Using OSCE as an Assessment Tool for Clinical Skills: Nursing Students' Feedback

Amina El-Nemer and Nahed Kandeel

Maternity and Gynecology and Critical Care Nursing Departments, Faculty of Nursing, Mansoura University, Egypt.

Abstract: Objective Structured Clinical Examination (OSCE) has been widely used in the assessment of students' clinical performance. Research revealed that it is an effective evaluation tool for nursing students' clinical skills. The OSCE was first introduced into Faculty of Nursing, Mansoura University by the Maternity and Gynecology Department which used it as an assessment tool for third year nursing students' clinical performance following their completion of Maternity and Gynecology Course during the 2007-2008 academic year. The successful outcome of this application encouraged the Critical Care Nursing Department to use the OSCE in evaluating first year students' clinical skills following their completion of First Aid Course. The main aim of this study was to investigate nursing students' feedback about the OSCE as an assessment tool for their clinical skills. This study has a cross sectional descriptive design. The total number of undergraduate nursing students who participated in the study was 724 (310 of third year nursing students and 414 of first year nursing students). The questionnaire developed by Pierre et al., (2004) was adapted in this study. The questionnaire assesses nursing students' evaluation of the OSCE attributes, the quality of OSCE performance, and OSCE scoring and objectivity. The results of this study indicate that OSCE has been accepted by the majority of nursing students as an evaluation tool for their clinical skills. Most students viewed OSCE as a fair assessment tool which covered a wide range of knowledge, minimized the chance of failing and highlighted areas of weaknesses. Going through the OSCE was a useful practical experience for nursing students. However, several students felt that OSCE was very stressful. The feedback received regarding this evaluation tool provides evidence that OSCE is an acceptable, useful assessment tool for nursing students' clinical skills. Such feedback is considered valuable for further development and enhancement of OSCE.

Key words: OSCE, Assessment tool, Clinical skills, Students' feedback.

INTRODUCTION

The undergraduate nursing education in Egypt has recently undergone tremendous changes in response to the requirements of the National Quality Assurance and Accreditation Committee. In 2003, the Ministry of Higher Education, which is responsible for the overall education system in Egypt, placed a great emphasis on improving the quality of academic programs and the quality of graduates. In response to the new requirements for improving the quality of higher education, Faculty of Nursing at Mansoura University initiated a quality assurance project in 2004. One of the main objectives of the project was to establish an internal quality assurance system that aimed to improve teaching and learning strategies and evaluation methods for undergraduates. Another important objective was to ensure that nursing students have basic mastery of clinical skills upon graduation. In order to achieve this aim, there was a need to improve the quality of the clinical skills assessment.

For long time, Faculties of Nursing in Egypt adopted the traditional practical exams for evaluating students' clinical performance. Within this approach, a student would be assigned to an examiner who would observe her performance for the entire examination when providing nursing care to a patient in the clinical area, or performing one procedure in the skill lab. The main problem of this approach is the bias and subjectivity in the evaluation (Ross et al., 1988). The traditional practical exam also tests a limited number of intended learning outcomes. Dealing with such limitations posed a challenge for faculty staff who started to search for standardized, more effective and objective assessment tools for students' clinical performance.

The review of literature revealed that an OSCE was recommended as a powerful and effective tool for...
evaluating nursing students’ clinical performance (Ross et al., 1988). OSCE was first introduced in medical education by Harden in Scotland in 1975 (Harden et al., 1975). It is now emerged in other disciplines including nursing, pharmacy, and dentistry to test clinical skill performance.

