

Application of Objective Structured Clinical Examination in Community Health Nursing Course: Experience of Staff Members and Students

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Abstract: Objective Structured Clinical Examination (OSCE) is the most valid and reliable tool for evaluation of performance competency. There are different formats of OSCE to assess the cognitive and psychomotor skills as well as the knowledge recall and communication skills in an objective and consistent manner. It is important to involve students and examiners in changing or innovating of evaluation pattern. The present study aimed to investigate the perception and experience of staff members and students toward introducing OSCE as a new approach of assessment in community health nursing course. In addition to compare the applicability of using three different structured methods of simulated patient (Lay person with staff members, Staff members play double roles and two staff members), in order to find out the most appropriate simulated patient method. The study is a mix of quantitative and qualitative design. It was carried out at the fourth year community health-nursing students, totaling 160 students. All examiners (n= 16) and only 60 students participated at the focus group sessions. Results revealed that most of students and examiners were satisfied with the objectivity of OSCE and the variety of questions that increase the chance of gaining marks. The students' level of performance ranged from good to excellent in all stations for most of students. The study recommends introducing OSCE into the curriculum of community health nursing course and holding comprehensive training for staff members on being a simulated patient and examiner at the same time.

Key words: Objective Structured Clinical Examination; Community Health Nursing; Students; and staff experience; Simulated/ standardized patients

INTRODUCTION:

The Objective Structured Clinical Examination (OSCE) is one form of performance-based assessments; this assessment was first introduced into medical education by Harden in Scotland 1975^(1,2). OSCE has proven to become the gold standard all over the world as a tool for evaluating the clinical competency in view of the fact that it fulfill all the criteria of an ideal method of assessment, which

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includes comprising validity, reliability, objectivity and practicability or feasibility⁽³⁾. Accordingly, it reduce bias and discrepancies in the assessment of clinical competence ^(4- 8).

Objective Structured Clinical Examination (OSCE) is an assessment approach that is used to evaluate clinical competence of health science undergraduate students in a comprehensive, consistent, and structured manner, putting into consideration the objectivity process by using an examination format that instructs students to rotate through a circuit of stations of clinical tasks to increase the test reliability^(2,9,10). In addition, it addresses the assessment of the three domains cognitive, affective, and psychomotor at one point⁽¹¹⁾. Currently OSCE becomes a popular tool for assessing clinical competency in nursing, for the reason of its main objective is to evaluate students' skills and attitudes at a higher level of integrated learning, which is

not possible with traditional evaluation approaches. Studies have shown that OSCE objectively evaluates various skills including the ability to elicit vital information, analyze and synthesize it, apply knowledge, make sound clinical decisions, and communicate effectively^(12- 14).

There are different formats of OSCE that have been used for health sciences students including nursing students. These formats include anatomical models to enable students demonstrate practical tasks, computer images to evaluate students abilities to utilize information regarding identification of certain health conditions, risk factors or proper intervention⁽¹⁵⁾. In addition, standardized patient/ stimulated patient (SP) which is a simulation of a patient by an actor or other layperson who is trained to present the specified history and physical findings in a standardized particular manner. Students, faculty staff, or physicians could be trained to act as SP^(16, 17). This performance is

repeated uniformly and consistently. The advantage of standardized patients in evaluation is presenting different students with a similar challenge, thus it reduces one important source of variability⁽¹⁸⁾. Furthermore, SP incorporates a wide range of options resembling reality that allow students to work out through a clinical problem with little or no mistakes, permit students to make life-threatening errors without hurting a real patient, and provide instant feedback so students that can correct a mistaken action ⁽¹⁷⁾.

In nursing education it was approved that OSCE can be used most effectively to assess safe practice in terms of performance of psychomotor skills, as well as the communication and schematic knowledge associated with their application⁽¹⁹⁾.

While using non- standardized patients as an assessment of clinical skills for students reduces the reliability and validity of exam. In community health nursing,

patients or clients may complaint of manifestations that beyond the students abilities or out of the learned objectives. In addition, the turn over of clients and patients in community health settings is high, which results in absence of desired health conditions for students evaluation and inconsistent chances for students to be examined in an objective manner. In this highlight of finding of Pierre et al 2004, which indicated the necessity of using new assessment tools with student and the impact of OSCE in reducing injustice and inconsistency of clinical evaluation⁽³⁾, it was necessary to introduce OSCE approach in the community health nursing course as evaluation methods. Accordingly, the present study aimed to investigate the experience of staff member/ examiners and students toward OSCE as a new approach of assessment. Furthermore, the study compared the applicability of using three different structured methods of simulated patient (Lay person with staff members,

Staff members play double roles and two staff members), in order to find out the most appropriate simulated patient structure method.

