

EVALUATION OF CLINICAL COMPETENCE



Using **O**bjective **S**tructured **C**linical
Examination (**OSCE**)

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Clinical Competence

- ❖ Definition

- ❖ Classification

Clinical Competence

DEFINITION

- ☞ Is a complex of tasks and skills that a physician should master to be considered competent

CLASSIFICATION

- ❖ Clinical Skills
(History, physical examination & their interpretation)
- ❖ Knowledge & Understanding
- ❖ Interpersonal attributes
- ❖ Problem Solving & Clinical Judgment
- ❖ Technical Skills

**What is the best way to evaluate
clinical competence?**

THE MEASURE

The best method of evaluating clinical competence is the most reliable, valid, and feasible method.

(Harden & Gleeson, 1976)

Measurement Properties

- ❖ Reliability
- ❖ Validity
- ❖ Feasibility

RELIABILITY

- ➔ Is a quantitative expression of the reproducibility with which a test measures the same task by different observers or in different occasions

RELIABILITY

Reliability is expressed as a number between

0 and **1**

0 - no reliability

1 - perfect reliability

Methods of Measuring Reliability

- ❖ Test – Re – Test
- ❖ Split Half
- ❖ Equal Forms
- ❖ Kudar – Richardson Method
- ❖ Generalizability Theory
- ❖ Other programs available commercially

VALIDITY

- ☞ relates to the degree to which a test can accurately measure what is suppose to measure

Aspects of Validity

1. Credibility (Face Validity)

Definition:

Credibility is the similarity of a test to clinical reality

How it can be measured?

- ❖ Judgment of group of experts, this may include examiners and candidates

Aspects of Validity

2. Comprehensiveness (Content validity)

Definition:

The extent to which a test “covers” or samples from a content domain

Measurement:

- ❖ This is also measured by judgment of experts

Aspects of Validity

3. Concurrent Validity (Accuracy)

Definition:

Statistical association with the best available test method

How it can be measured?:

❖ **By statistical correlation with a “gold standard” method, (0-1)**

0 = no correlation

1 = best correlation

Aspects of Validity

4. Predictive Validity (Prognostic Accuracy)

Definition:

Association with some relevant outcome measure obtained some time in the future

Example: Admission test

Measurement:

-by comparing a test with another future test
(statistical correlation)

Aspects of Validity

5. Construct Validity

Definition

the demonstration of expected (hypothetical) difference, using the test in question

Measurement:

by statistical difference of the performance of two groups in the same test

Example

Performance of senior residents & junior residents in an examination

Objective Structured Clinical Examination (OSCE)

General
Medical
Council

Regulating doctors
Ensuring good medical practice

Objective Structured Clinical Examination (OSCE)

Historical Background

- ❖ First introduced by Harden & colleagues in 1975 at Dundee
- ❖ Since its development, the OSCE has gained increased acceptance
- ❖ Numerous reports have appeared in the literature supporting this method, in part because it appears to test skills that other examinations cannot, & because of reports of high levels of reliability & validity

Objective Structured Clinical Examination (OSCE)

Purpose & Description

- ❖ To assess physicians competence, particularly clinical skills
- ❖ Recently OSCE has been used to assess more complex skills such as problem solving, interpersonal & technical skills
- ❖ The various components of clinical competence are assessed at different stations through which candidates rotate equally

Objective Structured Clinical Examination (OSCE)

Purpose & Description (Cont'd.)

- ❖ Candidates are rated using standardized checklists to compare their performance with a predetermined standards of competence
- ❖ The main feature of an OSCE is related to the use of simulated patients or sometimes real patients

Objective Structured Clinical Examination (OSCE)

Measurement Properties

- ❖ RELIABILITY – High
- ❖ VALIDITY – High
- ❖ FEASIBILITY - Low

OSCE

?

Objective Structured Clinical Examination (OSCE)

Summary

- ❖ It is gaining wide acceptance
- ❖ It is an examination format that assess various aspects of clinical competence more than any other methods
- ❖ It is highly reliable & valid, when used to assess clinical skills
- ❖ The major drawback of an OSCE is related to its high costs & very labor intensive

Thank You...