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Original Research

To OSCE or not to OSCE: student's perception of preparatory OSCE in a tertiary care hospital in Pakistan

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ABSTRACT

Objective: To assess the feedback provided by medical students on efficacy of the Surgical OSCE, and the feedback provided in preparation of the final exam, conducted at the end of the academic year. **Materials and Methods:** A cross-sectional survey was carried out amongst 133 students at the Department of General Surgery's Unit "D" in Khyber Teaching Hospital, Peshawar from November, 2014 to November, 2015. Students were asked to fill out questionnaires regarding the importance of preparatory OSCE and the feedback provided during these sessions and their contribution in preparing for the final exam. **Results:** 75.2% of the students were of the opinion that a wide range of knowledge was covered regarding surgical topics and examinations, and 82.7% agreed that the feedback provided by the teachers was helpful. 93.2 % agreed that the environment at the time of the test was very cooperative and that the teachers were helpful. 83% of the students agreed that the test was conducted in a fair manner with no bias. **Conclusion:** OSCE is a standardized format of examination. The feedback provided by the students is valued highly and is representative of their perceptions and can thereby help in the advancement and improvement of the testing process.

KEY WORDS: Objective Structured Clinical Examination; Feedback, General Surgery; Undergraduate Medical Education; Medical Students.

INTRODUCTION

Medical Education is an ongoing process of which feedback from students is an integral part [1-3]. It not only allows a form of communication between students and teachers but also helps to improve the performance of both [1, 2, 4]. Feedback is necessary to monitor the ongoing process of medical education. Providing input to the students has been seen to be associated with better learning and progress on part of the students in terms of skills and performance [1-3]. The historical method of hierarchical teaching was vertical with a flow of knowledge from teacher to student and examinations were held without prior guidance. Performing various clinical tasks such as history taking, examinations and minor procedures under observation has led to advancement in this regard [1-3].

Although, in medical education, Ende defines feedback as the information provided to the students by the facilitators or teachers regarding their competency, efficiency and performance, generally it is information provided to both the students by the teachers as well as to the educators by the students [2, 4]. Unfortunately, despite a wide understanding of the usefulness of student feedback, practice has been limited and this is attributed to time restraints on part of the teachers [1, 2]. On hand feedback cannot be provided as much as would be ideal, because of the lack of time. Furthermore, it has been found to be cumbersome on both the part of the examiner as well as the students [1]. OSCE (Observed Skills and Clinical Examination) however offers great prospect and enables both the examiners as well as the students to provide timely and accurate feedback [3].

Many methods can be employed for assessing the competency of students including multiple choice questions and short-essay questions, but none have been seen to be satisfactory in evaluating clinical skills [4-6]. OSCE is a method of examination that has recently been employed in Pakistan (after being implemented in the more developed countries) as an effective method of examination for the undergraduate students even though it was being used in postgraduate exams [4]. Previous studies have shown that it provides a summarized format and enables students as well as teachers to provide feedback with great ease [4, 7]. It was introduced in the 1970s by Harden [8] as a method to assess performance of a student regarding clinical competency and skills ranging from interviewing and examination of a patient to the ability to summarize and note findings, form a differential diagnosis, and map out a management plan [4,9-12].

Khyber Teaching Hospital is a tertiary care hospital that has an affiliation with Khyber Medical College of Khyber Medical University. Originally, the longer formats of oral examination included long and short cases which over the last few years have largely been replaced by the OSCE. This has provided the opportunity to assess the feedback provided by both students and teachers [3]. The aim of this study was to review information provided by the students regarding the feedback received by the teachers and the students' perception in its contribution to their performance in the final exam.

MATERIALS AND METHODS

OSCE compromises of several stations where different skills of the student are assessed including history taking,

physical examination, specimen identification, instrument identification and radiological assessment [3, 9].

Various methods are present to evaluate OSCE, however students' opinion and perception of the method has immense significance and is an effective method for the assessment of the examination and its effectiveness [12].

In our study, we used ten stations in the OSCE to assess the performance of the students including history-taking skill, physical examination, and counseling of the patient, radiological assessment, specimen and instrument identification as well as clinical scenarios (Table 1). Students were given three minutes per station, over which the required task had to be completed consisting of both interactive and non-interactive stations. It was ensured that rest stations be placed in between the stations in order to prevent the students and standardized patients from being strained.

