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STUDENT'S PERCEPTION OF OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) IN SURGERY AT BASRAH COLLEGE OF MEDICINE

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Abstract

The assessment method of OSCE gains popularity in most medical schools globally. The Department of Surgery in Basrah Medical College introduces this assessment format since 2010. The main objective of this study is to evaluate student's perception about preference of this test and acceptability of standardized patients.

A survey of successive batches of medical students (3 batches of six year and 4 batches of fourth year), who had been examined with Objective Structured Clinical Examination, was conducted using a self-administered questionnaire. Data were analyzed. The study was conducted in the academic year 2011-2012.

Two hundred and twenty one students completed the questionnaire, 100 students in the 6th year and 121 students in the 4th year. Eighty nine (40.3%) of the all respondents reported that OSCE was an easier examination than the traditional one and 106(48%) perceived that the duration of station was adequate. Moreover, 141(63.8%) preferred to have the traditional examination in addition to the OSCE. There was clear difference in opinion regarding the use of standardized patients (PSs) between 4th year students as 79(65.3%) dislike it while 58(58%) in the 6th year students accept the use of such patients.

In conclusion, the overall student's evaluation of OSCE was encouraging, as the majority of participated students preferred this examination and at the same time they want to keep the traditional one. The benefit of this survey can be gained if timely feedback is offered on the performance of the candidates after applying the standards of OSCE.

Introduction

Assessment is a vital part of medical curricula as it drives the learning process so it must adequately test the goals or objectives set by medical teachers[1-3].

The selection of suitable assessment or evaluation depends on its validity (a measure of the extent to which the test actually measure what is intended to measure), reliability (a measure of whether the assessment or test is consistent and accurate; examines the extent to which factors such as examiners, questions, occasions affect the marks or scores awarded) and practicability (can the requirements for staff and accommodation be met? can it cope with sufficient numbers of students?)[4-6].

Objective structured clinical examination (OSCE) which was introduced by Harden since 1975 and received an increasing interest is a suitable form of testing student's clinical competence as it fulfills most of the previous criteria[7-11].

Our Department of Surgery starts to apply OSCE since 2010 as part of clinical assessment of undergraduate students and this is the first attempt to look at student's perception for the acceptability and preference and in addition to understand student's feeling toward standardized patients.

Evaluation of OSCE experience by students helps to solve the question of its application as new mode of assessment and also defines some of deficiencies and obstacles in the preparation and conduction of this examination.

Method

The survey was conducted in the academic year 2011-2012 on successive batches of medical students (3 batches of sixth year and 4 batches of fourth year) who had an OSCE experience upon completion of their surgery attachment in the sixth and fourth year of their clinical training.

At the end of surgical clinical course which is 10 weeks, students underwent evaluation and assessment in form of long and short case examination in addition to oral examination for the 6th year students followed next day by OSCE, while 4th year students underwent long case examination only and followed next day by OSCE.

The OSCE structure consists of 5 x 5(five stations of five minutes duration for each) for both 4th and 6th year students. Stations designed to test physical examination, history taking, data interpretation and procedure skills performance (table I) and the set of stations for 4th and 6th year students is shown in table II which is similar for both except the presence of orthopedic and practical skill performance stations for 6th year students.

Questionnaires were distributed to all students immediately after their participation in the OSCE and the survey was on voluntary basis entirely. Results were tabulated and studied (Table III).

Table I: Details of the current OSCE stations in surgery at the Medical College of Basrah.

Station 1 (history taking): The student takes a detailed or focused history on a standardized patient with surgical problem e.g. upper gastrointestinal bleeding, abdominal pain etc. Student is asked to answer specific questions regarding the likely diagnosis.

Station 2 (physical examination): The student performs physical examination on a standardized patient or anatomical model e.g. abdominal examination, breast examination, thyroid examination etc.

Station 3 (images interpretation): The student views a series of photos on computer monitor (surgical conditions, chest and abdominal x-rays etc.) and responds to multiple choice questions regarding diagnosis and/or management of each condition or film.

Station 4 (urological): The resident performs a history and/or physical examination on a standardized patient with a urological problem, e.g. haematuria, examination of kidney etc.

Station 5 (orthopedics): The student performs a specific orthopedic examination on a standardized patient e.g. elbow examination, knee joint examination and so on (this station is only for 6th year student and replacing station no.1).

Station 5 (practical skill performance): The student demonstrates her/ his skills in performing a clinical procedure on a prop or a mannequin, e.g. performing digital rectal examination, drawing venous blood sample etc.

Results

A total of 221 students participated in this study, 100 students at 6th year and 121 students at 4th year.

More than one third of students 89 (40.3%) felt that OSCE was easier than the traditional long case examination with no much difference between sixth (39%) and fourth (41%) year students in contrast to 32(32%) students at 6th year who found that OSCE was more difficult than the traditional examination the percent decreased to 23% among 4th year students, while 29% of 6th year students found no difference from the traditional

examination and the percent increased with 4th year students to 36% (Table III).

One of important factors in designing OSCE stations is the duration of the station and whether it is sufficient to achieve the task or not, so 106(48%) of the respondents stated that the time allocated for each station was adequate (53% of 6th year students and 44% of 4th year students).Those who felt that the time was insufficient were 90(41%) students, 38(38%) of 6th year students and 52(43%) of 4th year students, while 9(9%) students from the 6th year were unable to judge and the number increased to 16(13%)students from the 4th year.

