

VIEWS OF UNDERGRADUATE STUDENTS ON OBJECTIVE STRUCTURED CLINICAL EXAMINATION IN NEUROLOGY: A PRELIMINARY REPORT

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هدف الدراسة: التعرف على آراء طلاب مرحلة البكالوريوس حول تقييمهم لإختبار الأوسكى المكون من محطتين فى كورس طب المخ و الأعصاب بكلية الطب، جامعة الملك فيصل.
طريقة الدراسة: أستخدم اختبار الأوسكى فى اختبار طلاب و طالبات السنة الخامسة الذين يؤدون كورس طب المخ و الأعصاب بالفصل الأول للعلم الدراسى 1420-1421هـ. و قد تم اختبار كل طالب على مريضين لكل 7 دقائق. و بعد الإنتهاء من الإختبار مباشرة قام كل طالب و طالبة بإكمال إستبيان من 6 أسئلة حول تغطية الحالات لما درسه أثناء الكورس و وضوح الأسئلة و كفاية الزمن المخصص للإجابة و نوع الحالات مقارنة بما نوقش أثناء الكورس و الإستفادة التعليمية من الإختبار و تنظيم الإختبار.

نتائج الدراسة: جلس للإمتحان 30 طالبا و 18 طالبة. إستغرق وقت الإمتحان فى المتوسط ساعتين للمجموعة المكونة من 16 طالبا. و كانت الإجابات فى الإستبيان إيجابية حول وضوح الأسئلة و التنظيم 41 طالبا (85%) و الوقت 36 طالبا (75%). و أجاب اثنان و ثلاثون طالبا (67%) بأن الإختبار كان يمثل تجربة تعليمية مفيدة بينما عبر نصفهم عن عدم التغطية الكافية لما درس أثناء الكورس و أيضاً بالنسبة لعدد المرضى بالإختبار و طالب 11 طالبا (22%) بزيادة وقت الإمتحان بكل محطة.

الخلاصة: وضحت نتائج الإستبيان قبولاً من الطلاب لإختبار الأوسكى للمهارات السريرية فى طب المخ و الأعصاب و لكن هناك حاجة لزيادة عدد المرضى و الوقت الممنوح لكل حالة للحصول على نتائج أفضل من حيث تغطية المادة و مراعاة تقليل العبء الواقع على المشاركين من المرضى.

مفتاح الكلمات: طب الأعصاب، التعليم الطبى، مرحلة البكالوريوس، أوسكى، المملكة العربية السعودية.

Objective: Obtain the undergraduate medical students' evaluation of an objective structured clinical examination (OSCE) formed by two stations in neurology.

Methods: The fifth-year medical students taking the neurology course at King Faisal University during the first rotation of academic year 1420-1421H (2000-2001G) made the evaluation. The time for each station was seven minutes. After finishing the examination, each student completed a six-item questionnaire on coverage, question clarity, time, patients, educational usefulness and organization of the examination with yes, no or don't know responses.

Results: A total of 48 students (30 males and 18 females) took the examination. The average time to complete the examination for a group of 16 students was 2 hours. The responses were positive for clarity of questions and organization of the examination 41(85%), and allotted time 36(75%). Thirty-two students (67%) found the structured

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examination a useful educational experience. About half the students expressed their concern about the coverage of taught material and the number of patients seen in the examination as representative of those seen during the course, and 11 students (23%) requested more time.

Conclusions: *The students' response to the use of the structured clinical examination as an objective tool for evaluation of clinical skills in neurology was favorable and comparable to reports from other parts of the world. Improvement is required in the number of patients, coverage and allotted time to optimize outcome by improving content validity and reducing stress on participating patients.*

Key Words: *Neurology, undergraduate, medical education, OSCE, Saudi Arabia.*

INTRODUCTION

The Department of Neurology in King Faisal University is the first academic department of neurology in the Kingdom of Saudi Arabia. The department offers a three-week clinical rotation in neurology (course MDNL506) to fifth-year medical students. Since the department was established the rotating students have been evaluated at the end of the course by a conventional long-case clinical examination. The Objective Structured Clinical Examination (OSCE) is presently the predominant method for formative and summative evaluation of clinical skills and competencies in undergraduate medical education.¹⁻⁴ OSCE has been recently used for evaluation of undergraduate and postgraduate students in various sub-specialty departments including radiology,⁵ dentistry,^{6,7} rheumatology,⁸ urology,⁹ critical care medicine¹⁰ and surgery.¹¹ Experience with the use of OSCE in neurology has been limited.^{12,13} The neurology course objectives focus primarily on teaching clinical skills; thus, at the end of the course students are expected to be able to perform a neurological examination competently, and interpret the clinical signs in terms of neuro-anatomical localization of neurological disease. In order to improve objectivity in evaluating our students it was decided to give OSCE a trial for fifth year students rotating during the first semester of academic year 1420-1421H (2000-2001G).

