

Introduction of OSCE at Undergraduate Level

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To determine feasibility of introducing OSCE to assess clinical competence among final year MBBS students of King Edward Medical College in the subject of Obstetrics & Gynaecology 15 stations OSCE was designed to test cognitive psychomotor and affective domains of knowledge. The OSCE was simple to organise and conduct. Students also liked it very much and demanded to introduce OSCE in other clinical subjects. OSCE is suitable for testing clinical competence of students and can identify areas where teaching methods and/or course contents are deficient.

Key words. OSCE, undergraduate level

OSCE is increasingly used as a way of assessing a range of clinical skills at both undergraduate and postgraduate level abroad. The original description of OSCE is credited to Harden¹ (1975) who states "to avoid many of the disadvantages of traditional clinical examination we have introduced OSCE. In this students rotate round a series of STATIONS in the hospital ward. At one station they are asked to carry out a PROCEDURE and at the next station they have to answer questions on findings at the previous station and their interpretation. As they cannot go back on omissions MULTIPLE CHOICE QUESTIONS have a minimal cueing effect. The student may be observed and scored at some stations by examiners using a check lists. In OSCE the variables and complexity of the examination are more clearly controlled. Its aims can be more clearly defined and more of the students knowledge can be tested. This examination is more OBJECTIVE & MARKING strategy can be decided in advance. The examination results in improved FEEDBACK TO students & staff".

Basic steps in developing OSCE² are: to determine skills to be examined, how many skill assessment station needed? Skill assessment, marking schemes, space for exam, personnel needed (examiner marshals and timekeepers, patients or volunteers), arrangements on the day of exam and review outcome

It was introduced for the first time in Pakistan by College of Physicians & Surgeons in 1990 in certifying examination of family Medicine. We decided to introduce OSCE to evaluate undergraduates at the end of Obstetric and Gynaecology ward rotation. It was started in 1998 in our department at King Edward Medical College/Lady Willingdon Hospital, Lahore. It was thought that this would provide an opportunity to replace gradually traditional examination which tests only factual knowledge and only small portion of clinical competence and lacks objectivity. Moreover, there has been considerable concern about the ability of long and short clinical cases to assess clinical competence of the candidate. While OSCE can reliably test components of clinical competence which includes the ability to communicate effectively and empathetically, counsel non-judgmentally, elicit

appropriate physical signs and perform practical procedures.

Methods

A 15 stations OSCE was developed which would assess different components of clinical competence which are listed as follows in Table I.

Table 1: OSCE Stations

Sub	Station No.	Topic	Skill Assessed	Material
OBSTETRICS	1. O.S*	Preg. With Diabetes	History Taking	Patient
	2. O.S.	Obstetric Palpation	Physical exam.	Patient
	3.NOS**	NST	Interpret test	CTG
	4. O.S.	IUD	Counseling	Patient
	5. NOS	Preeclampsia	Problem solving	Scenario
	6. O.S.	Breech	Practical skill	MODEL
	7. NOS	Anencephalic	Pathology	Path specimen
GYNAECOLOGY	1. NOS	Infertility	History Taking.	Patient
	2. OS	Abdominal mass	Physical exam.	Patient
	3. NOS	Ectopic Pregnancy	Differential Diagnosis	Path. Specimen
	4. NOS	PCOS	Data Interpretation	Lab. Reports and normally
	5. NOS	Habitual Abortion	Radiography interpretation	Hysterosalping ograph
	6. NOS	Taking pap smear	Practical skill	Instruments
	7. OS	Contraception	Counseling	Patient
Basic	N.O.S.	Placenta	Basic Knowledge	Path. Specimen

*O.S.= Observe Station

**N.O.S.= Non Observe Station

***PCOS Polycystic ovarian syndrome


One hundred and eighty students participated in the exam. Brief instructions were given at the start of examination Roll No. were allotted. First batch of students started at their respective P station (Procedure station) where specified task was to be undertaken. 2 minutes were given at each station. When 1st bell rang after 2 minute second batch of students occupied the P stations vacated by 1st batch which moved to their respective Q stations (question and response station) where students used response sheet to answer the questions asked in relation to observation or procedure carried out at previous station.. A sample of response sheet is shown in Table-II. At unobserved station students were asked to write down answer on response

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sheet which was marked later against set of agreed answers.

Table II: Objective structure clinical examination response sheet
 Name----- Roll No.-----Date-----
 Examination-----

Instructions to candidates:

- Answer the questions by shading the appropriate square like this. 
- Do not put unnecessary dots.
- You may erase and alter carefully otherwise answers may be misread.

Q No.1	True	A	B	C	D	E
	False	A	B	C	D	E

For Examiner only

Correct Answer-----, Wrong Answer-----

Score----- Remarks

Check list was used for scoring where student's performance was assessed directly. A sample of check list is shown in Table-III. Marks of two were added to give final score.

Table III. Check List for Examiners (History Taking)

Instruction to examiner

1. Please observe and tick appropriate box.
2. Complete and check list for each candidate, exclusively.

Candidate Name:_____ Roll No._____

The Candidate	Yes	No.
Greets and introduces himself herself	+2	-2
Listens Patiently	+2	0
Does not put leading questions	+2	-2
Is polite in conversation	+2	-2
Does not interrupt	+2	0

Marks (+ve)_____ Marks (-ve):_____

Marks obtained:_____ Examiner Signature

At the end of examination feed back session was held with students and examiners. Our interpretation of results of this study are based on students comments and examiners opinion.

Results

Student's View on OSCE

It was clear from students' comments at the feedback session that they had no difficulty in adapting to this method of clinical assessment. The majority viewed that it was a fairer method of assessing clinical competence than the traditional examination. The main advantages they considered were reduced examiner's bias, a variety of skills and knowledge were tested, a similar test for all students and an opportunity for feedback. The major criticism was that time was short for stations involving history taking and counseling. Students were happy about the quality of rest station They suggested that P & Q station should be combined.. OSCE should be introduced in other subject as well. It should be given more weightage as compared to other components of traditional exam.

They considered OSCE as reliable, valid, practical and flexible.

Examiners Impression of OSCE

The majority of examiners had no experience of OSCE apart from a short explanatory introduction. Most felt it was an improvement over the traditional exam. The main advantages expressed by the examiner included the range of competence tested and standardization of testing.

Discussion

OSCE could be introduced easily at undergraduate level where it had not previously been in use. It is well accepted by both students and examiners. No significant organization problem were encountered in its introduction. McFaul (1993) in Belfast used OSCE to assess clinical competence in obstetrics and gynaecology in two medical schools and commented that the standardized OSCE was simple to organize and conduct once the content had been decided even in medical school where it was not previously introduced³.

OSCE can discriminate between students possessing varying abilities. Weakness of particular students can also be highlighted. Such examination can allow statistical analysis of question difficulty and question discrimination so that a collection of valid and reliable questions could be build up, leading to better testing of clinical competence. OSCE can test ability of medical students to apply evidence in clinical practice⁴. Team OSCE is being introduced as a new method of formative assessment of medical students to test breadth of knowledge, skills and attitudes needed in general practice with complete simulation of doctor patient encounter from history to management⁵.

Conclusion

As OSCE can reliably and effectively fulfil the two main objectives of a medical examination i.e., to test factual knowledge and clinical competence and minimises shortcomings of traditional examination including lack of sensitivity, restricted scope for assessment, difficulties with objective assessment of history taking, communicative and counseling skills and wide variation in standards of the examiners and their perception of what is to be tested. It is concluded that OSCE should first complement and then replace our traditional examination.

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