

THE OBJECTIVE STRUCTURED CLINICAL EVALUATION

THE GROOTE SCHUUR HOSPITAL NURSES' EXPERIENCE

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INTRODUCTION

It can be said that, in nursing circles, 1984 has been the Year of Evaluation. This has certainly been the case in the Nursing Education Department of Groote Schuur Hospital.

In February 1983 one of the authors attended a three day workshop on Curriculum Planning and Management in Medical Education, arranged by Professor R. Kirsch, Chairman of the Undergraduate Education Committee of the UCT Faculty of Medicine. The workshop leader was Professor R. Harden, MB CHB, MD, FRCP, Professor of Medical Education, Director of the Centre for Medical Education, University of Dundee, Scotland.

The Objective Structured Clinical Examination (OSCE) method was discussed, and the principles were reinforced by the viewing of a video tape made by the UCT Department of Obstetrics and Gynaecology (Kent, p. 388—389; Lazarus, p. 390—394).

On 2 November 1983 a report back on the OSCE method was given to the registered nurses of Groote Schuur Hospital, GSH Maternity Centre and to the tutors of the Carinus and Nico Malan Nursing Colleges.

Following a detailed investigation into the feasibility of this exercise, the OSCE was introduced on 22 February 1984 on an experimental basis, to replace the traditional oral examination of the third year diploma nursing students.

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OPSOMMING

Die tradisionele mondelinge eksamen van die derdejaar diploma-verpleegstudente by Groote Schuur-hospitaal is in Februarie vanjaar, op 'n eksperimentele grondslag, met 'n Objektiewe Gestruktureerde Kliniese Evaluering (OGKE) vervang.

'n Beplanningskomitee moes aan verskeie vrae en probleme die hoof bied. Na alles het die eksamen goed afgeloop en die studente was ook baie entoesiasies oor dié evalueringsmetode. Verskeie voorstelle word na aanleiding van die proefneming aan die hand gedoen.

WHAT IS OSCE?

Van Niekerk and Lombard discuss their experience of the OSCE at the Department of Nursing Science at MEDUNSA in their article and quote Professor Harden: *an approach to the assessment of clinical competence which attempts to improve the reliability and validity of traditional methods, while at the same time providing a practical technique appropriate for use with large numbers of students* (van Niekerk, p. 44).

According to Turner *Professional examinations should be fair, comprehensive, objective and appropriate to the discipline above all. If at the same time they can be made administratively easier, interesting and in themselves a teaching/learning experience, so much the better* (Hall-Turner, p. 112).

In our experience, the traditional oral examination has the following deficiencies:

- a wide range of subjects is covered in the limited time allocated to the oral examination
- very exhausting for students, but particularly for the examiners, as our student groups are large (40—60)
- a subjective method of assessment

- inexperienced examiners are demotivated by the method
- only knowledge is tested and not psychomotor skills or attitudes.

INVESTIGATION

The following questions had to be answered:

- What components of clinical competence should be tested?
- How many and what types of stations should be designed?
- How much time should be allocated to each station?
- Who should man the stations?
- How should the marks be allocated?
- Who should calculate the marks?
- Where should the OSCE be conducted?
- How and where should the 52 students be briefed, as some were on annual leave, on night duty, in theatre, in the community as part of their Community Health practica and the wards were also heavily staffed by this target group. In the latter instance this meant that service needs would be affected by a sudden withdrawal of large numbers of students.

It must be remembered that none of the students had any experience of OSCE's.

PLANNING

An *ad hoc* committee of four members was appointed and it met on three occasions. An aspect of the planning phase was delegated to each member.

Stations

Ten stations were designed. As the target group of students were senior nurses, the emphasis was on administration, patient care, professional practice and teaching.

The procedures and methods decided on are shown in table 1.

