

Research Article

Assessment of III MBBS Students using OSPE/OSCE in Community Medicine: Teachers' and students' Perceptions

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Abstract: It is well known that conventional practical examination has several problems. Further the subjectivity also effects the correlation negatively between marks awarded by different examiners and performance of same candidate. The objective of OSCE/OSPE is to reduce the chances of examiner bias and assess the students' skills. Though this concept was introduced by Ronald Harden more than thirty five years ago; still it is not implemented in many of Health Universities and medical colleges in India. It is not introduced in assessment of students of Maharashtra University of Health Sciences, Nasik also. Aim and Objective of the study is to know the perceptions of teachers and students regarding OSCE/OSPE as a tool for assessment and to know how it can be made more effective. The present study was conducted in dept. of Community Medicine of MIMSR Medical College, Latur. All the teachers, PG students of Dept. of Community Medicine and all undergraduate students of 7th semester were enrolled in the study to know their perceptions regarding OSCE/OSPE. The teachers and students were briefed regarding Objective Structured Clinical/Practical Examination with a PowerPoint presentation and interaction. An examination was conducted using OSCE/OSPE with four station where all students and teachers participated. The data was collected with a preformed proforma and analyzed. The study aimed to know the perceptions of the teachers and students regarding OSCE. Most of the students and teachers favoured this type of examination. However they also mentioned some advantages, disadvantages as well as gave some suggestion for making this examination more effective. The study has highlighted many interesting findings; some were in congruence with literature. All the participants in the study were in favour of using this assessment method in future. OSCE/OSPE can provide a valid and reliable means of assessing the clinical skills of students. From the study it can be concluded that the students and teacher had consensus over using Objective structured clinical/practical examination as a tool of assessment in Community Medicine. OSCE/OSPE can provide a valid and reliable means of assessing the clinical skills of students.

Keywords: OSCE, OSPE, Traditional Practical Examination, Assessment

INTRODUCTION

The main aim of medical education is to foster the development of clinical competence in students at all levels. The proficiency assessment of the students is done through different type of examinations in the educational institutes of public and private sector at undergraduate and postgraduate levels. They are multiple choice examinations, short and long answer examination.

In view of large number of admissions in medical colleges, considerably more and larger groups of students have been admitted in various programmes and it is very difficult now to assess the students under common parameters.

The theory examinations are used to assess the knowledge of students. While the purpose of practical examination is to assess the cognitive, psychomotor and affective domain as well. But this purpose is not met somewhere as most of the time the students are assessed

for knowledge only and not for attitude and skill. It is a well known fact that the students learn for what they are assessed i.e. "learning is assessment driven". A single assessment method is not comprehensive in assessing a student.

It is well known that conventional practical examination has several problems [1-3]. Further the subjectivity also effects the correlation negatively between marks awarded by different examiners and performance of same candidate [4].

Oral / viva examinations has been replaced by objective structured practical examination (OSPE) and objective structured clinical examination (OSCE) in Basic Medical Sciences and Clinical Sciences respectively to overcome the problems which are faced in traditional practical examinations in medical institutions [5].

The students are given about five – 10 minutes

at each station and are observed evaluating or are queried about a diagnosis or management of a particular condition. Examination is meant mainly for student's interpersonal skills, history taking skills, physical and diagnostic skills. It evaluates student's knowledge base and problem solving ability. Assessment is performed at each station with a predetermined checklist made with the consensus of all examiners. It has demonstrated reliability and validity for assessing clinical performance, though labour and time intensive and requires some expertise [6-7].

The objective of OSCE/OSPE is to reduce the chances of examiner bias and assess the students' skills. Though this concept was introduced by Ronald Harden more than thirty five years ago; still it is not implemented in many of Health Universities and medical colleges in India. It is not introduced in assessment of students of Maharashtra University of Health Sciences, Nasik also.

Historically, it has originated from medical education, and is now being adopted by many disciplines of healthcare education. Because the OSCE is a new experience for most students and teachers, it is important as educators, that we explore this assessment from the perspective of the student.

