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RESEARCH ARTICLE

EFFECT OF TRAINING BY USING OBJECTIVE STRUCTURED CLINICAL EXAMINATION "OSCE" ON THE OUTCOME OF CLINICAL TRAINING OF NURSING STUDENTS ENROLLED IN PSYCHIATRIC AND MENTAL HEALTH NURSING COURSE

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ABSTRACT

The objective structured clinical examination (OSCE) has emerged during the past 2 decades as medicine (Oh *et al.*, 2011). This examination type involves direct observation of clinical performance using standardized patients and structured checklists for marking. A variety of areas of medical performance can thus be evaluated, including interviewing skills, physical examination skills, and interpersonal skills (Brosnan *et al.*, 2006 and Selim *et al.*, 2011).

**Aim of the study:** This study aimed to determine the effect of training by using Objective Structured Clinical Examination "OSCE" on the outcome of clinical training of nursing students enrolled in psychiatric and mental health nursing course and assess students' perception toward using OSCE as a training and evaluative tool in psychiatric and mental health clinical training.

**Material and Method: Subjects:** The study subjects were include all students enrolled in psychiatric and mental health nursing course (150) at the first semester of academic year 2012-2013, in faculty of Nursing Tanta University. The students were divided into two main groups the study group (75) students were chosen randomly and control group (75) students.

**Tools of the study:** A-Data collection tools: Tool (I): Students' perception toward OSCE as a training tool. Part (1) A socio-demographic data sheet, Part (2): Students' perception toward OSCE as a training tool. Tool (II): Students' perception toward OSCE as an evaluation tool. B- An intervention tool: Objective Structured Clinical Training and Examination program (OSCTE): Clinical training and evaluation by OSCE method were implemented on the study group enrolling in learning class activities only (exhibiting videos and examining through oral exam). Each study group were attend 9 sessions scheduled as three sessions per week, which were take about four hours per day, for about three weeks.

**Results:** The main results revealed that there was positive and direct significant correlation between using OSCE sessions in training and OSCE examination and there is statistical significant difference in the total mean scores of the clinical exam rotation between study and control group as it tabulated respectively in the p-value (0.0158, 0.009, 0.024).

**Conclusion:** The current study findings showed that the majority of the studied students' were having good overview toward OSCE as a training tool, and the most of the studied students' were having good overview toward OSCE as an examination tool. In regard to comparison between study and control group in their scores of exam rotation. There is significant difference in the students' scores of the exam rotation between both study and control group.

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INTRODUCTION

Nursing education aims to have students acquire the knowledge, practical skills, and social responsibility necessary

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to thoroughly assume their role as professional nurses after completing a nursing program (Oh *et al.*, 2011). Clinical skills underpin nurses' professional practice and thus student nurses need effective opportunities to acquire, develop and master these skills. Enabling practical skills development is a key dimension of nurse education (Brosnan *et al.*, 2006). The measurement of clinical skills performance continues to pose a challenge for nursing educators. 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. Moreover, the results of many assessment tools tend to be subjective in nature, and many have not been validated (Selim *et al.*, 2011). Assessing student's competence is most imperative for the reasons of client safety, monitoring students' progress, motivating students and measuring achievement. However, evaluation of clinical competence has been problematic in nursing education because of its subjectivity and complexity. The Consensus in the nursing and medical literature support the assertion that a multi-method approach is necessary to ensure valid and reliable evaluation of the student's cognitive, affective and psychomotor elements, thus competence. The emergence of the Objective Structured Clinical Evaluation (OSCE) is viewed as one possible approach in addressing the limitations and the problem of the subjectivity noted in traditional evaluative methods (Walsh and Mireille, 2008).

OSCE is an approach to the assessment of clinical competence in which the components of competence are assessed in a well planned or structured way with attention being paid to the objectivity (O'Neill and Mc Call, 1996). OSCE was first introduced in medical education by Harden in Scotland in 1975 (El-Nemer and Kandeel, 2009). It is now emerged in other disciplines including nursing, pharmacy, and dentistry to test clinical skill performance (Sauer *et al.*, 2005). OSCEs have also been used in several specialties, including surgery, medicine, pediatrics and rehabilitation (Chandra *et al.*, 2009). Although, it provides an objective evaluation of a wide range of clinical competencies with reduced risk of examiner bias, developing a reliable OSCE requires extensive resources such as personnel and facilities, funding, support from the faculty, the administrative authority and students (Dastjerdie *et al.*, 2002). The OSCE also incorporated the technology of standardized patients which is called interactive station, first described by Barrows and Abrahamson in 1964 (Hodges *et al.*, 2002). The use of standardized patients allowed the nature of problems and the level of difficulty to be standardized for all students. A student in an interactive station is observed and evaluated by a trained examiner using prepared checklist (El-Nemer and Kandeel, 2009).