During the OSCE, students rotate around a circuit of stations on a timed basis (Monaghan et al., 2000). At the ring of a bell, each student enters the station and performs the predefined timed task. Each station assesses a different clinical competency such as history taking, interpretation of clinical data, performing one or more clinical tasks or solving a problem (Ahmad et al., 2009). OSCE stations may be interactive or non-interactive (Austin et al., 2003). Interactive stations use "a standardized patient" who is a lay person who trained to play the role of a patient with a specific complaint (Robbin and Hoke, 2008). The use of "a standardized patient" can reduce students’ stress, and promote a more comfortable environment for learning and evaluation (Bramble, 1994). A student in an interactive station is observed and evaluated by a trained examiner using prepared checklist. Non-interactive stations involve written answers to specific tasks or problems that do not require a direct observation, and are usually marked after the exam (Austin et al., 2003). The number of OSCE stations is normally from 15 to 20, and the number of students in each OSCE session is determined by the number of stations. Increased number of the stations enhances the reliability of the assessment (Harden, 1990). By the end of the OSCE, all the students will have gone through each station and been marked according to a standardized marking system.

OSCE has advantage over traditional practical examination in evaluating students’ interpersonal and communication skills, problem-solving abilities, teaching and assessment skills, and decision making skills (Hodges et al., 1996; Munoz et al., 2005; Rentschler et al., 2007 and Sloan et al., 1996). Another advantage of OSCE is related to the flexibility of the individual components of the stations which can take the form of small scenarios, simulations, case studies, multiple choice questionnaires or short theoretical questions (Alinier, 2003). OSCE also provides an innovative learning experience for students (Rentschler et al., 2007). It offers a valid means to evaluate students’ clinical performance in a holistic manner (Ahmad et al., 2009). Harden (1988) emphasized that the real power of OSCE lies in its ability to evaluate a wide range of knowledge and skills which improves the reliability of the examination. Within OSCE reliability is based upon the interaction among students, standardized patients and assessors (Ahmad et al., 2009). These advantages made OSCE to be extensively used in nursing (Alinier, 2003; Ahmad et al., 2009; Ross et al., 1988; Rentschler et al., 2007 and Ryan et al., 2007).

OSCE was first introduced into Faculty of Nursing, Mansoura University in December 2007 by the Maternity and Gynecology Department. It was used to assess third year nursing students’ clinical performance following their completion of Maternity and Gynecology Course. Students and faculty staff were exposed for the first time to a new assessment tool which assesses a variety of students’ knowledge and skills in an objective and structured way (Pierre et al., 2004). The successful outcome of this application demonstrated the value of OSCE in assessing nursing students’ clinical performance. This encouraged other departments to adopt OSCE for clinical assessment. The Critical Care Nursing Department used OSCE for evaluating first year nursing students’ skills after the completion of First Aid Course during the 2008-2009 academic year. We believe that the successful use of OSCE depends greatly on its acceptability from both students and faculty staff. Therefore, students' and staff's feedback about the use of this new assessment method worth to be investigated. The focus of the current study was students’ feedback. The main aim of this study was to investigate the first and third year nursing students’ feedback about OSCE as an assessment tool for their clinical skills.

MATERIAL AND METHODS

Design:
This study has a cross sectional descriptive design.

Setting:
The study was carried out at Faculty of Nursing, Mansoura University, Egypt.

Subjects:
The study involved all third year nursing students (n=310) enrolled in Maternity and Gynecology Nursing Course during the 2007-2008 academic year and all first year nursing students (n=414) enrolled in the First Aid Course during the 2008-2009 academic year. The total number of undergraduate nursing students participated in the study was 724. All students were females as Faculty of Nursing, Mansoura University has not yet opened for males.
Tools of Data Collection:

Pierre et al. (2004) OSCE evaluation questionnaire was adapted in this study. The questionnaire consists of 32 items grouped into 4 sections. For the purpose of this study, only 23 items of Pierre et al. questionnaire were used, and few items were slightly modified to give a clear meaning in Arabic version. The questionnaire used in the current study consists of three main sections:

Section One: Evaluation of the OSCE Attributes:
This section assesses nursing students' evaluation of the OSCE attributes and it includes 12 items such as the fairness of the exam, area of knowledge covered, time of each station, and the organization and administration of OSCE (Table 1). Students were asked to rate their responses on a four point scale ranging: 'no comment', 'disagree', 'neutral' and 'agree'.