Considering all this, the study is aimed to know the perceptions of teachers' and students' perceptions regarding OSCE and OSPE.

Aim and Objective of the study was to to know the perceptions of teachers and students regarding OSCE/OSPE as a tool for assessment and to know how it can be made more effective.

MATERIAL AND METHODS

Type of study: cross sectional study.

Study setting: Dept. of Community Medicine, MIMSR Medical College, Latur.

Study population: All 7th semester student, teachers of Dept. of Community Medicine.

Period of study: 6 months

The present study was conducted in dept. of Community Medicine of MIMSR Medical College, Latur. All the teachers, PG students of dept. of community Medicine and all undergraduate students of 7th semester were enrolled in the study to know their perceptions regarding OSCE/OSPE.

The study was conducted as follows.

1. The teachers in dept. of community medicine were briefed about the concept of OSCE/OSPE with the help of power point presentation. They were invited to participate in the study.
2. Then the same presentation was done for the 7th semester students. They were also invited to participate in the study. All their queries regarding examination were solved.
3. After discussion with the teachers it was decided to conduct examination for the students. All the teachers were involved to prepare the stations for conducting examination with OSCE/OSPE. Four stations of five marks each were finalized after presentation/discussion with teachers. The duration for each station was seven minutes. Checklist was also prepared with full participation of the teachers. The stations used were given in table 1.

Table 1: The stations used

Station No.	Station details	Domain assessed	Patient used
1.	Cognitive, Assessment of dietary history of a suspected tuberculosis patient.	Cognitive, Affective and Psychomotor	Simulated patient
2.	Measurement of blood pressure	Cognitive and Psychomotor	Simulated patient
3.	Filling a syringe for DPT Vaccine Administration	Cognitive and Psychomotor	-
4.	Counselling father of a 4 year child suffering from gastroenteritis	Cognitive, affective and Psychomotor	Simulated patient

4. Actual examination was conducted with prior information to the students so that they should come prepared. The students were assured that the marks secured in this examination will not be counted for final assessment. The

confidentiality of the stations was maintained till the end of examination. A team of three teachers was appointed as examiners on each station so that all of them should be involved. The team included a senior teacher, a junior

- teacher and a postgraduate student.
- Non-teaching staff of department was also trained to help in conduction of examination. Two servants and a clerk acted as simulated patient during examination.
 - The views and perceptions of teachers and students were noted with the help of a proforma which included some statements.

Likert's scale was applied to know their degree of agreement with the statement.

- Immediate feedback regarding examination was given to students. Teachers were also interacted for their suggestions for making this examination more effective.

RESULTS

Table 2: Teachers' Perspectives about OCSE/OSPE

Sl. No.	Questions	Strongly Agree	Agree	Neither agree Nor disagree	Disagree	Strongly disagree
1.	OSCE/OSPE is fair compared with TPE.	03 (23.08)	06 (46.15)	02 (15.39)	02 (15.38)	00 (0.00)
2.	OSCE/OSPE covered a wide range of knowledge compared with TPE.	00 (0.00)	04 (30.77)	03 (23.08)	05 (38.46)	01 (7.69)
3.	OSCE/OSPE is easier to pass compared with TPE	00 (0.00)	06 (46.15)	03 (23.08)	04 (30.77)	00 (0.00)
4.	OSCE/OSPE with standardized patients is better than ward assessment with real patients	00 (0.00)	06 (46.15)	03 (23.08)	04 (30.77)	00 (0.00)
5.	OSCE/OSPE may be exhausting and lengthy if no. of stations will be increased	05 (38.46)	05(38.46)	02 (15.39)	00 (0.00)	01(7.69)
6.	OSCE/OSPE is more stressful compared with the old method (TPE)	02 (15.38)	04 (30.77)	03 (23.08)	03 (23.08)	01 (7.69)
7.	Viva – Voce is better than OSCE	01 (7.69)	00 (0.00)	01 (7.69)	09 (69.23)	02 (15.39)
8.	OSCE/OSPE is very useful and relevant to study and the type of work Students will be doing after graduation.	06 (46.15)	04 (30.77)	02 (15.39)	01 (7.79)	00 (0.00)
9.	OSPE should be followed as the method of assessment in Community Medicine henceforth	01 (7.69)	10 (76.93)	01 (7.69)	01 (7.69)	00 (0.00)
10.	Variability of examiner & patient can be removed to a large extent by OSCE/OSPE	02 (15.38)	11 (84.62)	00 (0.00)	00 (0.00)	00 (0.00)
11.	OSCE/OSPE may influence methods of teaching.	01 (7.69)	10 (76.93)	00 (0.00)	02 (15.38)	00 (0.00)

