

Perception of the Introduction of Objective Structured Practical Examination (OSPE) among Faculty of Preclinical and Paraclinical Departments in a Medical College

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Abstract:

Background: Under the Competency based undergraduate curriculum the objective structured practical examination (OSPE) is a standardized assessment tool as it tests the students on what they can do rather than what they know. OSPE covers the lacunae that exists in traditional practical examination (TPE) which is more subjective and the element of examiner's bias is present. The advantages of the OSPE are that it ensures a uniform marking scheme and consistent examination methods for both examiners and students.

Objective: The primary objective of this study was to explore faculty perception, across pre and para clinical departments of a medical college, of using OSPE as an assessment tool.

Methodology: A cross sectional study was conducted in a tertiary health care institute for a period of 2 months in 2020. Perceptions of all the medical teachers of pre and paraclinical departments with regard to introduction of OSPE was collected using a pre-validated Likert's scale-based questionnaire which, because of COVID 19 times, was sent to the faculty both by WhatsApp and e mail.

Results: Among the faculty, all were aware about OSPE. However, with the exception of the Community Medicine department where OSPE was being regularly used in combination with TPE, none of the other pre and paraclinical departments had started consistently using OSPE as a method of assessment.

70.9% faculty agreed (10% strongly agreed) that OSPE covered a wider range of knowledge than TPE. Nearly 80.8% agreed (20.1% strongly agreed) that it was a fairer assessment tool when compared to TPE. Examiner bias & patient variability can be removed to a large extent by OSPE was agreed by 80.4%. However, 90% strongly felt OSPE needed a lot of coordination by staff and consumed a lot of time. 55.1% felt OSPE can be used as a formative assessment tool, at least a few stations could be included, during the post end examination. Nearly 75% disagreed that OSPE should be followed as the only method of assessment in pre and paraclinical specialties henceforth. 100% agreed that OSPE in combination with traditional practical examination (TPE) can produce good results.

Data Analysis: Descriptive statistics was used for the analysis of data and results were expressed as percentages.

Conclusion: The faculty perceived use of OSPE as a useful and fair formative assessment tool that can be used in combination with TPE for best results.

Keywords: Standardized Assessment Tool, Traditional Practical Examination (TPE), Competency-Based Curriculum, Objective Structured Practical Examination (OSPE).

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Introduction

Competency based undergraduate curriculum has suggested Objective structured practical examination (OSPE) as a valid, reliable and objective assessment tool. [1]

The term OSPE was derived from Objective structured clinical examination (OSCE) in 1975 which was later extended to practical examination and was modified by Harden and Gleeson. [2,3]

Though practical skills are often still being assessed only by conventional/ traditional practical examinations (TPE) which are more subjective, an objective assessment pattern like OSPE needs to be introduced.[4,5] OSPE, through a specified set of tasks, assesses, by observing directly, the performance/ skill of students in a structured pattern. The tool tests the students on what they can do rather than on what they know. [6]

The theory examination, through the long and short answer questions as well as multiple choice questions, can assess the knowledge of the students. The traditional practical examination (TPE), consisting of spots and viva voce, tests mainly the cognitive domain. The practical examination to be more effective as an assessment tool should be designed in a way to explore all the 3 domains of learning- the cognitive domain by stimulating the student to think, the psychomotor domain, through performing certain skills in a structured manner and the affective domain through, for example, gauging communication skills with hospital patients or even simulated patients.

OSPE is a standardized tool for objectively testing all the 3 domains of learning in the preclinical and paraclinical subjects of a medical curriculum. [7] OSPE ensures a uniform marking scheme and consistent examination methods. In addition, the structured nature of this evaluation method offers less opportunity for factual recall and luck. [8]

OSPE is the method which can best assess students in a problem-based curriculum and can help them to develop into a holistic physician of first contact with the community while being globally relevant. [9,10]

Objective: The primary objective of this study was to explore faculty perception, across pre and para clinical departments of a medical college, of using OSPE as an assessment tool.

Methodology: A cross sectional study was conducted in a tertiary health care institute for a period of 2 months.

The perceptions of all the medical teachers of pre and paraclinical departments with regard to introduction of OSPE was collected using a pre-validated Likert's scale-based questionnaire consisting of a set of 11 questions. The questionnaire included the various aspects of OSPE and its comparison with TPE.

The responses were the perceptions noted under five options regarding the statements posed in the questionnaire: Strongly agree/ agree/ neutral/ disagree/ strongly disagree

The confidentiality of participants was ensured.

Selection criteria: Full time medical teachers, having teaching experience of more than 3 years and who were willing to participate & fill the questionnaire for data analysis purpose.

Sampling Method & Size: All 35 medical teachers of pre and paraclinical departments satisfied the selection criteria and were included in the study.

Ethics committee approval was obtained from the Institutional Ethics Committee.