During the OSCE, students rotate around a circuit of stations on a timed basis. 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 (El-Nemer and Kandeel, 2009; Ahmad Che *et al.*, 2009; Gaberson and Oermann, 2007 and Billings and Halstead, 1991). Student performance is assessed by examiners against checklist of detailed objective criteria relating to skill components (Brosnan *et al.*, 2006). The combination of multiple observations and standardization of content and difficulty made the OSCE a very popular evaluative tool. Further, extensive research demonstrated that OSCEs could have excellent psychometric properties. As a result, the use of OSCEs is now extensive in medical and nursing education as an assessment tool (Hodges *et al.*, 2002); however there are only a few reports about using them for

training purposes. Brazeau *et al.* used the OSCE as a teaching tool following a request from the faculty and students, who wanted more direct observation and feedback on performance in various clinical scenarios (Brazeau *et al.*, 2002). Following the use of the OSCE format for training, they concluded that the OSCE as a teaching tool was an efficient use of teaching resources. In addition, there was positive feedback from students about the opportunity to have constructive discussions on their strengths and weaknesses in clinical encounters and observe a variety of doctor-patient interaction styles, in addition to practicing for future OSCE-type examinations (Chandra *et al.*, 2009). For a long time, faculties of Nursing in Egypt adopted the traditional practical exams for evaluating students' clinical performance in psychiatric nursing (Selim *et al.*, 2011). 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 throughout the whole semester (Brosnan *et al.*, 2006 and Selim *et al.*, 2011). The main problem of this approach is 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 (Selim *et al.*, 2011 and El-Nemer and Kandeel, 2009).

The reliability and psychometric properties of the objective structured clinical examination (OSCE) are well established, particularly in general medical and surgery setting. While there is wide spread use of OSCEs in almost every other discipline, psychiatry has been slow to adopt this assessments method and it has only recently been more widely introduced in undergraduate and post graduate assessments worldwide. The feasibility and use of OSCE in psychiatry have been described but there has been limited work published regarding its validity and reliability in this discipline (Walters *et al.*, 2005). Objective Structured Clinical Examination (OSCE) which gained widespread acceptance as a valid academic measurement of nursing competence all over the world (Goisman *et al.*, 2010) has recently been introduced in faculty of nursing Tanta University as a project introduced by the National Quality Assurance and Accreditation Committee. Most of faculty departments are included in this project, yet it has not been established in psychiatry. In addition students may become uncertain about OSCE which reflect inadequate knowledge about the nature of OSCE and insufficient training on OSCE procedures.

Also, it appeared that the training session which students received on OSCE before the final exam was not enough for providing them with a comprehensive view of the OSCE (El-Nemer and Kandeel, 2009). So, it was of interest to the present study to hire other studies' suggestions and take on the implementation of an OSCE as a training tool in psychiatric mental health nursing course. In order to develop and expand the use of OSCE as evaluative tool, it is necessary to identify the associated limitations and weaknesses of its application (Hodges *et al.*, 2002). In addition there is minimal literature discussing the use of OSCE examination from the perspective of the nursing students (Clarke and Rainey, 2011). Thus the researcher sought to evaluate nursing students' perception

toward this method of assessment in psychiatric and mental health branch. So, it is interesting to conduct this study to assess students' perception toward and determine the effectiveness of using OSCE as a training and evaluative tool in psychiatric and mental health nursing training.

### Aims of the study

#### The aims of this study are to

- Determine the effect of training using Objective Structured Clinical Examination "OSCE" on the outcome of clinical training of nursing students enrolled in psychiatric and mental health nursing course.
- Assess students' perception of using OSCE as a training and evaluative tool in psychiatric and mental health clinical training.

### Research hypothesis

Nursing students' enrolled in psychiatric and mental health nursing course who are scheduled for attending training by OSCTE (experimental group) will exhibit higher scores on their clinical exam than those in the control group.