In his study where Beigzadeh et al, differentiates between simulated and standardized patients, he explains how Harden and Borrows define a simulated patient as a lay person who is an actor that has been taught carefully to role-play in order to present the signs and symptoms of an actual patient. The simulated patients cannot be discerned from real patients by experts. Whereas a Standardized patient is a lay person that may or may not have medical issues or may be a patient who has been trained to present the picture of a certain disease or play the role of a patient [13].

A standard format was used for the assessment of the students at each station. Each station was given a total of ten marks, which were broken down into multiple parts according to the questions or tasks at each station. The standard marking sheet had been approved by, and made in consultation with the senior surgeons and academic staff of the ward to ensure validity. It was taken into consideration that the marking sheets are such that the information regarding marking is kept secured and only information regarding the student performance is given back to the student. This was done in order to attain the required goal of preparing the students for their final exam.

Table 1.

Station	Task
1	Counselling (E,SP)
2	History (E, SP)
3	Radiological Assessment
4	Surgical Instruments
5	Clinical Scenario based Questions
6	Surgical Sutures
7	Clinical Scenario Based Questions
8	Surgical Specimen
9	Surgical Instruments
10	Clinical Picture Based Questions

E= Examiner, SP= Standardized Patient

This study was a cross-sectional survey conducted from November, 2014 to November, 2015 in Surgical D ward of Khyber Teaching Hospital, Peshawar.

This session of Final year MBBs consisted of 260 students which were divided into 16 batches by the college administration, each consisting of 14-18 students' per batch. Nine batches of students were part of this study on the assessment of feedback provided by the teachers and the effectiveness of the OSCE on the preparation for the final exam. The batches to be included in this study were selected by simple random sampling. The batch numbers were written on pieces of paper which were then withdrawn randomly. Thus a total of 133 students out of 260 were included in this study.

Each batch would spend two weeks in the ward at the end of which an OSCE exam would be conducted. On the initial day, each batch would be introduced to a focal Postgraduate Trainee Medical Officer to help the final year address any difficulties they might come across. An introductory class would be taken in which the schedule for the next two weeks of the rotation in the surgical ward would be explained in detail. Each student would be assigned beds, for which they would be responsible in terms of history taking, examination, laboratory tests, and management. This enabled students to have hands-on experience of dealing and interacting with patients. Furthermore, morning and evening classes would be taken by both the consultants and the postgraduate trainees in which major cases, examinations, radiological films, investigations, and management of patients would be discussed. It was made mandatory to attend the evening rounds and emergency OPDs and OR, thereby exposing the students in every way to the surgical patients and preparing them for the OSCE to be held at the end of fifteen days rotation in the ward. Students were also informed about their valued opinions being taken into consideration for the betterment of the process at the end of the OSCE.

At the end of the OSCE, a session was held with the students to highlight the weak areas by the examiners on spot. Feedback would be provided in which information would be given to the students by the examiners regarding their competency, efficiency and performance, after which a structured questionnaire consisting of eight entities was handed out to the students to analyze and take into consideration the insight of the students. The students were required to give their opinion on the knowledge covered, fairness of the test, time given, feedback, and whether this preparatory OSCE would help in the final exams.

RESULTS

Questionnaires collected showed a response from 133 students out of the 133 that were tested thereby having a 100% response rate. The study revealed that the majority of the students (75.2%) were of the opinion that a wide range of knowledge was covered regarding surgical topics and examinations. Sixty-five students (48.9%) disagreed that more time was needed at each station and agreed that the

three minutes that were provided per station were sufficient. Seventy students (52.6%) thought that the test was rather stressful. Nearly half of the students (47.4%) thought the test highlighted weak areas whereas eleven students failed to answer. The majority (94%) of the students agreed that the test would be helpful in the preparation for the finals.

About 78.9 % students responded that this was not their first introduction to OSCE and 82.7% agreed that the feedback provided by the teachers was helpful. The majority agreed that the teachers were very helpful (93.2%) and 93.2 % agreed that the environment at the time of the test was very cooperative. Eighty three percent of the students agreed that the test was conducted in a fair manner with no bias (Table 2).

The data collected was analyzed using SPSS version 22 for descriptive statistics.

