



## OSCE an Assessment Tool for Clinical Skills in Nursing Education: A Review Paper

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### Abstract

Objective Structured Clinical Examination (OSCE) is considered to be an most effective Method for clinical Nursing Education. It includes structured assessment of very specific and clearly defined clinical skills in which students complete sequence of practical examination designed to assess various components of a procedure.

This method provides numerous advantages for assessing the clinical skills in Formative and summative evaluation. This review will discuss a detailed overview of OSCE, advantages, uses, and its implementation.

Keywords: OSCE, Assessment tool, Clinical Skills, Nursing Education.

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### 1. Introduction

In the Nursing Education arena, evaluating the clinical performance of nursing students has been a long-standing area of debate. Historically Nursing Education has been challenged to find the most effective evaluation methods that can objectively and reliably assesses the clinical performance of Nursing students at all levels of Education (Edair & Abdoel Hamid 2013; Hatamelah & Abu Sabeed 2015). Evaluation includes addressing appropriate and relevant methods, suitable techniques, proper administration, and interpretation of results. It must contribute directly to learning improvement. Continuous evaluation is necessary by sampling all output produced by the student like course work, tests, projects and practical's related to knowledge, skill and attitude for the final result of the student in a particular course (Oreman-2009).

Conducting Practical Examination to assess the clinical component / competency of nursing students is a difficult task for both evaluator and students. (Gerry Gormany 2011). Often this method is used to improve the practice as well as to enhance the growth of an individual. Real or simulated practical test is based on direct observation of professional task / procedure performed by a student is consistent with constructive learning principles which promotes retention, understanding and active case of skills (Gayathri Priya 2011).

### 2. Objective Structured Clinical Examination

An innovative approach in assessing the clinical competence. It is also known as Objective Structured Practical Examination. OSCE is observed as the 'Gold Standard' for assessing the clinical skills. This graded evaluation system that was developed for use in medicine in Dundee during mid – seventies (1979). Harden & Gleason had the idea of creating this test to assess clinical competencies of trainee doctors by making them individually rotate through a number of "stations" where they are assessed individually using precise sets of

criteria in the form of a checklist. In the OSCE, the word "O" stands for objectivity, the letter "S" stands for structure, "C" stands for clinical examination and "E" stands for examination.

### 3. Purposes of OSCE

- To Measure clinical performance Skills.
- To evaluate basic, Core and Advanced Nursing competence.
- To promote objectivity in evaluation.
- To match assessment to intended constituents.
- To promote structured interaction between student and examiner.
- To identify objective performance criteria for the skill being examined.
- To apply in both formative and summative assessments in health professional education.

### 4. Process

The number of students participating in each level is determined by the stations. Studying a large group of students often requires several chapters. All OSCE locations are usually allocated the same amount, usually between three and ten minutes. This too can change in a short time.

### 5. Types of OSCE Station:

The stations are categorised as:

1. Procedure station : Where Procedures are observed by the examines.
2. Question stations : Which are unobserved (only a return answer is desired). Student's performance on a procedure station is observed and marks are awarded.
3. Rest Station : Where there is a short break provided in between the rotation to other stations.

### 6. Advantage of OSCE in Nursing Education

Advantages of OSCE in Nursing education outweigh the other traditional methods of clinical examination. The important advantages include: -

- Provides Objectivity in evaluation
- Test students' ability to integrate knowledge, clinical skills, and communication with patients.
- Promotes innovation
- Reduces examiner's bias
- Economical as the stations can be reused.
- Have potential for peer feedback and assessment.
- Uniform scenarios for all candidates

The greatest advantages of using the OSCE is the flexibility of its individual components. The station can be in the form of small scenarios, simulations, case studies, multiple choice questions, brief theoretical question or even a rest station which helps students relax from time to time.

