

OBJECTIVE STRUCTURED CLINICAL EXAMINATION IN NURSING**Dr. Laxmi Rana,**

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Education and examination are closely related to each other. Outcome of an education can never be measured without examination. Examination is a part of education and learning which measures the knowledge, understanding and skill of students in any educational institution. In education an examination is a test to show the knowledge and ability of a student. Thus to examine means to test how good of something to rank it in a level. A student who takes an examination is a candidate or examinee and the person who takes test to decide how well the student has performed is called as **examiner**. An examination can be a written test, an on-screen test or a practical test. Thus examination is a part of education and learning.

Theoretical knowledge assessments are usually conducted by institutions to examine the knowledge aspects and understanding to certain aspects related to knowledge. However measuring the skill is too difficult especially when we consider quality to a practical task. In health science accuracy in the performance of a skilled task becomes too difficult if lacking objectivity in the assessment. Thus in nursing also objectivity in assessment is must because nursing is an applied science requiring perfection in caring the patients.

Problems Associated with Conventional Practical Examinations –

The conventional clinical and practical examinations have several problems.

- Although marking should depend only on student variability, patient (or in the case of practical - experiment) variability and examiner variability significantly affect scoring.
- In fact, the subjectivity involved may reduce the correlation coefficient between marks awarded by different examiners for the same candidate performance to as low as 0.25.
- The marks awarded also reflect only the global performance of the candidate and are not based on demonstration of individual competencies.
- Problems in communication

significantly affect the outcome.

- Attitudes are usually not tested at all by the conventional examination. Even in clinical skills, often the student is questioned only regarding his final conclusion.
- The ability to examine a patient and arriving at that conclusion is not observed by the examiners.
- The final score indicating his overall performance gives no significant feedback to the candidate.
- In the traditional method of clinical examination a candidate would be assigned to an examiner for the entire examination which is exhaustive.

These defects of clinical and practical examinations have been realised for long and have given rise to attempts at

improving the current scenario. All these attempts are relatively new and are still in the process of being tried out.

Object Structured Clinical Examination (OSCE):

Objective-all candidates are presented with the same test.

Structured-the making of each station is structured.

Clinical-the tasks are representative of those faced in real clinical situation.

An Objective Structured Clinical Examination is a modern type of examination often used in health sciences such as, nursing and midwifery, medicine, surgery, radiography, pharmacy, dentistry and paramedicine etc. Clinical skill performance and competence in skills such as communication, physical examination, medical procedures/prescription, physiotherapy techniques, radiographic positioning, radiographic image evaluation and interpretation of results can be measured through OSCE. It is also call as objective structured practical examination (OSPE).

An earlier innovation in this regard is the objective structured clinical examination (OSCE) later extended to the practical examination (OSPE) described in 1975 and in greater detail in 1979 by Harden and his group from Dundee. According to Harden (!988) "OSCE is an approach to the assessment of clinical competence in which the components of competence are assessed in a planned or structured way with attention being paid to the objectivity of examination"

Unfortunately, this method is rarely used and that too only for formative evaluation, especially in our country except for the AIIMS, New Delhi, where it forms part of the summative evaluation for the students.

Thus OSCE is an assessment tool in which the components of clinical competence such as, history taking, physical examination, simple procedures, interpretation of laboratory results, patient management problems, communication, attitude etc. are tested using agreed check lists and rotating each student round a number of stations, some of which are observed with check lists. Even rating scales are also used to grade student in a particular grade.

There are two types of stations.

1. Procedure stations- Some stations are called as procedure stations where the students are given tasks to perform on patients. At all such stations there are observers with agreed check lists to score the student's performance.

2. Response stations- At response stations, students respond to questions of the objective type or interpret data or record their findings of the previous procedure station.

The OSCE examination consists of about 15-20 stations each of which requires about 4-5 minutes. Thus the whole procedures requiring only one hour to complete the test.

It can identify students who are weak in performing clinical skills early and also help the mentors, tutors, lecturers and students in directing towards extra sessions, resources and assistance in practice. It may be used as a summative or formative assessment.

Basic steps :

Basic steps of OSCE exam include:

1. Determination of the OSCE team.
2. Skills to be assessed (OSCE Stations).
3. Objective marking schemes
4. Recruitment and training of the standardized patients.

5. Logistics of the examination process.

Points for Student During OSCE:

- Attention to verbal and written instruction and clarifying doubts with the assessors before starting.
- Check of availability of all the equipments needed at the station.
- Stay calm and focused.
- Inform the assessor if missed anything as there may be time to do.
- Keep an eye on the time.
- Communicate with the patient /carer.
- On complication take a moment to run through the mind what was asked to do and check that the task is completed

OSCE Principles -

It is essential to know the principles related to OSCE to make it reliable and objective.

