources. The basic steps in conduction of OSCE exam include:

- 1 Determination of the OSCE team: Examiners and time keepers are required for correct movement of candidates and accurate time keeping. OSCE is expensive in terms of manpower requirement.
- 2 Skills to be assessed / OSCE Stations: Through complex stations of OSCE we can evaluate communication skills, management problems, administrative skills, handling unpredictable patient behaviour and data interpretation in a postgraduate student. These assessments and many others are impossible in traditional clinical examination^{6,7,8}
- 3 Objective marking schemes: The marking scheme for

the OSCE is decided and objectively designed. Candidates should be provided with answer booklets for the answers to tasks on the unmanned stations, which should be handed over and marked at the end of the examination.

- 4 Recruitment and training of the standardized patients: Vu and Barrows defined standardized patients as "real" or "simulated" patients who have been coached to present a clinical problem.^{9,10}
- 5 Logistics of the examination process: Enough space is required for circuit running and to accommodate the various stations, equipment and materials for the exam. A large clinic room completely cleared is ideal and may have further advantage of having clinical staff that will volunteer towards the execution of the examination thereby reducing cost. The stations should be clearly marked and the direction of flow should also be unambiguous. All candidates should acquaint themselves to the direction of movement and the sound of the bell.

Aims and objectives of the study were to evaluation of postgraduate students as a part of practical examination by OSCE, to study advantages and disadvantages of OSCE and to study inclusion of OSCE in practical examination.

MATERIAL AND METHOD

One week of extensive planning, and preparation was carried out to draft the various case scenarios, clinical questions, collections of photographs, clinical reports of various investigations of the patients. We evaluated 4 degree (JR III) and 3 diploma (JR II) students by OSCE.

There were total 25 stations kept. Out of which 6 were observed stations and 16 were response stations and remaining 3 were rest stations. There were six faculties to conduct the OSCE for the observed stations. Total marks allotted were 100. For passing, minimum 50% marks were mandatory. At every station 3 minutes were allotted to write the answers in the provided answer sheet. OSCE was completed in approximately 80 minutes. We took the help of three interns, one clerk and one peon for smooth conduction of OSCE i.e. time management for each station, distribution and collection of answer papers, transfer of patients from ward to examination hall. All answer sheets were evaluated as per marking system in model answer papers. Feedbacks were obtained from each student about OSCE.

RESULTS

Out of four (JR III) degree students, three students passed and one failed. Unfortunately all three Diploma students failed.

All students passed in observed stations. Three minutes time was found to be less for observed stations however it was adequate for response station. All the degree and diploma students were thrilled as they were exposed to OSCE for first



Figure-1: OSCE examination hall and OSCE in progress

time. They found it very challenging, interesting. However diploma students felt that the level of OSCE pattern was more difficult for them than for the degree students. But they said that OSCE was a good tool for evaluation in postgraduate examination. Due to inclusion of specific questions and coverage of large part of syllabus, everyone tried to answer each station but many failed to answer correctly. Uniform yardstick was applied for each student so they liked the OSCE pattern as there was uniform evaluation at one time and it was relatively bias free. All students demanded OSCE every 6 months. We faculties who conducted the OSCE came to know that it needs extensive planning and preparation, large space and many personnel for its smooth conduction.

DISCUSSION

Medical postgraduate students are regularly assessed for their knowledge, skill and attitude- formative as well as summative. These evaluations help to know whether students have become knowledgeable and skilful specialist doctors. Traditional methods of assessment include history taking, clinical examination and management which often end in mere theoretical discussion. Many skills are not tested often. Subjective factors like luck, lack of standardization, mood of examiner may affect the score. On the contrary OSCE is a good tool for evaluation in summative postgraduate examination, which eliminates pitfalls of traditional methods to a large extent. In OSCE more specific questions are asked and large part of syllabus is covered. Uniform yardstick is applied for each student. So bias is minimised. All types of patients may not be present at the time of examination. Large number of students can be assessed in short time. OSCE is more objective and subjective errors, luck factors are eliminated to large extent. So it addresses gap between subjective and objective evaluation.^{5,6,7}

Thus OSCE is good tool for evaluation of postgraduate students to test all domains i.e. Knowledge, psychomotor skills, bedside manners, communication skills and attitude of the student. The OSCE style of clinical assessment has given its obvious advantages, especially in terms of objectivity, uniformity and versatility of clinical scenarios for their assessment, showed superiority over traditional clinical assessment. Evaluation of clinical students at varying levels of

training within a relatively short period, over a broad range of skills and issues was possible with OSCE without prejudice in examining students and provided the same scope and criteria for assessment. But organizing OSCE requires lots of preparations, manpower and funding resources. OSCE may be a part of examination along with traditional method of evaluation. Passing OSCE need not be must as criteria but 20 -25% credit can be given for passing.

CONCLUSIONS

Objective Structured Clinical Examination is a good tool for evaluation of postgraduate students. However it requires lots of preparations, manpower and resources.

REFERENCES

1. Hubbard JP, Levit EJ, Schumacher CF, Schnabel TG., Jr An objective evaluation of clinical competence. *N Engl J Med* 1965;272:1321-1328
2. Barman A. Critiques on the Objective Structured Clinical Examination. *Ann Acad Med Singapore* 2005.;34:478-482
3. Harden RM, Gleeson FA. Assessment of clinical competence using an objective structured clinical examination (OSCE). *Med Educ* 1979;13:41-54
4. Barrows HS, Abrahamson S. The programmed patient: a technique for appraising student performance in clinical neurology. *J Med Educ* 1964;39:802-805
5. Hamann C, Volkan K, Fishman MB, et al. How well do second-year students learn physical diagnosis? Observational study of an objective structured clinical examination (OSCE). *BMC Medical Education* 2002;2:1186-1188.
6. Prislun MD, Fitzpatrick CF, Lie D, Giglio M, Radecki S, Lewis E. Use of an objective structured clinical examination in evaluating student performance. *Fam Med* 1998. May;30(5):338-344
7. Harden RM, Stevenson M, Downie WW, Wilson GM. Assessment of clinical competence using objective structured examination. *Br Med J* 1975;1:447-451
8. Baerheim A, Malterud K. Simulated patients for the practical examination of medical students: intentions, procedures and experiences. *Med Educ* 1995;29:410-413
9. Vu NV, Barrows HS. Use of standardized patients in clinical assessments: recent developments and measurement findings. *Educ Res* 1994;23:23-30
10. Vander Vleuten CP, Swanson DB. Assessment of clinical skills with standardized patients: state of the art. *Teach Learn Med* 1990;2:58-76.