Methodology:

Study design:

The study is a mix of quantitative and qualitative designs. The quantitative one is a comparative design, which was used to describe the students' performance all over the Objective Structured Clinical Examination (OSCE), in addition to comparing the applicability of three different methods in implementing simulated patient stations.

The qualitative design was used to portray the students and examiners' experience with OSCE by using focus group discussion (FGD) ⁽²⁰⁾. According to Barrou 2005, The FGD is appropriate to draw- out the voice of students in relation to introducing a new method of evaluation.⁽²¹⁾.

The study included research questions, which are:

- 1 – What is the experience of students and examiners with the application of OSCE?
- 2- What are the challenges that face students and examiners in OSCE?
- 3- What are the views of students and examiners about using different three structure methods in simulated patient stations?
- 4- What is the most applicable structure method of simulated patient station?

Setting:

The study was carried out at Community Health Nursing Department, Faculty of Nursing, Mansoura University

Subjects:

Purposive convenience sample of undergraduate fourth year community health nursing students (160 students) during the first semester of the academic year 2008/ 2009, and only 60 of them agree to participate in FGD.

Methods:

The study carried out through two main phases:

1- Preparation Phase included two parts:

The first part included negotiation and discussion with staff members of community health nursing department. Three meetings were held with staff members of community health nursing department, to discuss the challenges of the traditional clinical evaluation method and to illustrate the concept of OSCE. At the first meeting, each staff member was asked to collect literatures about OSCE. During the second and third meetings, all staff members became aware about OSCE and started to prepare for the exam. This followed by another three meetings to assign exam preparation tasks for each staff member, and continuously follow up of the ongoing preparation processes, which included the nomination of students groups, preparation of exam statements, questions, scenarios, evaluation sheets, equipments, assigning tasks during the exam, and printing of the approved exam. Moreover,

this phase included choosing of lay persons from the faculty workers to act as simulated patients. Those workers should be able to read and write.

The second part is the training for simulated patient exam that conducted for staff members/ examiners and lay persons who will act as simulated patients. Role-play scenarios were developed and used in this training, which was conducted through out ten days, five days for each group.

Furthermore, staff members trained on how to evaluate students during different OSCE stations, by using predetermined competencies being evaluated. These activities were in parallel with students training of OSCE assessment process.

2- Implementation phase:

Students divided into four groups each group involved 40 students, rotated throughout the OSCE stations.

Stations' design: The OSCE included three types of exams to test different skills

and abilities of students. A set of marking criteria was drawn up for each station to assesses each student objectively. OSCE consisted of the following exams:

- Electronic exam:

Electronic exam was designed to test the knowledge and recall skills of students to identify risk factors, abnormal signs of a certain health condition, normal pregnancy signs and child growth. It consisted of four stations each one lasts for one minute, totally four minutes, and four marks.

- Procedure demonstration exam:

Procedure demonstration exam was designed to test the practical skills; it consisted of three stations each one lasts for three minutes. Each student asked to demonstrate one phase of a clinical procedure. The duration of this exam was 12 minutes and seven marks; procedure checklist was used as evaluation tool.

- Multiple simulated patient exam:

Multiple simulated patient exam was designed to test the four skills domains

namely; knowledge and understanding, practical, intellectual, and transferable skills.

It consisted of three simulated patient stations each one representing a different health condition in 10 minutes.

- The first simulated patient station is

"Lay person with staff member": A lay person to act as simulated patient and a staff member acting as examiner.

- The second simulated station is "Staff member playing double roles":

A staff member to act as simulated patient and examiner at the same time.

- The third simulated station is "Two Staff member":

It included two staff members one acting as simulated patient and the other is the examiner.

During each station of multiple simulated patient exam students were evaluated by using 5- points likert scale. This scale structured to evaluate students' competency in history taken (2 items = 10 scores), physical examination (5 items= 25 scores), interpersonal skills (9 items= 45

scores) and health education (3 items= 15 scores), the total scores was 95. Then; students were asked to record their findings in a certain sheet that used to confirm the observation scale marks.