Section Two: Evaluation of the Quality of OSCE Performance:
This section looks at nursing students' evaluation of the quality of OSCE performance and it comprises 7 items involving students' awareness of the nature of the exam, tasks of the exam, structure of the exam and the adequacy of the time at each station (Table 2).

Section Three: Evaluation of the OSCE Scoring and Objectivity:
This section investigates nursing students' evaluation of the OSCE scoring and objectivity, and it incorporates 4 items addressing the standardization of the OSCE score, and its usefulness and objectivity (Table 3). For sections two and three, students were asked to rate their responses on a three point scale ranging: 'not at all', 'neutral' and 'to a great extent'. Alpha Cronbach test was used to test the reliability of the questionnaire. Alpha score for the 23 item questionnaire (sections 1, 2 & 3) is 0.79 which indicates that the tool is reliable.

Methods:
1- Ethical Approval:
An ethical approval was obtained from Faculty of Nursing Ethics Committee.

2-Translation of the Questionnaire:
The questionnaire was translated into Arabic version by the authors. To ensure the validity of translation, back translation technique was used by an expert in English language from Faculty of Education, the English Department. A lecturer from Faculty of Nursing reviewed the two versions, and modifications were made accordingly.

3- Preparations for the OSCE:
-Preparing for Maternity and Gynecology Nursing OSCE:
The Maternity and Gynecology Nursing OSCE stations were prepared by the department staff. It involved 20 stations which included the anatomy and physiology of the reproductive system, clinical procedures, clinical management, drug administration, IV infusions, and family planning. Each station was based upon blueprint specifications, and designed to conform to a specific format. Students in each academic semester were divided into two groups. The OSCE was carried out in four clinical skill labs. Each lab involved 20 exam stations. Four rest stations were built into the schedule of the OSCE, each of 5 minutes duration.

-Preparing for First Aid OSCE:
Preparing for the First Aid OSCE was very challenging for the critical care nursing faculty staff. The number of first year students was huge (n=414) and there were only three skill labs available for the clinical exam. There was a need for a large space to run the OSCE. Enough spaces were also needed around each station to prevent students' meeting when rotating around the stations. Hence, it was inconvenient to examine all students simultaneously. We were fully aware that OSCE should be standardized for all students, but in the presence of limited resources and huge number of students, we had to consider other options. After several discussions with critical care nursing faculty staff, we decided to prepare three OSCEs. The three OSCEs were prepared to cover the same objectives, and the distribution of marks for similar questions in the three exams was alike. Each OSCE included 10 stations which involved opening airway technique, splint, burn, appropriate position, bandage, cardiopulmonary resuscitation, bleeding, and three different scenarios that required performing first aid for a specific emergency condition. Students were divided into three groups; each group was examined separately on a different day. The three OSCEs were carried out in three consecutive days. Because of the limited number of simulators in the skill labs, standardized patients
were used in the OSCE. Four secretaries and five faculty staff from the critical care nursing department were trained to perform a role playing for a specific emergency, such as fractures, nose bleeding and choking. Two rest stations were built into the schedule of the OSCE, each of 5 minutes duration.

- **Training of Faculty Staff and Students:**

  For the Maternity and Gynecology Nursing OSCE and First Aid OSCE, the examination team involved all the staff in each department. All the staff received training on OSCE before the actual exam. An OSCE training package was prepared for training students before going through the final OSCE. Students were training in the skill labs one week prior to the actual OSCE. In the beginning of the training session, students received an orientation about the nature of the OSCE and the process of the examination.

4- **Administration of the OSCE:**

  The OSCE answer book was prepared including a cover sheet, the instruction sheet and a separate sheet for each station. Observation check lists were prepared for clinical procedures. A standardized marking system using a Rubric test was used in marking all OSCE answer booklet. Before starting the OSCE, one of the examiners read the instruction to students. The stations were either interactive or non interactive, but students were requested to demonstrate both clinical knowledge and psychomotor skills. All students in the three skill labs went through the same stations simultaneously by moving around the stations. They moved each 5 minutes when hearing the bell sound. For first aid OSCE, all students completed the circuit over one hour period. For Maternity and Gynecology OSCE, all students completed the twenty stations over 100 minutes period. There was a time keeper in each skill lab.