### Operational definition

Standardized patient: Individuals who have been trained to reliably reproduce the history and physical findings of typical clinical cases (Monaghan *et al.*, 2000). They can be real patients who have been standardized or they can be simulated patients.

## MATERIALS AND METHODS

### Research design

A quasi experimental design was utilized in this study.

### Setting

The study was conducted at the Faculty of Nursing in Tanta University that is affiliated to the Ministry of Higher Education.

### Subjects

The study subjects included all nursing students enrolled in psychiatric nursing course during the first semester of the fourth academic year (2012-2013), at faculty of Nursing Tanta University. They amounted to 150 students. The students were divided into two main groups (study and control group). Both groups were matched in relation to their academic achievement on the third year. Each group consisted of 75 students.

### Tools

The data of the present study were collected using the following tools:

#### Data collection tools

##### Tool (I)

Students' perception of OSCE as a training tool. This tool was developed by the researcher after a thorough review of related literature (Santosh *et al.*, 2010; Al mohiy and Davidson, 2011

and Gamal *et al.*, 2004). To assess students' perception about the following areas:

- I- Learning skills through videos, role play and demonstration, re-demonstration and checklist.
- II- Effectiveness of using OSCE in training.
- III- Satisfaction in using OSCE in training.

Tool (I) is attached with a socio-demographic data sheet to elicit data about studied subjects e.g.:- Name, age, and educational background (secondary or technical nursing certificate).

##### Tool (II)

Students' perception of OSCE as an evaluation tool. This tool was developed by the researcher after a thorough review of related literature (Verma and Singh, 1993 and Jane *et al.*, 2009). This tool was developed to assess students' perception about the following areas:

- I- Attributes of the OSCE.
- II- Effectiveness of OSCE examination.
- III- Scoring and objectivity of the OSCE.

-Tool (1) & tool (2) includes (18) & (31) statements respectively. Each statement was rated on 3 point likert scale ranging from 1-3 points. Each statement was graded as the following:

Agree 3 points  
Uncertain 2 points  
Disagree 1 point

- Tool (1) & tool (2) evaluated as the following:

Average = <75  
Good = 75-85  
Excellent = >85

### An intervention tool

This tool encompass implementation of Objective Structured Clinical Training and Examination program (OSCTE) on the study group 4<sup>th</sup> year students' enrolled in learning class activities of psychiatric and mental health nursing course. The study group was divided into 3 sub groups, each one composed of 25 students. First step in implementing this tool includes training through the following methods: lectures followed by discussion, displaying videos and photos, teachable checklist, role play, demonstration and re-demonstration. Followed by assessing the study group perception of training through OSCE method immediately after attaining the objective of the program. The second step is passing the OSCE exam which includes 7 stations. Then tool (2) was administered to assess student's perception of OSCE format examination.

### Method

- An official permission to conduct the study was obtained from responsible authorities to collect the necessary data.

- The socio-demographic data sheet, tool I and II were developed by the researcher, after a thorough review of related literature.
- 3-Tools of the study was translated into Arabic and tested for content validity by a jury from related specialties. The tools proved to be valid.
- Internal consistency of the study tools I & II was done by means of Cronbach's Alpha coefficient which yielded values of  $r=0.9421 - r= 0.9325$  respectively.
- A pilot study was carried out to ascertain the clarity and applicability of the study tools, and to identify obstacles that might be faced during a data collection. I was done on 10 students; who were later excluded from the actual study. After implementation of the pilot study and according to its results' some modifications were done.
- The aim of the control group for just comparison in scores with the study group in their clinical rotation for learning activity and OSCE. (because the study group exposed to the same methods of teaching in the control group plus the OSCE methods and examining through OSCE method not oral exam only).
- 7-Actual study:

### **Objective Structured Clinical Training and Examination program (OSCTE)**

The program was implemented in form of sessions, on study group only, each study subgroups attended 9 sessions scheduled as four hours per day, three times per week, for three weeks. The program was presented in the following sequence:-

**The researcher began the training with** "myths about mental illness" through videos, and role play.

**The second session** covered the topic: "Introduction to the types of psychotropic drugs". The training was through showing videos, role play and teachable checklist.

**The third session** covered the topics "types of seizure" and "electroconvulsive therapy". The training was through showing videos, teachable checklist, demonstration and re-demonstration.