Exam's scores:

Researchers used the gained scores to compare the level of performance of students at the different stations, in order to predict its appropriateness for students. Level of performance of students rated as following:

Poor less than 50%, fair from 50% up to < 65%, good from 65% to < 75%, very good from 75% to < 85% and excellent from 85% and more.

2- Data collection: Data was collected by using:

- **Focus Group Discussion (FGD)** was used to obtain the views of students and examiners regarding the different examination methods of OSCE. Focus group discussion included two groups:

The first group is "Group (A) students FGD", and the second group is "Group (B) examiners FGD". To

1-Group (A) Students FGD sessions consisted of six sessions, each session included 10 students, each session consumed 45- 60 minutes. The total consumed time was 4.5 - 6 hours

2- Group (B) examiners FGD sessions consisted of two sessions each session included eight examiners and consumed 45- 60 minutes. The total consumed time was 1.5- 2 hours.

Students' Focus group questions:

Q1- Describe your experience with OSCE?

Q2- How did you feel about OSCE?

Q3- How did you think about fairness and objectivity of each station?

Q4- How did you find the OSCE?

Q5- How did you feel about each simulated patients' station?

Q6- What are the challenges that you find in OSCE?

Q7- How did you find the surrounding

environment of OSCE?

Q8- How did you describe the questions and scenarios' statements?

Examiners Focus group questions:

Q1 – Describe your experience with OSCE?

Q2- How did you find the surrounding environment?

Q3- Describe the student challenges at each station and how you overcome?

Q4- How do you think about fairness and objectivity of each station?

Q5- How do you describe the statements, questions and scenarios of OSCE?

Q6- Describe your experience as regarding simulated patients' station?

Q7- What do you suggest to use OSCE effectively in the future?

Q8- What are the challenges that you found in OSCE?

Data analysis:

Quantitative data analysis

The quantitative data was analyzed by using SPSS package, ONE- WAY ANOVA was used to compare the mean difference

of students' scores at multiple simulated patient stations.

Qualitative data analysis:

Thematic analysis was used to analyze participants' descriptions of their experiences with OSCE. The interview transcriptions were analyzed to search for common themes and similarities, and also variations among participants' views. Data was coded and similar codes were identified and grouped together under categories and subcategories. Similar categories were organized together under common themes. To check the validity of the findings, the three researchers reviewed the raw data and clarity of analysis in relation to the emerging categories and agreed themes ⁽²¹⁾.

Ethical consideration:

All participants informed about the study, and consents were obtained from them. Students informed that there is no any obligation to participate in the study and they have the right to refuse to participate

without any affection on their formal assessment. All data was anonymised, and names were replaced with a participant number.

Results:

The study results are presented by qualitative and quantitative data. These results were divided into two main parts; the first part describes the performance and experience of students with Objective Structured Clinical Examination (OSCE).

The second part illustrates experience of examiners with OSCE.

Students' performance and experience with OSCE:

As regards to students performance

Table(1) shows that the excellent level of performance was observed at electronic exam among 73.25% of students, followed by 62.5% at procedure demonstration exam. While the poor performance was observed at multiple simulated patient exam among 6.8% of students.

Table 1: Distribution of students according to their level of performance at different OSCE stations

Stations	Level of performance of students N= 160									
	Poor		Fair		Good		Very good		Excellent	
	N	%	N	%	N	%	N	%	N	%
Procedure demonstration exam	0	0	5	3.1	5	3.1	50	31.25	100	62.5
Mean± S.D	0		3.7± 0.28		4.4± 0.1		5.3± 0.32		6.4± 0.36	
Mean 95% CI	0		3.3 : 4.1		4.2 : 4.5		5.2 : 5.4		6.3 : 6.5	
Electronic exam	6	3.75	36	22.5	0	0	0	0	118	73.25
Mean± S.D	1± 0.00		2± 0.00		0		0		3.4± 0.5	
Mean 95% CI	1.0 : 1.0		2.0 : 2.0		0		0		3.2 : 3.4	
Multiple simulated patients exam	1	6.8	62	38.75	58	36.25	18	11.25	11	6.8
Mean± S.D	4.2± 0.16		5.1± 0.32		6.2± 0.23		7± 0.27		7.5± 0.9	
Mean 95% CI	4.1 : 4.3		5.03 : 5.2		6.1 : 6.2		6.8 : 7.1		6.9 : 8.2	
Total OSCE marks = 20 marks	0	0	6	3.75	15	9.4	64	40	75	46.8
Mean± S.D	0		11.4± 0.22		12.5± 0.31		14± 0.59		16.1± 0.5	
Mean 95% CI	0		11.2 : 11.7		12.4 : 12.7		13.8 : 14.2		15.8 : 16.3	