5- **Collecting Students' Feedback:**

  Immediately after the OSCE, all students were told about the aim of the study, and its significance. They were invited to provide their feedback about OSCE as an assessment tool for their clinical skills. All students were assured that the study would be conducted anonymously to protect their confidentiality. They were also informed that their participation was voluntary, and that not taking part in this study would not affect them in anyway. The questionnaires were distributed to all students and collected before they left the session.

6- **Data Analysis:**

  Data were analyzed using the Statistical Package for Social Science (SPSS version 15). The obtained data were coded, analyzed and tabulated. Descriptive analysis was performed in this study including frequencies and percentage. Chi-square and p value were also calculated for statistical significance.

**RESULTS AND DISCUSSION**

The results obtained from the 310 third year nursing students representing G1 and 414 first year nursing students representing G2 are, respectively, presented in tables (1), (2) and (3). The response rate from the two groups was 100%.

Table (1) represents nursing students' evaluation of OSCE attributes. The results of the questionnaire revealed that the majority of students from both groups provided positive feedback about the OSCE attributes. They agreed that the OSCE was fair (G1 87.4%, G2 91.1%), covered a wide range of knowledge (G1 90%, G2 93.7%) and was well administered (G1 84.5%, G2 91.5%). Most students felt that OSCE stations were well structured and sequenced (G1 83.5%, G2 79%). Concerning the outcome of the exam, most students from the two groups reported that the nature of OSCE minimized the chance of failing (G1 94.8%, G2 88.9%) and highlighted areas of weaknesses (G1 81.3%, G2 83.1%). However, 3.5% of third year students and 11.6% of first year students felt that the time at each station was inadequate.

Although the majority of students from both groups reported that OSCE was less stressful than other exams (G1 87.4%, G2 67.9%), still a considerable percentage of students felt that the exam was very stressful (G1 18.4%, G2 27.5%) and intimidating (G1 7.1%, G2 6.5%). Most students were aware with the level of information needed (G1 80.6%, G2 92%). A considerable percentage of students were 'neutral' about many of the attributes of OSCE, such as the fairness of the exam (G1 12.6%, G2 5.1%), the need for more time at stations (G1 8.4%, G2 12.3%), the stressful nature of the exam (G1 16.8%, G2 27.8%), and whether the OSCE highlighting areas of weaknesses (G1 14.2%, G2 11.4%).

The results also showed a statistical significant difference between the third year nursing students and the first year nursing students regarding their evaluation of the knowledge covered by the exam, the time needed
at the stations, the administration of the exam, the awareness with the level of the information needed, and the stressful and intimidating nature of the exam \( (p=0.000) \).

Table (2) points out to nursing students' evaluation of the quality of OSCE performance. The majority of students reported that they were fully aware of the nature of the exam (G1 80%, G2 88.2%) and that OSCE provided them with more learning opportunities (G1 83.5%, G2 89.9%). The table also illustrated that the tasks students were asked to perform in the OSCE were fair (G1 83.2%, G2 93.5%) and reflected those which were taught (G1 81.9%, G2 89.6%). Most students (G1 81.6%, G2 87%) reported that the stations were organized in sequence and logical way.

Regarding the time of each station, 83.5% of third year students and 81.6% of first year students agreed that the time of each station was adequate. More than 89% of students in both groups agreed that the instructions of the exam were clear.

On the other hand, a considerable percentage of students were 'neutral' about the attributes of OSCE, such as the awareness with the nature of the exam (G1 17.7%, G2 10.4%), the tasks reflected those taught (G1 13.9%, G2 8%), the time at each station (G1 10%, G2 14%), and the logical sequence of the stations (G1 14.8%, G2 11.1%).

There were no significance differences between the two groups regarding the quality of performance of OSCE except for the fairness of the tasks that students were asked to perform \( (p=0.000) \).