**In the fourth session** Eating disorders were explained through displaying videos, teachable checklist and role playing. The researcher in **the fifth session** shown videos about "activity therapy", "seclusion and restraints" and apply this procedure through demonstration and re-demonstration.

**In the sixth session** A video about delusion and hallucination was displayed and the researcher demonstrated how to assess a patient with delusion and hallucination.

**In the seventh session** The use of stress management techniques was demonstrated, videos about drug addiction were displayed and how to assess a client with drug abuse, alcohol abuse and withdrawal symptoms were using taught checklist.

**In the eighth session** Videos about "anxiety disorder" and "behavioral therapy" were shown and the students were trained

on how to use the appropriate type of behavioral therapy using teachable checklist and role play.

**The last session (9th session)** was concerned with the evaluation of the study group through a clinical test using a multi OSCE stations where a series of discrete or partially related short OSCE stations were used as well as exhibiting videos, showing images and simulated patient using observational checklist. By the end of the interactive station the students received immediate feedback about their mistakes in performance.

After implementing of the program on each subgroup of the study group, the evaluation scores of this clinical rotation was compared with its comparable of the control group to evaluate the effectiveness of using OSCE format in training and evaluation of under graduate psychiatric nursing students.

After accomplishment of the program the researcher asked experimental group to write down their opinions toward OSCET program.

### **Ethical considerations**

- 1-Privacy of the participant and confidentiality of their data were maintained.
- 2- Written consent was obtained from the students to participate in the study.

### **Statistical analysis**

Data entry and statistical analysis were done using the mean, standard deviation, standard error, student t- test, Chi-square, Linear Correlation Coefficient [r] and Analysis of variance [ANOVA] tests by SPSS V17.

## **RESULTS**

**Table (1):** Shows percentage of student nurses in the study group according to their perception of OSCE as a training tool. The results revealed that the majority of the studied students' were having excellent overview toward "perception about learning skills" and "satisfaction in using OSCE sessions in training" (90.67and 90.67) respectively, while more than half (66.67) of the studied students were having excellent overview toward effectiveness of using OSCE sessions in training.

**Table (2):** Represents percentage of student nurses in the study group according to their perception of OSCE as an examination tool. The results revealed that the more than half (60.00 )of the studied students' were having excellent overview about effectiveness of OSCE examination, while less than half of the studied students were having excellent overview toward "attributes", "scoring and objectivity of the OSCE exam"(45.33and 46.67) respectively.

**Table (3):** Shows Correlation between mean score percentage of student nurses in the study group according to their perception of OSCE as training and as an examination tool. Results revealed that there is positive and direct significant correlation between using OSCE sessions in training and OSCE examination.

**Table 1. Percentage of student nurses in the study group according to their perception of OSCE as a training tool (n=75)**

Study group (n=75)	Percentage of student nurses in the study group according to their perception of OSCE as a training tool					
	Average <75		Good 75-85		Excellent >85	
	N	%	N	%	N	%
Students' perception about learning skills by using OSCE sessions	5	6.67	2	2.67	68	90.67
Students' perception toward effectiveness of using OSCE sessions in training	9	12.00	16	21.33	50	66.67
Students' perception toward satisfaction in using OSCE sessions in training	6	8.00	1	1.33	68	90.67

**Table 2. Percentage of student nurses in the study group according to their perception of OSCE as an examination tool (n=75)**

Study group (n=75)	Percentage of student nurses in the study group according to their perception of OSCE as an examination tool					
	Average <75		Good 75-85		Excellent >85	
	N	%	N	%	N	%
Students' perception toward attributes of the OSCE exam	11	14.67	30	40.00	34	45.33
Students' perception about effectiveness of OSCE examination	8	10.67	22	29.33	45	60.00
Students' perception toward scoring and objectivity of the OSCE examination	27	36.00	13	17.33	35	46.67

**Table 3. Correlation between mean score percentage of student nurses in the study group according to their perception of OSCE as a training and as an examination tool (n=75)**

OSCE as a training and as an examination tool	Mean score percentage of student nurses in the study group (n=75)		Correlation	
	Mean±SD		r	P-value
OSCE as a training	52.333±5.61		0.525	<0.001*
OSCE as an examination	76.773±8.56			

**Table 4. Relation between total mean scores of rotation exam of study and control group of 4th year nursing students' enrolled in psychiatric and mental health nursing course (N=150)**

	Mean scores of rotation exam						T-Test	
	Study groups (OSCE exam)(N=75)			Controls groups (traditional oral exam)(N=75)			t	P-value
	Mean	±	SD	Mean	±	SD		
Group I	7.690	±	1.180	7.100	±	1.323	2.443	0.0158*
Group II	7.810	±	1.049	6.920	±	1.256	2.720	0.009*
Group III	7.340	±	1.718	6.440	±	0.870	2.337	0.024*

\*Significant values at p&lt;0.05.