- The OSCE examination consists of about different stations each of which requires about some minutes of time. It usually comprises a circuit of short (the usual is 5–10 minutes although some use up to 15 minute) stations.
- All stations should be capable of being completed in the same time.
- The students are rotated through all stations and have to move to the next station at the signal.
- Since the stations are generally independent student can start at any of the procedure stations and complete the cycle.
- Each candidate is examined on a one-to-one basis with one or two impartial examiner(s) and either real or simulated patient.
- Each station has a different examiner, as opposed to the traditional method of clinical examinations.
- Candidates rotate through the stations, completing all the stations on their circuit. In this way, all candidates take the same stations.
- An OSCE is made objective is by having a detailed mark scheme and standard set of questions.
- Stations in OSCE must be limited to a very specific task such as, recording temperature or giving oral medication or performing eye care etc.
- Instructions must be carefully written to ensure that the candidate is given a very specific task to complete.
- Written instruction may be kept in the unmanned station and a booklet to be kept for writing answer.
- OSCE need to include all most all the elements of the curriculum focusing a wide range of skills.
- All the students are assessed using same standardized question in each station.
- If real patients are used there is need to change the patient to maintain the safety and over use of the patient on ethical ground. It is essential to select the patient with a slight variation in their signs and symptoms so that they can be assessed with the same marking scheme.
- Where simulated patients are used, they must be trained or standardized before test
- Students are detailed out what is expected from them and ensure that

same information is given to all the students.

- Paper pencil test can be done separately where certain objects are kept and students are to write findings

Marking:

Weightage for each item in the check list can be decided by the examiners depending on their importance.

Marking is done by the examiner usually using a standardised mark sheet. Thus for objectivity in evaluation detailed mark scheme and standard set of questions must be used. It is prepared before conducting the OSCE. For example, a station concerning the demonstration to a simulated patient on how to give oxygen mask, the assessment criteria need to include award points for specific actions which are performed safely and accurately.

The examiner can award marks depending on how well the candidate performed the steps. The candidate is only to answer questions that are on the mark sheet and if the candidate writes anything others then the required answer there will be no mark.

At the end of the mark sheet, the examiner often has a small number of marks that they can use to weight the station depending on performance and if a simulated patient is used, then they are often asked to add marks depending on the candidates approach to the patient.

Further at the end of examination, the examiner is asked to give a "global score", which is usually used as a subjective score based on the candidates overall performance, not taking into account how many scores /marks obtained by the candidate.

Lastly the examiner is asked to rate the candidate as pass/borderline/fail. or

some times as excellent / good / pass/borderline/fail. This is then used to determine the individual pass mark for the station.

At the end of the examination, the scores obtained in the procedure stations are totalled to give the candidate score. Scores at individual stations can also be released to give the candidate a meaningful feedback

The sum of the pass marks of all the stations determines the overall pass mark of the candidate. Sometimes the examiner impose a minimum number of stations required to pass which ensures that a consistently poor performance is not compensated by a good performance on a small number of stations.

Advantages-

- OSCE ensures integration of teaching and evaluation.
- OSCEs and OSPEs can be made for any subject.
- Variety maintains student's interest.
- There is increased faculty-student interaction.
- OSCE is adaptable to local needs.
- A large number of students can be tested within a relatively short time
- Makes the assessment of clinical skills more objective, rather than subjective unlike traditional method of examination
- It is considered to be an improvement over traditional examination methods because the stations can be standardised enabling fairer peer comparison
- Complex procedures can be assessed without endangering patient's health.
- Objectivity and step wise assessment help students to

improve skill through repeated practice.

- Removes the risk of injury or litigation while using real patients for examination especially in sensitive area of medicine.
- Generate formative feed back for both the students and programme.
- Covers broader range like problem solving, communication skills, decision-making and patient management abilities.

Disadvantages

No examination method is flawless. Thus OSCE has disadvantages. They are-

- Criticized for using unreal subjects even though actual patients can be used according to need.
- OSCE is more difficult to organize and requires more materials and human resources.
- Shortage of trained examiners .
- Preparation takes time.
- Knowledge and skills are tested in compartments.

It is difficult for students if not instructed adequately

Conclusion

Through OSCE both the process and the product are tested giving importance to individual competencies. The examination covers a broad range of clinical skill and agreed check lists are used for scoring. There is scope for immediate feedback. Patient variability and examiner variability are eliminated. Thus it increases the validity of the examination. The OSCE style of clinical assessments has advantages in terms of objectivity, uniformity , versatility and can

be performed within a relatively short period to evaluate broad range of skills and issues. Thus it is worth implementation for clinical examination replacing traditional method of examination

Reference

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