DISCUSSION

It is generally accepted worldwide that OSCE is in fact a standardized format of testing widely accepted by the students [10-12]. The study carried out in Khyber Teaching Hospital (a tertiary care hospital) in Pakistan has contributed to the fact that practice OSCE which covers a wide range of knowledge in a concise manner, is largely believed to contribute to better performance in the finals and that the feedback provided by the teachers is very helpful. OSCE conducted in the colleges and teaching hospitals contributes to the overall preparation for the final exams. It allows the collection of data form students enabling the teaching staff to learn about the deficiencies in testing and teaching and how to further improvise on the process of testing [14, 15].

However some recent studies including one carried out in the University Of Birmingham, suggests that feedback provided to the students from mark sheets is not helpful in improving OSCE [3]. The primary reason for this being lack of specificity of the feedback on tasks that were performed by the students, despite the fact that it was taken from the OSCE mark sheets, thereby failing to result in significant improvisation. Deficiency of specific and timely feedback from the teachers, which may have been specific to the student and not the task also contributed to this. Ende stated in his study that feedback should thus, be specific to the tasks performed and not to the student [3]. It should be properly timed, specific and valid, well phrased, based on self-obtained data and should deal with actions and decisions rather than interpretations [2, 3]. This has been seen to be associated with an increase in mutual respect, understanding, and an increase in the self-esteem of students in relation to their ability to perform [1].

A study conducted at Newcastle Medical School, in relation to students' perception of OSCE brought into light their concerns regarding the structure of the exam [16]. Participants insisted that more time should be given at each station so they may compose themselves and fully comprehend the commands in order to carry out the required task. It was also asked that proper and concise instructions be given as to what is required per station, in order to facilitate better performance [17,17]. In another study carried out in Ziauddin Medical University, in Karachi, students also agreed that more time was needed to carry out various tasks and stressed upon decreasing the interactive stations as they led to more anxiety [2, 17]. It was asked that stations testing radiographs be increased to enhance their knowledge regarding those. Students at Aga Khan University offered positive feedback, deeming OSCE as an effective method of evaluation for assessing Psychomotor domains [18], whereas students at King Edwards Medical University, asked that OSCE should be implemented as the method of examination in all clinical subjects [19].

All over the world short essay questions and long cases have and are being replaced by the OSCE [4, 7, 17]. OSCE is now standard practice for testing the clinical abilities of the students thereby making their opinion and feedback on the testing all the more valuable. The information provided by the students is an accurate representation of their opinions which will help in improvisation in the process of testing and overcome any shortcomings, and fallbacks in the process. The perception of the students largely contributes to the betterment of the process on numerous scales in the future [17].

Table 2.

Evaluation Of Objective Structured Clinical Examination (OSCE)				
Question	Agree n (%)	Neutral n (%)	Disagree n (%)	No Comment n (%)
Wide Area of Knowledge Covered	100 (75.2)	30 (22.6)	2 (1.5)	1 (.8)
More Time Required At Each Station	44 (33.1)	22 (16.5)	65 (48.9)	2 (1.5)
Test Was Stressful	22 (16.5)	41 (30.8)	70 (52.6)	0
Areas of Weakness Were Highlighted	63 (47.4)	36 (27.1)	20 (15)	14 (10.5)
Assessment Of the testing process and Students' Perception Regarding Validity and Reliability of the Test				
Would Be Helpful in Final Exam	125 (94)	6 (4.5)	2 (1.5)	0
First Introduction to OSCE	21 (15.8)	5 (3.8)	105 (78.9)	2 (1.5)
Feedback was Helpful	110 (82.7)	16 (12)	1 (.8)	6 (4.5)

The comments provided by the participants will lead to identification of inadequacies on the part of teachers also and help them to address those to enhance future learning [17].

LIMITATIONS

This data has been collected from a limited group of students over the period of one year in a single surgical ward, thereby making the sample size small as a result of which it cannot be used to generalize. Also not all students succeeded in contributing fully to the survey by skipping out on several questions due to lack of understanding of what was being asked.

CONCLUSION

The feedback provided by the students is valued highly and is representative of their perceptions and can thereby help in the advancement and improvement of the testing process. Pakistan's medical schools have long followed the conventional model of education and the wider acceptance of OSCEs is a welcome change.

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