**Table 5. Common mistakes of study group 4th year nursing students' enrolled in psychiatric and mental health nursing course performance during exposure to standardized patient in the interactive station (study group – N0= 75)**

Common mistakes of study group performance during exposure to standardized patient in the interactive station	study group (N=75)									
	Group I		Group II		Group III		Total		Chi-square	
	N	%	N	%	N	%	N	%	X <sup>2</sup>	P-value
1- St nurse gives false reassurance	1	4.00	4	16.00	0	0.00	5	6.67	5.571	0.062
2-St nurse miss to use effective communication technique as summarizing	0	0.00	1	4.00	1	4.00	2	2.67	1.027	0.598
3- St nurse mention medical jargon	0	0.00	2	8.00	2	8.00	4	5.33	2.113	0.348
4- St nurse makes direct contradiction for the psychotic ideas	0	0.00	4	16.00	5	20.00	9	12.00	5.303	0.071
5- St nurse mention Arabic medical jargon which was difficult to be understood	0	0.00	1	4.00	1	4.00	2	2.67	1.027	0.598
6- St nurse ask standardized patient questions include medical terminology	1	4.00	0	0.00	0	0.00	1	1.33	2.027	0.363

**Table 6. Study group 4th year nursing students' enrolled in psychiatric and mental health nursing course opinions toward OSCET program (N=75)**

Student's opinions	study group (N=75)	
	N	%
1- We like the method of using video in training and exam	35	46.67
2- The instructor was enthusiastic which make us enthusiastic too	15	20.00
3- OSCE sessions were effective which make me benefits before actual handling with psychiatric patients	42	56.00
4- We benefited from feedback which given after OSCE exam	17	22.67
5- we were much delighted about discussion and feedback after role play, which make us understand better and teach us how to react in different situation with psychiatric patient	23	30.67
6- We was fascinated when seeing how much psychiatric patient suffering from the psychotic symptoms and we can discuss this with the instructor	17	22.67
7- We thought that giving health education to psychiatric patient in Arabic something difficult but with role play it's not	5	6.67
8- OSCE sessions give me a chance to know how to handle psychiatric pt	10	13.33
9- In the interactive station when I see the standardized patient I feel anxious, but after talking with her, I feel a little relax.	7	9.33

**Table (4)** relation between total mean scores of rotation exam of study and control group of 4th year nursing students' enrolled in psychiatric and mental health nursing course. The table indicates that there is statistical significant difference in the total mean scores of the clinical exam rotation between study(using OSCE exam) and control(using traditional method of exam) groups as tabulated respectively (p-value = 0.0158, 0.009, 0.024).

**Table (5)** presents the common mistakes of study group performance which given to them through immediate feedback after exam. The results revealed that less than one fifth (12%) of the studied students received immediate feedback after OSCE exam about made direct contradiction for the psychotic ideas. Less frequently, 6.67% of them received immediate feedback regarding giving false reassurance to their standardized patient. While 1.33% of them received immediate feedback about asking patient questions include medical terminology.

**Table (6)** shows study group opinions toward OSCET program. The results indicate that more than half (56%) of the studied students reported that OSCE sessions were effective which make them benefits before actual handling with psychiatric patient. In addition, 46.67% of them expressed that they liked the method of using video in training while more than the quarter (30.67%) declared that they were delighted about discussion and feedback after role play, which make them understand better and teach them how to react in different situation with psychiatric patient. Less frequently 6.67% of them expressed that they thought that giving health education to psychiatric patient in Arabic something difficult but with role play it was not.