Table (3) illustrates nursing students' perception of OSCE scoring and objectivity. Most students believed that OSCE scores provided true measures of essential clinical skills (G1 78.7%, G2 83.1%) and were standardized (G1 86.5%, G2 92.3%). They also felt that OSCE was a useful practical experience for them (G1 83.2%, G2 90.3%). For the majority (G1 86.5%, G2 95.2%), OSCE scores were not affected by student's personality and social relations. However, a considerable percentage of students take the 'neutral' position concerning OSCE scoring measure (G1 16.1%, G2 13.3%), the usefulness of the OSCE experience (G1 15.2%, G2 8%), and OSCE affected by personality and social relations (G1 11.9%, G2 3.4%).

There were no significance differences between the two groups regarding their perception of the OSCE scoring and objectivity except for the effect of personality and social relations on OSCE scores \( (p=0.000) \).

Discussion:

Generally, nursing students' feedback about OSCE was positive. This is supported by other research findings (Aalinier, 2003; Rentshler et al., 2007; Ross et al., 1988 and Pierre et al., 2004). The results suggest that OSCE is a useful and acceptable tool for evaluating students' performance of clinical skills. Most students viewed OSCE as a fair assessment tool which covered a broad area of knowledge, allowed them to compensate in some areas and minimized their chances of failing. The fairness of OSCE was also reported by other studies (Pierre et al., 2004; Duffield and Spencer, 2002). In a study conducted by Singleton et al. (1999) to assess the validity, reliability and feasibility of team OSCE, the majority of students felt that they had been marked fairly.

**Table 1:** Nursing Students' Evaluation of the OSCE Attributes.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Third year students (G1)</th>
<th>First year students (G2)</th>
<th>( X^2 )</th>
<th>( P )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total No. 310 (100%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No comment</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>1(0.3%)</td>
<td>1(0.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>39(12.6%)</td>
<td>27(6.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>271(87.4%)</td>
<td>377(91.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total No. 414 (100%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No comment</td>
<td>2(0.5%)</td>
<td>2(0.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>14(3.4%)</td>
<td>21(5.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>21(5.1%)</td>
<td>37(8.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agree</td>
<td>377(91.1%)</td>
<td>379(91.1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exam was fair</td>
<td>92(29.2%)</td>
<td>250(99.9%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Was knowledge area covered</td>
<td>15(4.8%)</td>
<td>30(7.7%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Needed more time at stations</td>
<td>11(3.5%)</td>
<td>30(7.7%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Exams well administered</td>
<td>4(1.3%)</td>
<td>5(1.2%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Exams very stressful</td>
<td>13(4.2%)</td>
<td>21(5.1%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Exam minimized chance of failing</td>
<td>0(0%)</td>
<td>2(0.5%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>OSCE less stressful than other exams</td>
<td>16(5.2%)</td>
<td>5(1.2%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Allowed student to compensate in same areas</td>
<td>7(2.3%)</td>
<td>51(12.3%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Highlighted areas of weakness</td>
<td>0(0%)</td>
<td>47(11.4%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Exam intimidating</td>
<td>42(13.5%)</td>
<td>281(67.9%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Student aware of level of information needed</td>
<td>-1(0.3%)</td>
<td>41(10.2%)</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Most students provided positive feedback about the quality of OSCE performance in terms of the clarity of the instructions of the exam, the sequence of OSCE stations, the reflection of the tasks taught and the time at each station. These findings are consistent with Pierre et al. (2004) study results. OSCE was seen as a positive and a useful practical experience by most students. We find that congruent with Alinier's (2003) study in which nursing students perceived OSCE as a favorable experience that should be repeated regularly.

However, OSCE was perceived as a stressful experience and intimidating by a considerable percentage of students, particularly first year nursing students. This perception could be due to the fact that this was the first time that the OSCE has been implemented at Faculty of Nursing, Mansoura University. Hence, it was a new experience for all nursing students which made them feel anxious about it. In future it would be preferable to use the OSCE in midterm clinical evaluation as a preparatory stage for students before the final OSCE. Nursing students' stressful experience with OSCE was also reported in other studies (Pierre et al., 2004; Ross et al., 1988 and Ryan et al., 2007). Similarly, Brewin and Cantwell (1997) related students' stress and anxiety to the new experience with OSCE.