Major (2015) acknowledged the benefits of assessing discreet skills for novice and introduced various OSCE station to assess basic and core skills among nurses. The results showed that the OSCEs are very useful and viable tool for the objective assessment of nurses' clinical based skills. A Qualitative study was conducted to explore the Healthcare Students Experience and the investigator adopted hermeneutic phenomenology and after verbatim

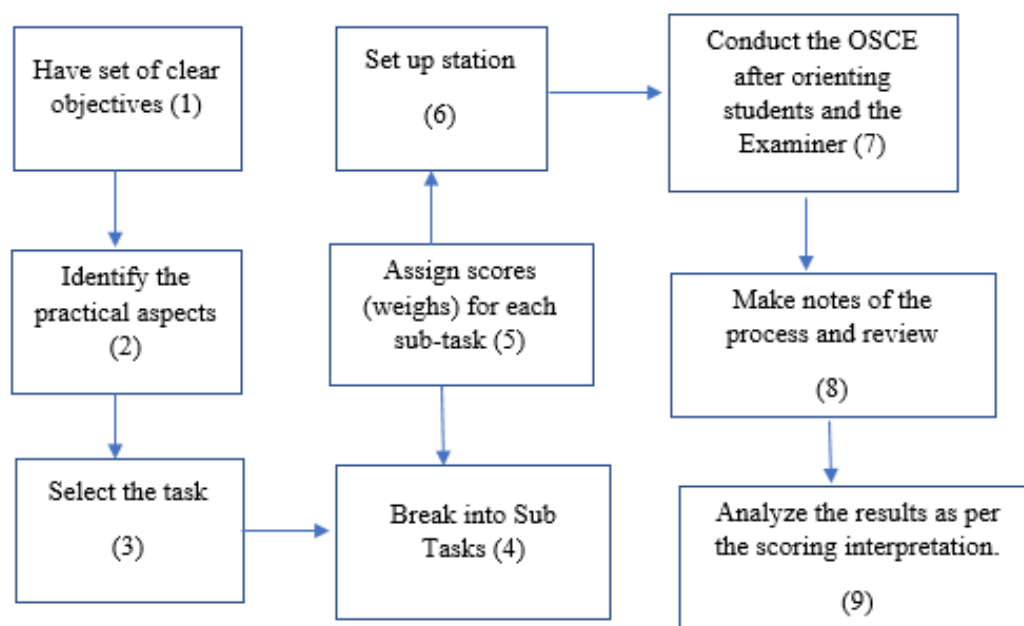
transcription author gained insight on student “lived experiences” from their own words that they demonstrated positive feelings, and are congruent with the literature as students valuing the OSCE as a worthwhile experience.

### 7. Application of OSCE

Generally, the following range of Nursing skills are typically assessed in using OSCE:

- Interpersonal communication and common skills
- History taking skills
- Physical examination of specific body system
- Mental health assessment
- Clinical decision making including the formation of differential Diagnosis
- Clinical problem-solving skills
- Interpretation of clinical finding sand investigation
- Management of a clinical situation, including treatment and referral
- Patient Health education
- Health Promotion
- Acting safely and appropriately in an urgent clinical situation
- Basic and advanced nursing can procedure practices

### 8. STEPS IN implementing OSCE



### 9. The components of OSCE

- Examination coordinating committee
- Exam coordinator
- List of skills, Behaviours and attitude to be assessed
- Scoring Criteria for assessment (making scheme of the checklist)
- Examination site
- Examiner
- Examinees
- Examination Station

- a) Time and Time allocation between station
- b) Complete station
- c) Examination Question (Case Based Scenarios)
- d) Environment of exam section
- e) Examination station circuit
- f) Patient (Real / Simulated)
- g) Time keeper / Clock and Time signal
- h) Contingency plan
- i) Assessment of the Performance of the OSCE
- j) Viva Voice / Oral Examination

## 10. Organizing the OSCE

- OSCE assessment comprises of approximately 10-15 stations, each requiring approximately 4 to 5 minutes. Depending on assessment needs, total number of stations and time spent at each station may vary.
- It is mandatory to complete all stations at the same time.
- Students go through all the stations and must go to the next station at the signal.
- Because the stations are generally independent, students can start any procedural station and complete the cycle.
- Using 15 stations of 4 minutes each, 15 students can complete the exam in 1 hour.
- Every station is designed to test a specific component of clinical competence.
- At some station called the procedure station, students are given test to perform on patient or simulator. There are observers in all stations with agreed upon checklists or rating scales to score the student's performance.
- At other station called response station, student respond to question of the objective type or interpret data or record their findings of the procedure station.