## DISCUSSION

The current study aims to demystify the world of examination and provide practical suggestions on how to achieve success. This was our challenge, we intended therefore to develop a new form of OSCE for use in teaching and assessing our students' competency in interacting with psychiatric patient. Kollwitz *et al.*, (1991) suggested that, the OSCE is a tool for teaching as well as for assessment (Theroux and Pearce, 2006). Another suggestion was by Theroux *et al.*, (2006) where the majority of students felt that it was important to perform these exams at least once before entering their clinical rotation and students felt that the learning experience should be similar to what they would encounter in clinical setting (Theroux and Pearce, 2006). The present study results reflected that the majority of the studied students have excellent mean score according to their perception of OSCE as a training tool. This could be attributed to many factors; some of them are using video clips in training as well as applying role play through demonstration and re-demonstration. The current study implement an intervention program on the experimental group only and it had a statistically significant effect on the nursing students' scores of the experimental group against control group. Similarly in a study by Kurz *et al.* (2009), -but not in psychiatric branch- found that research group skills' assessment had been improved between the time the course ended and the middle of the following clinical course, but this was not noted on control group (Kurz *et al.*, 2009).

In addition, a study entitled "Changing an existing OSCE to a teaching tool", (2002), pointed out that using existing OSCE resources to change the OSCE to a teaching tool proved to be an efficient use of teaching resources while increasing our educational impact (Brazeau *et al.*, 2002). Also Yoo *et al.*, 2003, described the use of OSCE with undergraduate nursing students with assessment and specific clinical activities. Their findings showed that the students using the OSCE had higher clinical skills scores than the group using the traditional method of learning (Yoo and Yoo, 2003). Moreover, a study by Brazeau *et al.* (2002), concluded that the OSCE as a teaching tool was an efficient use of teaching resources (Brazeau *et al.*, 2002). The results revealed that more than half of the studied students' were having excellent overview according to their perception of OSCE as an examination tool. This may be due to structured arrangement of the exam, clarity of the instructions, and exam providing the students with feedback. By testing the relationship between using OSCE sessions in training and OSCE examination. The results indicated that there is positive and direct significant correlation. This proves the success and correctness of the implemented program.

The present study found that the common mistakes in students' performance during interactive station were providing direct contraindication for the psychotic ideas and giving false reassurance. This may be due to that was the first experience for the students to testing them by using standardized patient and increasing their anxiety during this interactive station. Present study revealed that the studied nursing students stated that in the interactive station when they seen the standardized patient (SP), they felt anxious but after interacting with her, they felt a little relax. This denote why some of them because in their haste to complete the task, they forget to ask standardized patient for their names. In addition immediate constructive feedback were provided after finishing this station incorporating nursing students' strengths and weaknesses and any deficiencies that need to be addressed, which enabled nursing students to have had time to reflect on their performance. This reflection will engage the nursing students to think about their performance and help them in the future occurrence of a similar experience. Similarly students commented on the standardized patient in a study by Theroux *et al.*, 2006, as it was a wonderful experience. Another student who had felt anxious prior to this experience reported that "the major positive experience was the feeling of empowerment that I feel after the exam" (Theroux and Pearce, 2006).

On the contrary a study by Kurz *et al* 2009, their students stated that standardized patient reduced their anxiety (Kurz *et al.*, 2009). In the same line a study by McLaughlin 2006, concluded that most students reported that standardized patient stations were less stressful (McLaughlin *et al.*, 2006). The difference between the results in both studies may be due it is the first experience for our students to be tested through standardized patient. OSCE has been supported as an appropriate method in evaluating nursing clinical skills because of various advantages such as, improving student clinical performance, preparing highly qualified and competent graduates, increasing decision making abilities, and enhancing teaching level (El Darir *et al.*, 2013). Furthermore, OSCEs have been reported to be beneficial as they enhance skill

acquisition through hands-on approach and affords students to practice in a safe controlled environment (Evans, 2008). Although the OSCE is very demanding tool of assessment and needs time and efforts for preparation, it deserves these efforts and proved to be successful (El-Faki *et al.*, 2008).

### Conclusion

From the results of the present study, it can be concluded that the present study attempts to adapt the OSCE as an OSCTE for training purposes. Based on study findings, the researchers believed that it can be a useful tool for training as well as assessing students enrolled in psychiatric mental health course which may improve the outcome of clinical training of nursing students.

### Recommendation

Based on the results of this study, the following recommendations could be suggested:

- 1- Development and accreditation of training and examinations by OSCTE and the technology of standardized patient should be implemented in all nursing faculties in Egypt.
- 2- Continuing staff development and training about using OSCTE could greatly help to refine the process of training and evaluation.
- 3- Educators in psychiatric nursing field should continue to explore the various opportunities for implementation and evaluation of using standardized patient and new technology on students' outcome.

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