Table 3: Students' Perspectives about OCSE/OSPE

Sl. No.	Questions	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1.	OSCE/OSPE is fair compared with TPE.	02 (18.18)	07 (63.64)	01 (9.09)	01 (9.09)	00 (0.00)
2.	OSCE/OSPE covered a wide range of knowledge compared with TPE	06 (54.55)	04 (36.36)	01 (9.09)	00 (0.00)	00 (0.00)
3.	OSCE/OSPE is easier to pass compared with TPE.	04 (36.36)	07 (63.64)	00 (0.00)	00 (0.00)	00 (0.00)
4.	OSCE/OSPE with standardized patients is better than ward assessment with real patients	04 (36.36)	04 (36.36)	01 (9.09)	02 (18.19)	00 (0.00)
5.	OSCE/OSPE may be exhausting and lengthy if no. of stations will be increased.	02 (18.18)	07 (63.64)	01 (9.09)	01 (9.09)	00 (0.00)

6.	OSCE/OSPE is more stressful compared with the old method (TPE).	00 (0.00)	01 (9.09)	00 (0.00)	08 (72.73)	02 (18.18)
7.	Viva – Voce is better than OSCE	00 (0.00)	02 (18.19)	01 (9.09)	04 (36.36)	04 (36.36)
8.	OSCE/OSPE is very useful and relevant to study and the type of work Students will be doing after graduation.	09 (81.82)	02 (18.18)	00 (0.00)	00 (0.00)	00 (0.00)
9.	OSPE should be followed as the method of assessment in Community Medicine henceforth	06 (54.55)	05 (45.45)	00 (0.00)	00 (0.00)	00 (0.00)
10.	Variability of examiner & patient can be removed to a large extent by OSCE/OSPE	05 (45.45)	06 (54.55)	00 (0.00)	00 (0.00)	00 (0.00)
11.	OSCE/OSPE may influence methods of teaching.	06 (54.55)	05 (45.45)	00 (0.00)	00 (0.00)	00 (0.00)
12.	Attitude of examiners during OSCE/OSPE was better as compared to TPE.	05 (45.45)	05 (45.46)	01 (9.09)	00 (0.00)	00 (0.00)
13.	The degree of emotional stress in OSCE/OSPE was less as compared to Traditional Practical Exam. (TPE)	05 (45.45)	05 (45.46)	01 (9.09)	00 (0.00)	00 (0.00)

Table 4: Some advantages of OSCE according to teachers and Students

Faculty	Students
Students will learn at least some skills required for	No bias in time and questions by examiners
Help to improve teaching learning process	Improves clinical skills, knowledge and self-confidence of students
Improves clinical skills & knowledge of students	More conceptual learning
	Stress and anxiety may be reduced as in viva – voce
	Attitude of examiners is better as compared to traditional practical examination
	Feedback given by examiners which was very helpful

Table 5: Some disadvantages of OSCE according to teachers and Students.

Faculty	Students
Only specific questions are to be asked as in proforma	Little difficult to manage time at stations
A pattern of questions may be formed and students will study only concerned topics	No direct interaction with examiners
More resources (examiners, time) required for preparation	May not be comprehensive assessment
Preparation of stations requires expenses and time; continuous process	
Comprehensive assessment may not be possible as we have to follow proforma	

Table 6: Suggestions by teachers and Students to make OSCE more effective.