## 11. Challenges

### i. General challenges

- a) Extreme compartmentalization:

Although OSCE is a great tool to assess clinical skills and practical knowledge, it imposes some limitations.

Nursing, includes holistic patient care, rather than mere symptomatic treatment which is difficult to assess through OSCE.

### ii. Organisers Perspective:

OSCE is a resource-intensive technique to assess competency. Besides funds for constructing stations, human resources and time required for preparation and execution are also more. It requires careful planning, setting up of different stations, training the SPs, training the evaluators, procuring different equipment's for each station.

- a) Content selection and design

OSCE mainly includes the ability to test is its ability to test the psychomotor and affective domain which needs careful designing and implementation of plan.

**Other important Challenggers are: -**

1. Framing of stem / questions of OSCE can be difficult even for an experienced teacher unless trained adequately as the question stem needs to be concise and it should be such that the candidate identifies what to do. Preparation of a structured checklist where all skills are demonstrable can be difficult. The number of items in the checklist and time provided need to be correlated. should correlate to the time provided.
2. Assessment of a trained professional for evaluation:

It is neither feasible nor practical to keep a certified professional in each station to assess the student skills. Usually, the evaluation are non-clinicals who have been trained to evaluate the student based on the checklist

For example: A student may adopt a different technique to inspect the liver which a clinician can understand. However, if such a method is not included, the evaluator is unaware of it, the chances of making that student as not competent are very high. Furthermore no credits are given if the student perform certain additional examination that are not included in the checklist, as the evaluator may not be trained to interpret it. Checklist are not as practical as they were thought to be. Regchretal (2008) compared the psychometric properties of checklists and global rating scales for assessing competencies as tests of the OSCE format. They concluded that "Expert-rated global rating scales showed higher inter-station reliability, better construct validity, better concurrent validity than checklists.

3. Limited knowledge assessment

While OSCE remain superior for the evaluation of affective domain, it cannot adequately assess the student's knowledge. OSCE shouldn't be seen as a replacement to - a case presentation or viva voce.

### **iii. Students Perspective:**

- a) Need for prior exposure:

OSCE is a relatively new model of evaluation techniques used as an assessment tool. Entire process of evaluation needs to be explained well.

Since each OSCE is different, instruction and orientation have to be given before each evaluation, a generalize rule / guide line can be developed.

- b) Focussed preparation:

The focus in OSCE is mainly on interpreting, analysing and performing clinical examination in a clinical scenario. Efforts are to be made to resemble actual clinical scenarios, and the student must be aware of how to evaluate and handle such a station. OSCE would need the students to perform a procedure rather than asking him to describe the method. This calls for better preparation focussed on correct technique to perform a procedure.

- c) Stressful situation:

OSCE is a stressful situation for students compared to conventional examination. Performing a procedure in front of an evaluator is a stressful situation for students. Although the evaluators merely observe the students, some of their body language can induce more anxiety.

## **12. Conclusion**

Due to its Objectivity, uniformity and versatility of clinical scenarios, OSCE stands superior to traditional methods with regard to clinical assessment. In formative evaluation, it offers a customised educational method which allows faculty members to test multiple clinical skills

and different topics while providing on going feedback. OSCEs provide a more objective, valid and reliable evaluation method compared to traditional method. A poorly planned and executed OSCE would lead to resource wastage and poor evaluation, hence teachers need to be trained in Nursing education to conduct OSCE stations and the reliability and validity need to be examined.

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