The majority of students, 141(63.8%) preferred their clinical examination to be in form of the traditional one combined with OSCE with no difference between 6th year students 69(69%), and 4th year students 72(59.5%).

While those who wanted their examination to be in form of OSEC only were 45(20.4%) students [20(20%) at 6th year and 25(20.6%) at 4th year and this can be explained if we know that 32 students out of them rated OSCE as an easier examination than the traditional one.

Twenty seven (12.2%) students disliked OSCE [8(8%) students in the 6th year and 19(15.7%) students in the 4th year] although they represent a minority but their reasons need to be discovered.

Again there were 8(3.6%) students [Three (3%) in the 6th year and 5(4.2%) in the 4th year] without definite decision regarding what they preferred.

There were 79(65.3%) students in the 4th year preferred to deal with real patients while only 42(42%) students in the 6th year preferred to see real patients and those who felt that standardized patients are just similar to real patients were 58(58%) students in the 6th year and only 42(34.7%) students in the 4th year had the same feeling.

Discussion

Although OSCE has an established place in evaluation and assessment of both undergraduate and postgraduate medical students in large number of medical schools all over the world, it remains a newly used assessment tool in our college. OSCE has been used by department of surgery of Basrah College of Medicine consistently since 2010 in the evaluation of fourth and sixth medical students upon completion of their training in clinical surgery.

Minority of respondents at both fourth and sixth year (23%, 32% respectively) felt that OSCE is more difficult than the traditional clinical examination and this can be attributed to influence of anxiety and lack of confidence associated with new assessment in addition to presence of practical skill performance station designed for 6th year students only, which is absent in the routine traditional examination. While the majority reflected that OSCE is either easier or just similar to the traditional examination.

Duration of station is an important factor in planning of OSCE5 and in response to a question about the time there were 38% of 6th year participants felt that the time allocation was inadequate and the percentage increased to 43% of 4th year participants and this feeling is shared by students from other medical schools.

Interestingly most students (63.8%) felt that OSCE should combine with the traditional examination and this opinion was reflected by both 4th and 6th year students. This high acceptance of the OSCE by students has been previously described in the literature[12,13].

The concept of standardized patients (SPs) was introduced by Howard Barrows and Abrahamson in 1964s to facilitate the learning of clinical skills under the name of programmed patients and subsequently used for assessment since 1968. Many other descriptive terms were used latter but the most common are simulated patients and standardized patients. The standardization referred to in the term

"standardized patient" relates to the consistent content of verbal and behavioral responses by the SP to stimulus provided by a student or examinee[10,14-17].

SPs have been used in the context of formal examination such as OSCE by Harden and Gleeson in 1979[4]. The use of standardized patients in our department started with the introduction of OSCE and it is essential to have feedback from the students about such patients to evaluate the role of SPs in the examination as there are many unresolved issues regarding their use.

A clear difference of opinions occurred regarding the acceptance of standardized patients between 6th and 4th year students. Where majority of respondents from the 4th year (63.3%) preferred to deal with real patients and didn't accept SPs, in contrast with literature 13whereas more than half (58%) of respondents from 6th year accepted SPs and this difference can be explained by the fact that fourth year is the first clinical year and students are more eager to see real patients rather than unrealistic patients.

In conclusion, although the findings in this survey are reassuring regarding students' perception about applicability, preference and acceptance of OSCE, there are several points to be considered to further improvement of the OSCE's use.

Firstly, the majority of students in this survey preferred to keep the traditional examination in addition to the OSCE, which is the current policy of the department.

Secondly, it is important to improve training of SPs to gain students acceptance or alternatively to find solution for using real patients.

Thirdly, more attention and care should be directed toward organization of station.

At last we will wait and see our students' perception of the OSCE change with increasing use and with introducing more specific testing which need a frequent appraisal and refinement by the department in addition to feedback from the students.

TABLE I: Details of the current OSCE stations in surgery at the Medical College of Basrah.

Station 1 (history taking): The student takes a detailed or focused history on a standardized patient with surgical problem e.g. upper gastrointestinal bleeding, abdominal pain etc. Student is asked to answer specific questions regarding the likely diagnosis.

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Table II: Types of stations

4th year OSCE	6th year OSCE	
History taking	History taking or practical skill exam.	Station 1
Physical examination	Physical examination	Station 2
Slides examination	Slides examination	Station 3
Urological station	Urological station	Station 4
Physical examination	Orthopedics station	Station 5

Table III: Summary of questionnaire results [Type a quote from the document or the summary of an interesting point. You can position the text box anywhere in the document. Use the Text Box Tools tab to change the formatting of the pull quote text box.] Total (%)	6th year students	4th year students	Response to question
			OSCE in comparison with traditional ex.:
89(40.3%)	39(39%)	50(41%)	Easier
72(32.6%)	29(29%)	43(36%)	Similar
60(27.1%)	32(32%)	28(23%)	Harder
			Station time:
106(48%)	53(53%)	53(44%)	*Sufficient*
90(41%)	38(38%)	52(43%)	Not sufficient
25(11%)	9(9%)	16(13%)	Equivocal
			Exam. Preference:
45(20.4%)	20(20%)	25(20.6%)	OSCE only
(63.8%) 141	69(69%)	72(59.5%)	OSCE +traditional
27(12.2%)	8(8%)	19(15.7%)	Traditional only
8(3.6%)	3(3%)	5(4.2%)	Equivocal
			Accepting of standardized pat.:
100(45.2%)	58(58%)	42(34.7%)	Similar to real pat.
121(54.8%)	42(42%)	79(65.3%)	Real pat. is better

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