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RESEARCH ARTICLE

OBJECTIVE STRUCTURED PRACTICAL EXAMINATION-AN ASSESSMENT TOOL FOR THE EVALUATION OF TEACHING AND LEARNING

Patil. NJ* and Saini. N

Department of Pathology, Krishna Institute of Medical Sciences, Karad

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ABSTRACT

Introduction: Medical students should be assessed for their knowledge, comprehension and psychomotor skills. Traditional examination overlooks these points and mainly reflects the global performance of the students. Objective structured practical examination (OSPE) is the new system of assessment which is objective, valid and reliable tool for evaluation of teaching and learning.

Aims & objective: To evaluate the role of OSPE as an assessment tool for secondyear MBBS students in the subject of Pathology.

Materials and Methods: OSPE was introduced for second year MBBS students for the formative assessment in the subject of Pathology. Two factors were considered for determination of the effective outcome i.e. performance of students and feedback from the students and examiner.

Results: OSPE was accepted by all the students as a fair assessment tool which covered a wide range of knowledge. OSPE was less stressful to the students, increases confidence, there is no fear of examiner and should be constructed frequently. The percentage of failure was very low. Although the confidence level was very high, the score related to analytical thinking and application of present knowledge to the clinical practice was low.

Conclusion: OSPE is an effective assessment tool for the evaluation of teaching and deep learning.

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INTRODUCTION

Assessment is a goal oriented process and is effective when it integrates all the three domains of learning i.e. cognitive, affective and psychomotor (Prideaux *et al*, 2003). Medical students should be assessed for their knowledge, comprehension and psychomotor skills. The conventional practical examination mainly reflects the global performance of the students and does not evaluate overall competency level. New teaching and assessment tools have been introduced in medical education keeping intention to acquire scientific knowledge, practical skills and competencies (Maxwell *et al*, 2003). An earlier innovation in this regard is the Objective Structured Practical Examination (OSPE), described in 1979 by Harden and his group from Dundee (Harden *et al* 1975; 1979). Unfortunately it is used rarely in our country and only for the formative assessment. OSPE is an effective tool for assessment which has a good capability to discriminate between different categories of students based on their cognitive and application skills (Rehman *et al*, 2012). It is an unbiased system of evaluation of teaching and learning which is neither stressful nor dependent on mood of examiner is constructed to judge performance of students in the practical examination consistent with learning objectives taught in respective domain (Rehman *et al*, 2007). OSPE is an assessment format in which the candidates rotate around a circuit of stations at each of which a specific task has to be performed.

The marking system for each station is structured in advance. Blueprint is used to plan the content of OSPE (Boursicot *et al*, 2005). Students and teachers feedback is considered a key indicator for successful implementation of OSPE which links to effective teaching that includes understanding and interpretation (Roushton *et al*, 2005; Al-Mously *et al*, 2012; Manjula *et al*, 2013).

Aims and Objective

To evaluate the perception and performance of second year medical students in the subject of Pathology by conducting OSPE for the formative assessment.

METHODOLOGY

OSPE was constructed for the formative assessment of the second year MBBS students in the subject of Pathology in our department. A batch of 25 students was included for the assessment. The tasks selected for the OSPE were based on the learning objective of the course and the candidate's level of learning. Blueprint was used to plan the content of OSPE so that different domains of the skill could be assessed on equal basis. The OSPE was designed with the suitable consideration of venue (practical hall Pathology), & time (practical hours). Total 20 marks were allotted for 10 stations (2 marks for

*Corresponding author: Patil. NJ

Department of Pathology, Krishna Institute of Medical Sciences, Karad

each station). For each station 2 minutes were allotted and 2 blanks were kept.

Marking schedule was based on the important aspects of the learning objectives to be tested. List of equipment's was prepared and gathered one day prior to examination. Recruitment of staff including clerk, technician, attendants and examiners was done in advance and instructions were given regarding the conduction of OSPE. Clear instructions were given to appearing students on the previous practical day regarding the exact task they were expected to perform. Arrangement of stations was done 2 hours prior to examination. Stations as well as answer-sheets were numbered in sequence. Rest stations were provided and timing for each station was managed with stopwatch. Attendants and technicians were utilized for arrangement of stations, time management, proper guidance to students during rotation, distribution and collection of answer-sheets & feedback forms. Examiners were briefed about the marking system & allotment of marks for each station. OSPE was conducted as per the designed protocol.

Observations and Results

Two factors were considered for determining the effective outcome i.e.

1. Performance of students
2. Feedback from the students and examiner.

The answer-sheets were assessed as per marking schedule. The score was as follows:-

Table no 1 Showing performance of the students

Marks	Percentage of students
<50%	5 %
50-60%	75%
60-70%	20%

Feedback was taken from the students and the examiner. Constructive feedback was obtained from all the students as follows.

1. OSPE is better than the current method of assessment.
2. The examination is less stressful to the students.
3. OSPE is useful for revisions and can help in the preparation for the summative assessment.
4. There is no fear of examiner.
5. OSPE increases the confidence level of the students.
6. Examination format is good.
7. Sufficient time is given for thinking & correction.
8. OSPE offers possibility of high scoring.
9. OSPE should be conducted frequently.

Feedback from the students was as follows

1. Confidence level was 95%.
2. The percentage of failure was very low (5%).
3. Considering the analytic thinking & application of present knowledge to the clinical practice the score was low (20%).

CONCLUSION

OSPE can be considered as an effective tool for the assessment of deep learning i.e. understanding and interpretation. OSPE is feasible and ensures objectivity, reliability and validity in the assessment. It can be used for formative assessment and as a part of summative assessment. It explicit specific criteria for judging and grading successful performance. The students are subjected to the same test which makes assessment system fair to everyone. Single specimen, slide photograph, instrument or chart can be used for any number of students for the conduction of OSPE. OSPE ensures uniformity in the assessment & the bias is taken care of. OSPE offers nonthreatening & comfortable atmosphere to students as there is no direct student teacher interaction.

It is more popular in the students than the traditional methods of assessment.

Feedback from the examiner revealed that teaching methods should be focused on the clinical application of pathological knowledge.

The lecture session should include more active interaction with students.

Thus feedback is the central component of the effective assessment which can be used to overcome the drawbacks in the conventional teaching learning method and provides further improvement and standardization. Still there are few drawbacks like availability of space for the arrangement of stations, availability of trained examiner and assistants for the help and time required for the organization and prior orientation of students & examiners. Also the examiner remains passive during conduction of the test.

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