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# Using Objective Structured Clinical Examination (OSCE) in undergraduate psychiatric nursing education: Is it reliable and valid?

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#### SUMMARY

While there is widespread use of OSCE in general nursing specialties, psychiatric nursing has been slow to adopt this evaluation method and it has only recently been introduced to psychiatric nursing education. *Aim:* The main aim of the present study is to test the first application, validity and reliability of the OSCE in undergraduate psychiatric nursing education.

*Method:* OSCE was developed to assess undergraduate psychiatric nursing students' clinical skills. The students' evaluation of the OSCE process was obtained after the completion of each OSCE circuit.

Results: The psychiatric nursing OSCE proved to be a reliable and valid method in assessing psychiatric nursing clinical competencies. In general, the students perceived OSCE as a positive experience and stressful on the other hand.

Conclusion: OSCE is a reliable and valid method of assessing the students' psychiatric nursing competency skills. It has been shown to have many advantages over traditional methods of assessment and has the ability to objectively assess psychiatric nursing skills.

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#### Introduction

The measurement of clinical skill performance continues to pose a challenge for nursing educators (Norman et al., 2002). The traditional clinical examination has been criticized for focusing simply on students' knowledge and their abilities to memorize, while ignoring other important characteristics such as problem-solving, critical thinking, and communication skills (Ross et al., 2006). Moreover, the results of many assessment tools tend to be subjective in nature, and many have not been validated (Alinier, 2003). The assessment of clinical competence has been greatly advanced over the past two decades. The advent of several structured performance tests has enabled some of these limitations to be overcome. One of the most popular forms of the structured performance tests is the Objective Structured Clinical Examination (OSCE) (Newble, 2004).

The OSCE was first introduced in medical education in 1975 by Ronald Harden in Scotland at the University of Dundee. It has currently become a popular tool for assessing clinical competence in nursing (Joy and Nickless 2008; Rushforth, 2007). It is carefully

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structured to include parts from all elements of the curriculum as well as a wide range of skills for both formative and summative evaluations (Townsend et al., 2001). OSCE consists of a series of time limited clinical tasks through which all students have to perform in a consecutive series of stations (Munoz et al., 2005). At each station, the student is faced with a task or a problem. Students are observed by examiners whose interaction with the students is carefully regulated, usually being limited to providing instructions or asking about predetermined operations (Newble, 2004; Rushforth, 2007; Townsend et al., 2001).

For a long time, Faculties of Nursing in Egypt adopted the traditional practical exams for evaluating students' clinical performance in psychiatric nursing. Within this approach, a group of students would be assigned to one or two instructors who would observe and evaluate students' performance for their entire clinical experience when providing nursing care for different psychiatric patients through the whole semester. The main problem of this approach is the subjectivity in the evaluation. Whereas in an OSCE, all students are assessed using exactly the same stations with the same marking scheme to make the assessment of clinical skills more objective rather than subjective (Rushforth, 2007).

During an OSCE, students are observed and evaluated as they go through a series of stations in which they interview, examine and treat standardized patients who present with some type of health problems. A standardized patient is an actor trained to play the role of a patient with specific complaints (Turner and Dankoski, 2008; Walters et al., 2005). The use of standardized patients has overcome

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the problem faced with real patients. Thus, the validity and reliability of real patients in psychiatric oral and practical examination are under debate, primarily because the number of real patients in psychiatric oral examination is limited to one or two patients. Another critique is whether real patients behave and respond to questions in the same manner in different circumstances (Berkenstadt et al., 2006; Wallace et al., 2002).

In this respect, Kurz et al. (2009) stated that the use of actual patient presents several barriers to objective evaluation. Thus since the use of real patients is not practical and feasible in OSCEs, the use of standardized patients may be a rational and a more practical alternative method for board certification exam in psychiatric nursing (Berkenstadt et al., 2006; Wallace et al., 2002).

It has been claimed that OSCE provides a valid and a reliable means to evaluate psychiatric nursing student's performance in a holistic manner (Wallace et al., 2002). Although several students felt that OSCE was very stressful (Brand and Schoonheim-Klein, 2009; El-Nemer and Kandeel, 2009; Pierre et al., 2004; Ryan et al., 2007), the preliminary findings are promising regarding this evaluation tool. A study by Hodges et al. (2002) and Wallace et al. (2002) showed the majority of students in psychiatry participated in an OSCE rated the scenarios as very realistic, and reflective of clinical situations they had experienced.

