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OBJECTIVE STRUCTURED EXAMINATION AS A TOOL FOR MEDICAL STUDENT'S ASSESSMENT

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The basic underpinnings of clinical competence are

- Knowledge
- Skills
- Attitudes

Although there are many methods for evaluating students knowledge and some for measuring skills, but our ability to measure clinical performance reliably is quite limited.

Assessment methods must meet three criteria to be fair and credible to those being assessed. They must be:

- Valid
- Reliable
- feasible

The traditional long, short case viva approach appears to have validity. The candidates are tested on real patients and asked clinical problem solving questions. Since candidates are tested on different cases and judged by different standards and by different examiners, reliability of the result may by some what suspect.

In order to overcome the poor reliability of clinical examination especially those used to asses medical skills and clinical competence. The objective structured clinical examination (OSCE) is nowadays used all over the world due to its reliability, validity and practica-bility[1-4].

Objective structured clinical examination (OSCE)

In this examination, the candidates rotate through a series of tasks called stations, around which the examinees are asked to rotate. The content of OSCE stations largely covers three main areas:

- **Clinical examination skills**. History taking and examination.
- **Practical skills**. Interpretation and procedure skills.
- **Communication skills and attitudes**.

The examination often has 10-12 or more stations, each lasting 5-7 minutes, several rest stations and one or two larger station of 10-15 minutes for history taking etc. A typical OSCE examination would take 90-120 minutes. However, examination varies from medical college to other in the time allocated to each station and the number of stations.

Since each station can test a totally different content area, the candidates knowledge and skills over a whole range of topics can be tested[5-7]. The major difference from other types of clinical examination is that over the course of OSCE, all candidates are given the same clinical and other challenges and assessed by the same examiners who are provided with a check list to score the performance of the candidates.

In order to ensure that all the candidates are tested on the same clinical materials (patients), trained volunteers role-play as so called standardized patients, particularly for

history taking, but also for some physical examination stations. Real patients are sometimes used but should be instructed to give their history in a reliable fashion.

One other way in which (OSCE) differs from traditional long and short examination is in the use of simulation (anatomical models). Stimulation allows skills to be tested that could not be tested on volunteers (standardized) or real patients for e.g. rectal, vaginal examination etc…

Here, are examples of various skills which are tested in different (OSCE) stations.

1- **History taking skills**: on real or standardized patients. The student is asked to take a history from a patient with for e.g. chest pain, diarrhea, headache, etc. and to present the history at the next station.
2- **Examination skills**: on real, standardized or a dummy (anatomical model). The student is asked to examine a patient for e.g. with breathlessness. He is required to elicit physical signs and reach to a diagnosis or he is asked to perform a rectal examination on (pelvic mannequin) etc…
3- **Interpretation skills**: The student is given some information (images, data, ECG, radiographs, biopsies etc.) and asked for his interpretation and what to do next? This form of skills is very easy to set up, do not need patients or volunteers.
4- **Procedure skills**: On patients or anatomical models. The student is instructed to do some therapeutic or complex clinical management skills. For e.g. to record 12 lead ECG, to prick finger for blood glucose measurement, to demonstrate how to perform plural aspiration or lumbar puncture etc…
5- **Communication skills**: On patients. Good communication is central to clinical competence. The student is asked for e.g. how he would explain the patient to collect his 24 hours urine sample, or to obtain a verbal consent to do lumbar puncture or a surgical procedure.
6- **Attitudes:** attitudes of graduating students have never been formally assessed, yet attitude link very closely to professional behaviours and one a major cause of complaint from patient. The student is assessed for the knowledge of medico-legal framework in which doctors work. The ethical principles which are important for a doctor. And how would these principles are applicable to clinical srtuations etc…

I think it is a time now to think deeply and introduce this sort of assessment for our students. Since the OSCE examination is known to serve in identifying the areas of weakness in the curriculum and teaching methods or both and thus serve as a mechanism to improve educational effectiveness[1,8,9], therefore clinical department staff need to meet together regularly with the supervision of the faculty of medicine to prepare for such an examination, which I believe requires training and increasing experience for preparation of stations by staff members.

To start with, we need to asses parts and not all the examination. The students then can be questioned regarding their attitudes whether positive or negative towards the examination and their opinion of the suitability of this new in comparison to old traditional examination[9,11].

References

1. Tervo RC, Dimitrievich E, Trujillo AL, Whittle K, Redinius P, Welliaman L. The Objective Structured Clinical Examination (OSCE) clinical clerkship: an overview. SDJ Med 1997; 50: 153-156.
2. Prislin MD, Fitzpatrick CF, Lie D, Giglio M, Radecki S, Lewis E. Use of an objective structured clinical examination in evaluating student performance. Fam Med 1998; 30: 338-344.
3. Coovadia HM, Moosa A. A comparison of traditional assessment with objective structured clinical examination (OSCE). S Afr Med J 1985; 67: 810-812.
4. Harden RM, Gleeson FA. 1979 Assessment of medical competence using an objective structured clinical examination. ASME Medical Education Booklet no. 8.
5. Frye AW, Richards BF, Philip EB, Philip JR. Is it worth it? A look at the costs and benefits of an OSCE for second-year medical students. Med Teach 1989; 11: 291-293.
6. Johnson G, Reynard K. Assessment of an objective structured clinical examination (OSCE) for undergraduate students in accident and emergency medicine. J Accid Emerg Med 1994; 11:223-226.
7. Van der Vlevien CPM, Swamson DB. Assessment of clinical skills with standardized patients. State of the art. Teaching and Learning in Medicine 1990; 2: 58-76.
8. Famuyiwa OO, Zachariah MP, Ilechukwu ST. The objective structured clinical examination in undergraduate psychiatry. Med Educ 1991; 25: 45-50.
9. A-Latif A. An examination of the examinations: the reliability of the objective structured clinical examination and clinical examination. Med Tech 1992; 14: 179-183.
10. Lazarus J, Kent AP. Student attitudes towards the objective structured clinical examination (OSCE) and conventional methods of assessment. S Afr Med J 1983; 64: 390-394.
11. Black NM, Harden RM. Providing feedback to students on clinical skills by using the Objective Structured Clinical Examination. Med Educ 1986; 20: 48-52.