Feedback from nursing students suggests that OSCE is an objective tool for evaluating clinical skills. Students perceived OSCE scores as a true measure for essential clinical skills being evaluated, standardized, and not affected by student's personality or social relations. The objectivity of OSCE was highlighted in the literature by many authors (Ahuja, 2009; Bartfay et al., 2004; Harden, 1988 and Singh et al., 2009). The evaluation of OSCE by nursing students highlighted some areas that need to be enhanced in future, such as the inadequate time of some of the stations, and the limited period of orientation about OSCE. The insufficient time at OSCE stations was one of students' complaints in some of the studies which investigated students' perspective of OSCE (Monaghan et al., 2000; Pierre et al., 2004 and Zartman et al., 2002).

OSCE generated a considerable uncertainty among students regarding aspects of OSCE attributes, performance, scoring and objectivity. Students' uncertainty about OSCE was also reported in other studies (Pierre et al., 2004 & Brewin and Cantwell, 1997). Such uncertainty may reflect inadequate knowledge about the nature of OSCE and insufficient training on OSCE procedure. It appeared that the training session that students received on OSCE before the final exam was not enough for providing them with a comprehensive view of the OSCE. Brewin and Cantwell (1997) suggested that students' uncertainty about OSCE may be due to the fact that the OSCE was a new experience for all of them.

Table 2: Nursing Students' Evaluation of the Quality of OSCE Performance.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Third year students (G1)</th>
<th>First year students (G2)</th>
<th>X²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total No. 310 (100%)</td>
<td>Total No. 414 (100%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>Neutral</td>
<td>To a great extent</td>
<td>Not at all</td>
</tr>
<tr>
<td>Fully aware of the nature of the exam</td>
<td>7(2.3%)</td>
<td>55(17.7%)</td>
<td>248(80%)</td>
<td>6(1.4%)</td>
</tr>
<tr>
<td>Tasks reflected those taught</td>
<td>13(4.2%)</td>
<td>43(13.9%)</td>
<td>254(81.9%)</td>
<td>10(2.4%)</td>
</tr>
<tr>
<td>Time at each station was adequate</td>
<td>20(6.5%)</td>
<td>31(10%)</td>
<td>259(83.5%)</td>
<td>17(4.1%)</td>
</tr>
<tr>
<td>Instructions were clear and unambiguous</td>
<td>10(3.2%)</td>
<td>23(7.4%)</td>
<td>277(89.4%)</td>
<td>7(1.7%)</td>
</tr>
<tr>
<td>Tasks asked to perform were fair</td>
<td>16(5.2%)</td>
<td>36(11.6%)</td>
<td>258(83.2%)</td>
<td>6(1.4%)</td>
</tr>
<tr>
<td>Sequence of stations logical and appropriate</td>
<td>11(3.5%)</td>
<td>46(14.8%)</td>
<td>253(81.6%)</td>
<td>8(1.9%)</td>
</tr>
<tr>
<td>Exam provided opportunities to learn</td>
<td>12(3.9%)</td>
<td>39(12.6%)</td>
<td>259(83.5%)</td>
<td>6(1.4%)</td>
</tr>
</tbody>
</table>

Table 3: Nursing Students' Perception of the OSCE Scoring and Objectivity.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Third year students (G1)</th>
<th>First year students (G2)</th>
<th>X²</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total No. 310 (100%)</td>
<td>Total No. 414 (100%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>Neutral</td>
<td>To a great extent</td>
<td>Not at all</td>
</tr>
<tr>
<td>OSCE scores provide true measure of essential clinical skills</td>
<td>16(5.2%)</td>
<td>50(16.1%)</td>
<td>248(78.7%)</td>
<td>15(3.6%)</td>
</tr>
<tr>
<td>OSCE scores are standardized</td>
<td>15(4.8%)</td>
<td>27(8.7%)</td>
<td>268(85.6%)</td>
<td>13(3.1%)</td>
</tr>
<tr>
<td>OSCE practical and useful experience</td>
<td>5(1.6%)</td>
<td>47(15.2%)</td>
<td>258(83.2%)</td>
<td>6(1.4%)</td>
</tr>
<tr>
<td>Personality and social relations will not affect OSCE scores</td>
<td>5(1.6%)</td>
<td>37(11.9%)</td>
<td>268(86.5%)</td>
<td>5(1.2%)</td>
</tr>
</tbody>
</table>