OSCE which gained widespread acceptance as a valid academic measurement of nursing competence in North America, Australia and the United Kingdom (Brosnan et al., 2006; Rushforth, 2007), has recently been introduced into the Faculties of Nursing in Egypt in critical care and maternity nursing departments (El-Nemer and Kandeel, 2009) yet it had not been established as a tool for evaluation in psychiatric nursing,; accordingly, this study was conducted.

#### Aim

This study aims to evaluate the first implementation, validity and reliability of OSCE in undergraduate psychiatric nursing education.

#### Setting

The study was conducted at the Psychiatric Nursing and Mental Health Department — Faculty of Nursing — Alexandria University.

#### Sample size

Seventy six undergraduate nursing students in the fourth academic year at the Faculty of Nursing — Alexandria University have been chosen randomly to participate in this study through the academic year 2008–2009. Written informed consent was secured from each student who agreed to participate in the study.

#### Methods

Ethical approval

Ethical approval was obtained from Faculty of Nursing Ethics Committee in order to conduct the study.

The development of the tools

The preparation of OSCE took 4 months, it included the preparation and review of station content, students' answer booklets, simulated patients' scenarios, checklists of simulated patients' stations and model answers. The preparation of OSCE stations was based on clinical psychiatric nursing intended learning outcomes. Face and content validity of each checklist, simulated patient scenario, station task, written assignment, student's answer booklet, model

answer sheets and number of stations were established by review and consensus by a panel of senior teaching staff of Psychiatric Nursing and Mental Health Department at both Alexandria and Mansoura Universities.

Course content and objectives of psychiatric nursing course were reviewed thoroughly to decide on the needed stations based on the intended learning outcomes of the course. Thirteen stations were prepared including 11 working stations and 2 rest stations. The OSCE stations were designed to cover the contents and skills of clinical psychiatric nursing. The OSCE consisted of three interactive simulated patient stations (station 1, 5 and 8), post stations (2, 3, 6, 7 and 9) and the other three stations included a medication classifications and indications (4), a medication side effects (10) and a laboratory investigation results station (11). The first rest station followed station 4, while the second rest station followed station 7 (see OSCE blueprint – Appendix A).

Regarding the simulated patients, the scenarios were created based on real clinical cases and written in detail including the patient's background, chief complaint, facial expression, posture and responses to student's interactions. Training for a role begins with the presentation of written material of real patients. Individuals (actors) were chosen from psychiatric nurses working in psychiatric hospital for more than 5 years. Nurses were trained to act as patients for two days before the exam using data show and role play. They were then observed performing the role by the station's author and a panel of senior faculty staff in the field of psychiatric nursing education to verify the realism of the portrayal and to ensure consistency across the simulated patients training. An agreement upon their performance was obtained to perform the structured scenarios for each station.

Each simulated patient station contained two raters from the teaching staff with checklists to rate the students' performance independently. Each checklist of simulated patients consisted of a series of performance based observations and rated students' performance as done accurately, done inaccurately and not done.

The post stations were written assignments and/or questions concerned with the simulated patient's station. Post station 2 and 3 included writing patient's record, nursing notes and nursing care plan based on the interview and assessment of patient in station 1. Post station 6 and 7, included writing nursing interventions before receiving electroconvulsive therapy and choosing appropriate activity therapy based on assessment of patient in station 5. Post station 9 was concerned with writing nursing management of hallucinations based on interviewing the simulated patient in station 8. Model answers of the previously mentioned stations were structured and reviewed for marking these stations.

Pierre et al. (2004) self-administered questionnaire was adopted in the current study for evaluating the OSCE application by the students. The questionnaire was translated by the researchers into Arabic language and face validity was performed through back translation. The questionnaire's main outcomes were student evaluation of examination attributes, which included the quality of instructions and organization, the quality of performance, authenticity and transparency of the process, and usefulness of the OSCE as an assessment instrument compared to other formats. The reliability of the questionnaire of students' evaluation of the OSCE was calculated using Cronbach  $\alpha$  and it scored 0.70.

#### Data collection

A pilot study was conducted on a group of 13 students in May 2008 to develop and test OSCE stations and to ensure the applicability and feasibility of the tools.

In the actual study, the OSCE was applied on six rotations through the academic year 2008/2009 and from each rotation a group of 13 students was selected randomly. Only thirteen students were

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