

## RESEARCH ARTICLE

# Objective structured practical examination/objective structured clinical examination as assessment tool: Faculty perception

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### ABSTRACT


**Background:** Competence will be acquired in medical education if there is a regular periodic assessment. Traditional practical assessment is subjective, and due to the lack of objective practical assessment, the competency in skill acquisition will be compromised. Implementation of objective structured practical examination (OSPE)/objective structured clinical examination (OSCE) will be a reliable tool for the effective assessment of all domains. **Aims and Objective:** The aim and objectives of this study were to explore the perception of faculty on OSPE/OSCE conducted in physiology. **Materials and Methods:** The aim of the study was to obtain the faculty feedback on OSPE/OSCE. This was a descriptive, cross-sectional study survey questionnaire and in-depth interview. A total of 50 medical faculties teaching in medical colleges of different universities in South India were participated in the study. To all faculties included in the study, the questionnaire was mailed and interview was conducted by telephoning. The results were then analyzed. **Results:** The results indicated the acceptance of OSPE/OSCE by more than 85% of faculties as a good assessment tool which favors better skill acquisition, critical thinking, and learning objective. However, more than 60% of faculties felt that OSPE/OSCE was taxing mentally and physically and it required additional faculty to conduct the examinations. **Conclusion:** OSPE/OSCE helps a student in better acquisition of knowledge and skill as it is a better tool of assessment and also helps in teaching modifications.

**KEY WORDS:** Objective Structured Practical Examination; Objective Structured Clinical Examination; Assessment; Faculty Perception

### INTRODUCTION

Assessment of students in medical profession is often done by written tests which assesses cognitive ability and by testing overall practical performance which assesses knowledge and competence, so the lacunae remain in assessing skill. Skill training is an important aspect in medical profession. Hence, it

is essential to assess whether the objective of skill acquisition has been met. Assessment drives the student learning, and regular periodic assessment not only improves learning but also enhances the competence in all levels of education. Assessment of skills is subjective in traditional conventional method of practical examinations conducted.<sup>[1]</sup> The conventional method of practical tests assesses only students' cognitive ability and cannot evaluate students' actual skill, communication in clinical settings.<sup>[2]</sup> The objective structured practical examination (OSPE) was introduced in 1975 by Harden and Gleeson. The early innovation in this regard is objective structured clinical examination (OSCE), later extended to practical examination. OSPE/OSCEs are conducted by means of rotating students in successive stations that assess students' skills in history taking, physical examination, communication

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skills, patient management, diagnosis, equipment usage in experiments, sequence of steps followed in experiments, and data interpretation. The stations are organized in such a way that it allows students to rotate smoothly in a pre-determined time while being observed by an examiner on a one-to-one basis using standard patients/instruments.<sup>[3]</sup> Hence, OSPE/OSCE is an uniform and reliable clinical and practical evaluation method to assess medical students. Previous study says that it allows the actual demonstration of applied knowledge and skills rather than testing knowledge alone.<sup>[4]</sup> Hence, this method tests the students on what they can do rather than what they know. Examiner also has a key role in conducting a good OSCE/OSPE. In this study, even though all examiners agreed that OSCE will assess skill, but <50% believed that it can test the knowledge.<sup>[5]</sup> The authors in previous studies have opinion that OSCE is a valid tool for assessing patient care, interpersonal and communication skills, and professionalism and is a reliable method for the evaluation of practice-based learning and improvement and system-based practice but not medical knowledge.<sup>[6,7]</sup> Hence, the study was taken to explore the perception of faculty on OSPE as assessment tool.

## MATERIALS AND METHODS

A total of 50 faculties of all cadre of physiology department belonging to ten medical colleges in South India were included in the study as subjects. Met faculties personally/ telephonic conversation made to explain the details, purpose, and method of the study. To all of the faculties, the details of OSCE/OSCE we conduct in our department were also mailed which included five each questions of practical and clinical experiment with the checklist. Faculty of the Physiology Department, JSS Medical College, was involved in designing questions and checklist. All faculties were trained on OSPE/ OSCE through workshop conducted by Medical Education Unit, JSS Medical College, Mysuru.

Along with that, a self-made structured and prevalidated questionnaire was mailed. The questionnaire was prepared by referring previous studies using five-point Likert scale. A few modifications were made in the questionnaire. Questionnaire validation was done by consulting medical education faculty to review the questionnaire and to determine whether the questionnaire measured what it was designed to measure. The answered questionnaires were received through mail and were analyzed.

## RESULTS

Among 50 faculties, 45 had attended a workshop on OSPE by various centers and other 5 were familiar with OSPE/OSCE. In the present study, more than 80–90% believed that OSPE/ OSCE helps in testing objectivity and skills, promotes critical thinking in students, suitable for all level of students, and helps in enhancing teaching level. More than 80% said that it is

time-saving, and at the same time, more than 60% said that it is tiring to conduct OSPE. More than 80% of faculty believed that OSPE/OSCE is a uniform assessment tool, there is no examiners bias and it could be frequently conducted [Tables 1 and 2].