Data analysis: Descriptive statistics was used for the analysis of data and results were expressed as percentages.

Results

Table 1: Faculties perception regarding OSPE (n=35)

Questions	Strongly agree	Agree	Neutral	Strongly disagree	Disagree
OSPE covered a wide range of knowledge compared with traditional practical examination	10%	70.9%	14.9%	4.2%	0
OSPE is fairer compared with traditional practical examination	20.1%	60.7%	19.2%	0	0
OSPE may be exhausting and lengthy if no. of stations will be increased	28.2%	61.8%	10%	0	0
OSPE is a good tool to identify weak students who need more attention	4.6%	70%	20%	5.4%	0
OSPE should be followed as the only method of assessment in pre and paraclinical specialities henceforth	0	1%	24%	3%	72%
OSPE assesses all the three domains (cognitive, affective, and psychomotor)	10%	90%	0	0	0
Examiner bias & patient variability can be removed to a large extent by OSPE	0	80.4%	19.6%	0	0
OSPE needs a lot of coordination by staff and consumes a lot of time	90.5%	7.5%	2%	0	0
OSPE assesses a wide range of skills and assesses a large number of students in a short period of time	0	43.5%	40.5%	16%	0
OSPE should be made mandatory, at least a few stations, for formative assessment during post end examination	0	55.1%	40%	4.9%	0
Combination of OSPE with traditional practical examination (TPE) can produce good results	10%	90%	0	0	0

Among the faculty, all were aware about OSPE. However, with the exception of the Community Medicine department where OSPE was being used in combination with TPE as a formative assessment tool, none of the other pre and paraclinical departments had started using OSPE consistently as a method of assessment.

With regard to the first question 70.9% agreed (10% strongly agreed) that OSPE covered a wider range of knowledge than TPE. As regards the second question, 80.8% agreed (20.1% strongly agreed) that it was a fairer assessment tool when compared to TPE. About the third question 90% were of the opinion that it may be exhausting and lengthy if the number of OSPE stations were to be increased.

As to the fourth question, 70% agreed that OSPE was a good tool to identify weak students who needed more attention. 55.1% felt that at least a few stations of OSPE should be made mandatory for formative assessment during post-end examination. Nearly 75% disagreed that OSPE should be followed as the only method of assessment in pre and paraclinical specialties henceforth. All faculties agreed that OSPE assesses all the three domains (cognitive, affective, and psychomotor). Examiner bias & patient variability can be removed to a large extent by OSPE was agreed by 80.4%. However, 90% strongly felt OSPE needs a lot of coordination by staff and consumes a lot of time in preparation and implementation. 43.5% felt OSPE assesses a wide range of skills and assesses a large number of students in a short period of time. 100% agreed the combination of OSPE with traditional practical examination (TPE) can produce good results.

Discussion

The Objective Structured Practical Examination (OSPE) has been advocated for the practical assessment of preclinical and paraclinical subjects. OSPE is a good tool to avoid examiner bias, to bring objectivity in examination and for standardization of questions.

Findings from present study were similar to a study conducted by Nisha Relwani et al, [11] wherein 90% teachers agreed that inter examiner bias can be eliminated by OSPE. That OSPE tests all 3 domains of learning was a perception of 90% of faculty in this study and faculty perceptions are similar in studies by Chandankhede M et al [12], Pinaki Wani et al [13] and V Suganthi et al. [14] OSPE may become more exhausting and lengthy if the number of stations are increased. 98% of faculties agreed on the same and in a study by Radhika et al. 80% faculty agreed on this aspect of OSPE. However, in a similar study by Zahid K. et al [15] in Pakistan 70% of the faculty felt that it would not be stressful to students.

In response to the question of whether OSPE is fairer compared with traditional practical examination, 80.8% of all faculty felt this was so, in the present study. This finding is similar to a study by Alsaïd, Abir H et al [16] wherein 80% of faculty felt the same. OSPE covered a wide range of knowledge compared with traditional practical examination was felt by more than 70.9% faculty in present study and the same thought was reflected in a study on various aspects of OSPE by Azeem, M A. [17] OSPE needs a lot of coordination by staff and consumes a lot of time was felt strongly by almost all faculty and similar findings were found in a study by Hasan S. et al [18] As shown in Table 1, all faculty favoured appropriate combination of OSPE and TPE. This finding was similar to a study by Rokade and Mane [19] and a study by Shenwai M et al. [20]

Conclusion

The faculty perceived use of OSPE as a useful and fair formative assessment tool that can be used in combination with TPE for best results. OSPE gives feedback to the students and teachers because of the checklists and the structured format it embodies and also provides integration in teaching and learning. However, a number of further studies are necessary and opinions of faculties of a large number of Medical colleges are needed before arriving at a conclusion of total substitution of traditional practical examinations with OSPE.

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