Most students provided positive feedback about the quality of OSCE performance in terms of the clarity of the instructions of the exam, the sequence of OSCE stations, the reflection of the tasks taught and the time at each station. These findings are consistent with Pierre et al. (2004) study results. OSCE was seen as a positive and a useful practical experience by most students. We find that congruent with Alinier's (2003) study in which nursing students perceived OSCE as a favorable experience that should be repeated regularly.

However, OSCE was perceived as a stressful experience and intimidating by a considerable percentage of students, particularly first year nursing students. This perception could be due to the fact that this was the first time that the OSCE has been implemented at Faculty of Nursing, Mansoura University. Hence, it was a new experience for all nursing students which made them feel anxious about it. In future it would be preferable to use the OSCE in midterm clinical evaluation as a preparatory stage for students before the final OSCE. Nursing students' stressful experience with OSCE was also reported in other studies (Pierre et al., 2004; Ross et al., 1988 and Ryan et al., 2007). Similarly, Brewin and Cantwell (1997) related students' stress and anxiety to the new experience with OSCE.

Feedback from nursing students suggests that OSCE is an objective tool for evaluating clinical skills. Students perceived OSCE scores as a true measure for essential clinical skills being evaluated, standardized, and not affected by student's personality or social relations. The objectivity of OSCE was highlighted in the literature by many authors (Ahuja, 2009; Bartfay et al., 2004; Harden, 1988 and Singh et al., 2009). The evaluation of OSCE by nursing students highlighted some areas that need to be enhanced in future, such as the inadequate time of some of the stations, and the limited period of orientation about OSCE. The insufficient time at OSCE stations was one of students' complaints in some of the studies which investigated students' perspective of OSCE (Monaghan et al., 2000; Pierre et al., 2004 and Zartman et al., 2002).
From our experience, the implementation of OSCE is time consuming, and requires huge effort and extensive resources. This was also reported in other studies which implemented OSCE (Cerveny et al., 1999; Munoz et al., 2005; Rentschler et al., 2007; Zartman et al., 2002). It also requires a large number of qualified personnel to observe and evaluate students during OSCE (Alinier, 2003).

Implementation of OSCE at Faculty of Nursing, Mansoura University with such a large number of students has been very challenging for faculty staff members. However, the high response rate from students, and their positive feedback about the use of OSCE as an evaluation tool for their clinical performance have been very promising.

**Conclusion:**
In conclusion, the OSCE is a useful and acceptable method for evaluating nursing students' clinical skills. The implementation of OSCE at Faculty of Nursing, Mansoura University was a useful experience for students, and was considered a valuable and worthy for further enhancement.

**Recommendations:**
Students' orientation period about OSCE should be planned in a form of a written description of what would be expected of them and what they expect (Ross et al., 1988), and training sessions on OSCE procedure. This is very important for familiarizing students with OSCE, reducing their stress and anxiety, and improving their experience.

When preparing for OSCE, attention must be given to the time of the stations.
There is a need for developing a steering committee for OSCE at Faculty of Nursing, Mansoura University.
While this study investigated nursing students' feedback about OSCE, future research could consider Faculty staff members' experience of using the OSCE in evaluating nursing students' clinical performance.

**Acknowledgements:**
We would like to acknowledge the help of all staff members of the Maternity and Gynecology Nursing Department and the Critical Care Nursing Department who contributed to the implementation of OSCE. We also want to thank our nursing students for their invaluable feedback.

**REFERENCES**