## DISCUSSION

Feedback analysis is most important and useful basis for modifying and improving medical education. OSCE/OSPE as a teaching-learning methodology is accepted tool as it provides more emphasis on understanding. More than 80% of faculties agreed that OSPE/OSCE helps in focusing on learning objectives and favors better performance by the students. Majority of faculty agreed that OSCE/OSPE is the best tool for assessment as it could assess all the three domains (cognitive, affective, and psychomotor). 84% of faculties agreed that OSPE/OSCE favors critical thinking (cognitive); furthermore, they opined that, in OSPE/OSCE, practical/clinical skills (affective domain) were tested better compared to conventional method. There is a lack of assessment with regard to effective and psychomotor domain in the conventional method. OSPE/ OSCE tests the mental attention and attitude toward learning.

In conventional examination, attitudes are usually not tested and students are questioned with regard to this final conclusion. The ability to examine a patient is not observed, and hence, final score indicates the overall performance. These defects of examination can be reduced in OSPE/OSCE.

As students perform different tasks at each station in front of the examiner, OSPE/OSCE system is a better tool for the assessment of skills in basic sciences,<sup>[8]</sup> gives opportunity to the teacher to observe difficulties faced by student during examination, and also helps in identifying slow learners to whom more attention should be provided in teaching.<sup>[9]</sup> Hence, OSPE/OSCE provides a thorough evaluation and the deficiency is pointed out immediately.

Examiner variability significantly affects scoring, and as the questions and checklist provided in OSCE/OSPE are structured, the subjectivity factor involved may reduce the correlation coefficient between marks awarded by different examiners for the same candidates' performance to as low as 0.25.<sup>[10]</sup>

This type of evaluation helps to assess the areas of strength and lacunae of teaching methodology to rectify the difficulties and revise the curriculum suitably.<sup>[11,12]</sup>

**Table 1:** Distribution of participants according to their designation

Designation	Number
Professors	4
Associate professors	12
Assistant professors	34

**Table 2: Responses from participants**

Questionnaire for faculty OSPE/OSCE	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	N (%)	N (%)	N (%)	N (%)	N (%)
OSPE and OSCE test objectivity	40 (80)	10 (20)	-	-	-
OSPE and OSCE measured practical and clinical skill better	45 (90)	5 (10)	-	-	-
Needs critical thinking	42 (84)	8 (16)	-	-	-
Time saving compared with traditional examination	4 (8)	46 (92)	-	-	-
OSPE and OSCE eliminated examiners' bias	38 (76)	12 (24)	-	-	-
Intervals to conduct OSPE and OSCE should be frequent	2 (4)	48 (96)	-	-	-
Will be tiring to conduct	2 (4)	15 (30)	2 (4)	25 (50)	6 (15)
Students will be able to perform the given task in the prescribed time	18 (36)	32 (64)	-	-	-
Uniform evaluation of students is possible in this system	43 (86)	7 (14)	-	-	-
OSPEs/OSCEs can be replaced for practical table viva	6 (12)	5 (10)	9 (18)	22 (44)	8 (16)
Introduction of OSPE and OSCE for evaluation will be favorable to students	12 (24)	34 (68)	4 (8)	-	-
Introduction of OSPE and OSCE for evaluation in formative assessment	12 (24)	38 (76)	-	-	-
Introduction of OSPE and OSCE for evaluation in summative assessment	9 (18)	10 (20)	9 (18)	22 (44)	-
Suitable for all level of students	-	45 (90)	4 (8)	1 (2)	-
Enhances teaching level	8 (16)	34 (68)	4 (8)	4 (8)	-

OSPE: Objective structured practical examination, OSCE: Objective structured clinical examination

44% of the faculties disagreed for replacing practical table viva to OSPE/OSCE and also for implementation of OSPE/OSCE in summative assessment, while more than 60% of faculties agreed that OSCE/OSPE was taxing mentally and physically and it required additional faculty and time to construct and implement the examination.<sup>[13]</sup> This constrains the implementation of OSCE/OSPE in summative assessment. In our study, this is indicated by more 50% of faculties disagreeing implementation of OSPE/OSCE for summative assessment.

In previous study, even though all examiners agreed that OSCE will assess skill, <50% believed that it can test the knowledge<sup>[5]</sup> unlike our study results suggest that it is a good tool for assessing all three domains. Hence, OSPE/OSCE has an imminent future in examination format.

Limitation of the study was small sample size, as a number of faculty exposed OSPE/OSCE procedure were limited.

## CONCLUSION

OSPE/OSCE provides an opportunity to assess the clinical/practical application of knowledge. Structuring of questions and emphasis on objectivity is main emphasis in OSPE/OSCE. However, the lack of strict guidelines on the type of scenario to be followed in OSPE/OSCE needs experience and experimentation in the same result in the refinement of the OSPE/OSCE as a tool for learning and evaluation. We conclude that OSCE/OSPE can supplement the existing pattern of conventional methods of clinical/practical examination.

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