This paper presents a preliminary report of the students' views on the trial of OSCE.

METHODS

The students were divided into two male groups and one female group who rotated in neurology for three-week blocks. The examination was composed of two stations, each with a patient having neurological signs similar to those covered during the course. The time given for each station was seven minutes. Each student answered a questionnaire of six items immediately after finishing the examination. The first question was on the coverage of the examination for the clinical material that was taught during the course. The second question was on the clarity of the examination questions. The third was on the adequacy of the allocated time for each station. The fourth was on whether the patients seen in the examination were representative of those seen during the course. The fifth was on whether the examination could be viewed as a useful educational clinical experience, and the last question was on whether the organization of the examination was satisfactory. The students had to answer yes, no or don't know.

RESULTS

A total of 48 students took the OSCE, 30 males and 18 female students. The average time taken to complete the OSCE for a group of 16 students was two hours. Figure

1 shows a bar chart of students' responses for the questionnaire items, including coverage of material taught, clarity of questions, adequacy of time per station, given patients as representative of those seen during the course, usefulness of the examination as an educational clinical experience, and organization of the examination. Forty-one students (85%) were satisfied with the clarity of the questions and organization of the examination. Thirty-six students (75%) were satisfied with the allotted time, but 11 (23%) suggested increasing the time to 10 minutes per station. Thirty-two students (67%) found the examination a useful educational clinical experience. Around half of the students found the coverage of the clinical material taught and the number of patients inadequate.

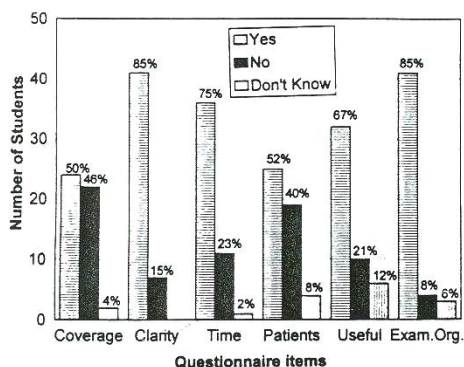


Figure 1: Percentage frequencies of students' responses for the 6-item questionnaire (n=48 students)

DISCUSSION

Evaluation of students in undergraduate medical education is a measurement of student learning and is directed towards assessment of knowledge, and of clinical and communication skills. Data analysis and data interpretation are the two most popular methods for assessing knowledge, whereas OSCE and case presentation are the most used methods

for assessing clinical skills.¹ OSCE was introduced first as a new test for clinical competence.¹⁴⁻¹⁹ It has been widely accepted as a means of objectively assessing the acquisition of clinical skills and clinical competence with greater reliability and validity^{1,5,21} and is now considered worldwide as the standard form of examination for the clinical assessment of both under- and post-graduate students.¹⁻¹³ The students in previous reports felt that OSCE is a fairer system than the other forms of examination and preferred it as a method of clinical assessment.^{22,23}

Although the overall response to using OSCE as an objective tool for evaluating neurology students was favorable, the salient shortcomings included the coverage of the examination for the clinical material taught, the number of patients, and to a lesser extent the allotted time per station. Improvement in coverage and increase in the number of patients requires an increase in the number of stations to improve content validity, but will also increase the total time of the examination. Thus, the addition of a third patient and an increase of time to eight minutes per station will increase the examination time to three hours, which is still shorter than the time taken to examine the same number of students using the conventional interactive bedside assessment method. That method requires, on average, four hours for the same number of students. Furthermore, the stress to the participating patients has to be taken into consideration.

Although using a different set of patients may resolve this issue, it will certainly affect that important factor in favor of OSCE regarding objectivity, uniformity and fairness of the student evaluation process. Similar problems were previously noted on using OSCE in neurology.^{12,13}

The present preliminary results of using OSCE in neurology were favorable and are comparable to reports from other parts of the world. Improvement, however, in the

number of patients, material coverage and allotted time per patient is required to optimize the outcome by improving content validity and reducing stress to participating patients.

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