Table 1 OSCE for third year student nurses — procedures and methods

Procedure	Method
1. Administration:	
1.1 Problem solving	Questionnaire completed by student
1.2 Ward Inspection	Observed and scored by examiner
1.3 Documentation	Questionnaire completed by student
1.4 Quiz: Pick a Box	Questionnaire completed by student
2. Patient Care:	
2.1 Patient observation	Observed and scored by examiner
2.2 Administration of medication	Observed and scored by examiner
2.3 C.P.R.	Observed and scored by two examiners
3. Professional Practice:	
3.1 S.A.N.C. Regulations	Questionnaire completed by student
4. Teaching:	
4.1 Teaching by precept and example	Questionnaire completed by student
4.2 Health education: diabetic patient	Observed and scored by examiner

Table 2 Comparison of percentages obtained in OSCE and traditional oral examination.

Average % of 52 students obtained in OSCE	Average % of 52 students obtained in traditional oral examination
56 %	63 %

The design of the Nursing Education Section, situated in the nurses' residence, is such that it loops around a quad, making rotation of students easy. It was decided to use this venue, as the large number of students to be examined would have made it impossible to use the wards and the patients. The passage was then clearly marked with arrows indicating one-way traffic and doors were clearly signposted.

The necessary equipment was fetched from the wards in order to create a realistic situation, albeit simulated. On the day of the examination students were handed a questionnaire as they entered the station. A box of completed questionnaires was placed outside each door.

Sweets were placed at strategic points within and between stations and they disappeared at an alarming rate! A resting station was manned by motherly Annie, the domestic, who served tea, coffee and cold drinks to dehydrated survivors of the ordeal.

Time allocation

The students were divided into five groups of nine and one group of seven. The date was set for the 22 February 1984.

Timetables and notices were placed on notice-boards three weeks before the examination, and the Zone Matrons were asked to inform the ward sisters. In this way staffing problems for that day could be minimised.

The initial briefing, which took place weeks before the examination, was informal and students arrived at the Education Department in pre-arranged small groups.

The total time per student on the day of the examination was as follows:
 20 Minutes for second briefing
 45 Minutes — (4½ minutes at each of 10 stations)
 5 Minutes between stations (½ minute between stations)
 ±10 Minutes relaxation after examination
 80 Minutes

Preparation of questionnaires and checklists

The aim with the preparation of the questionnaires and checklists was to judge student performance objectively, that is, to provide evidence of content validity and reliability. To test for content validity there has to be a qualitative and quantitative representation of the syllabus (Sheahan, p. 50). To test for reliability, it is necessary to formulate and work towards precise marking schemes. It has been said that checklists should be drawn up by a group of professionals, and that it should be so arranged that there is just one possible answer to each question (Sheahan, p. 52).

Psychomotor or manipulative skills must be observed on a one-to-one basis in order to be assessed. Similarly social or interactive skills, involving attitudes

and thus in the affective domain, must be observed on a similar basis in order to be assessed" (Sheahan, p. 53).

For administrative reasons, the students' names were written on the questionnaires the day before the examination, and name labels were prepared for easy identification of students.

Preparation of staff

The clinical educators were briefed the day before the examination and set about preparing the stations. Excitement filled the air as trolley-loadfuls of equipment appeared on the horizon of *the tunnel*. The college principals were encouraged to send tutors to observe the examination.

IMPLEMENTATION

When D-day dawned, the first group of students timidly announced their arrival. The second briefing session was more informative and students were again given an opportunity to ask questions.

The results of good planning and initiative were evident: stations were manned by relaxed examiners, equipped and decorated with potplants; students moved obediently from one station to the next to the clanging of the librarians' borrowed school bell; the clerk prevented pile-ups by maintaining a steady flow of traffic in one direction only and Annie gained experience in providing refreshments for a large number of people without the aid of modern gadgetry such as coffee percolators or *soda streams*.

Calculation of Marks

It had been decided to complete the calculation of marks the same day in order to give feedback as soon as possible. In retrospect, this was not a good idea in view of the large number of students and the stress and anxiety because of time constraints, on the part of those marking.

EVALUATION OF STUDENT PERFORMANCE

When the marks obtained by the students in the OSCE were compared with the marks of a different group of students which had been obtained in the traditional oral examination (see table 2) it was significant to note that, in this sample, there was a 7 % difference. This may have been due to the subjective nature of the traditional method of examination, which made mark allocation more difficult.

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