Faculty	Students
Examiners should get a chance to ask questions related to stations which are not there in proforma	More time needed for each station
Teaching and assessment should go hand in hand	More emphasis should be given on maintaining confidentiality of the examination
Higher level of OSCE should be conducted for student with distinction	There should be some interaction or conversation with the examiners
Some modifications should be done in OSCE and can be implemented (OSCE + Traditional Practical Examination)	

The present study was conducted in 11 students of 7th semester and the 13 teachers of department of Community Medicine, MIMSR Medical College, Latur. The study aimed to know the perceptions of the teachers and students regarding OSCE. Table 2 and table 3 shows the perspectives of teachers and students respectively. Most of the students and teachers favoured this type of examination as shown in table. However they were also asked to mention any advantages, disadvantages as well as give some suggestion for making this examination more effective as in table 4, 5 and 6.

DISCUSSION

The present study is conducted at MIMSR Medical College, Latur, one of the medical institution affiliated to Maharashtra University of Health Sciences Nashik. It is well known that conventional practical examination has several problems [1-3]. Further the subjectivity also affects the correlation negatively between marks awarded by different examiners and performance of same candidate [4]. One potential method for assessing clinical competence in the work-simulated setting is the Objective Structured Clinical Examination (OSCE). The OSCE was first described by Harden et al. (1975) [8] as a means to assess the clinical skills of final year medical students. This type of examination has an international growing popularity. It can also be used to measure preclinical skills that other test do not perform [9]. The objective structured examination in many countries is a gold standard even in clinical skills assessment. This method of examination completely eliminates subjectivity, favouritism and simultaneously the student has greater chances to express their knowledge.

This experience provided an opportunity to know the students' and teachers' responses about OSCE. They raised some issues about advantages and disadvantages of this method of examination and also gave some suggestions for further improvement of OSCE. Both students and teachers accepted that this type of examination is better than the traditional practical examination.

The traditional university examination is to be held in both morning and afternoon session and all the examiners are supposed to take examination of every student. The examiners complain about extensiveness of examination and students complain about variability and irrelevance of questions by examiners. Most of the students and teachers agreed that examiner bias may be eliminated by following this type of assessment. They also agreed that it is easier to pass OSCE/OSPE as compared to traditional practical examination. Several studies have proved the Objective Structured Clinical/Practical Examination as a reliable assessment tool [10-14].

Any examination is a well-known source of

stress and anxiety and OSCEs in particular considered as quite stressful [15]. But in present study students disagreed that OSCE/OSPE is a stressful examination in contrast with the opinion of the teachers. Our students seemed to be comfortable with this type of examination; however they agreed that this type of examination may be exhausting and stressful if number of stations will be increased. These findings were in congruence with findings of Smee S. [11] where he observed that OSCE is less stressful than traditional examination.

Students found difficulty in management of time at some stations so they demanded more time to be given for these stations. Lack of practice at being examined in the OSCE/OSPE format might be the cause of dissatisfaction with time available. The students may get practice for management of time if there will be prior administration of one or two mock examinations ("dry run"). Our faculty members and students agreed that this method of assessment should be followed in Community Medicine which will also be helpful to improve teaching methods. One interesting finding in this study was that the students were in favour of encounter with the examiner; they wanted examiners to ask some questions. Even the teachers also suggested they should be allowed to ask some questions related to the task at station.

There are some limitations of this study like small sample size and a specific cohort selected from a medical institution which restricts the generalization of results. The examiners should be involved in teaching a skill prior to assess it, which may be helpful in enhancing the quality of OSCE/OSPE. The examiners or assessors should be trained to ensure reliability and consistency in scoring criteria [16].

CONCLUSION

The study has highlighted many interesting findings; some are in congruence with literature. All the participants in the study were in favour of using this assessment method in future. OSCE/OSPE can provide a valid and reliable means of assessing the clinical skills of students. So it is recommended that OSCE/OSPE should be used on pilot basis before being fully adopted. A good assessment requires continuous efforts and sufficient resources like manpower, money and time.

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