Regarding to the perception of students to the OSCE, during focus group sessions, nearly one quarter of students (n= 14) mentioned that OSCE was an organized method of clinical evaluation. They also recommended applying this method for all practical courses. *"OSCE was an organized method of evaluation and I recommend applying it for all practical courses"* (G= group, SE= session, S= student) (G A: SE1: S 2, 5, 8, SE 3: S3, 4, 6, 9, 10, SE 4: S1, 5, 8, 9, SE 5: S5, 7 SE6: S 8).

Other students (n= 10) felt that OSCE needs high intellectual skills and high speed in performance, and it tests a variety of students' skills. Therefore, it is suitable for evaluating all nursing students' clinical performance. *"It needs concentration, depends on understanding and rapid performance"* (GA: SE1: S 6, 7, 10, SE6: S 1, 7), *"It is suitable for evaluating students' various skills"* (GA: SE5: S 3, 6), *"OSCE tested students' different abilities"* (GA:

SE3: S 5, 9, 10).

One third of students (n= 18) mentioned that OSCE included a variety of questions, which enabled them to gain more marks and this was a positive aspect of OSCE. *"OSCE is very good, it is composed of many different questions which provided me with a chance to obtain more marks"* (GA: SE1: S2, 4, SE3: S4, 9, SE6: S 6, 7, 8, 10, *"OSCE covered most outlines of the course"* (GA: SE2: S 1,2,5,8, SE4: S 5, 6, 7, G 5: S4, 5,7)

On the contrary, a few number of students (n= 3) had negative views about OSCE. They viewed the variety of questions negatively. One of the students commented that OSCE was not suitable for all students. *"OSCE is troubling because it includes various questions"* (GA: SE2: S 3 8, 9), *"It is not suitable for all students"* (GA: SE1: S 8, 9)

More than two thirds of students (n= 38) were happy about the allocated time for the electronic exam and procedure

demonstration exam, but they felt that the allocated time for the multiple simulated patient exam was inadequate. Most students (n= 38- 46) had positive views about electronic exam in terms of the variety and clarity of questions, the suitability of the exam environment, and the adequacy of the allocated time for these stations. About half of students (n= 28- 30) had a positive view of the procedure demonstration exam's stations.

The positive aspects of these stations were similar to those were in the electronic exam.

"The time at the stations in the electronic exam was enough for answering questions" (GA: SE1: S2-6, SE2: S1-7, SE3: S 3-7, SE4: 6- 1, SE5: S3-5, SE6: S7,8),

"The allocated time for the stations in the procedure demonstration exam was enough" (GA: SE1: S2-6, SE2: S1-7, SE3: S 3-7, SE4: 6- 10, SE5: S3-5, SE6: S7,8)

"The statements of the electronic exam

were clear" (GA: SE1: S1,1-7, SE2: S4, 6-10, SE3: S 1-8, 10, SE4: S 2- 8, 10, SE5: S6-10, SE6: S 1,2,7-10)

"The questions in electronic exam were expected & varied" (GA: SE1: S1, 2-7, SE2: S4, 6-8, SE3: S 1-5, 10, SE4: S 1, 2- 8, 10, SE5: S6-10, SE6: S 1, 2, 7-10)

"The electronic lab environment was suitable" (GA: SE1: S2, 3-8, SE2: S2, 6-9, SE3: S 1-5, 10, SE4: S 2, 3- 9, 10, SE5: S6-10, SE6: S 1, 2, 7-10).

Table 2 illustrates the difference mean scores of students at the multiple simulated patient exams. Students' scores show a significant difference among the three simulated patient stations. This difference appears among stations in all evaluated items, and in the total scores. Students gain the highest scores at the lay person station, followed by staff member of double roles, and the lowest scores gained at two staff member station.

Table 2: Mean scores of students' marks in multiple simulated patient exam

Items	Simulated patient stations					
	Lay person with staff member examiner		Staff member playing double roles		Two Staff member	
	Mean± S.D	Mean 95% CI	Mean± S.D	Mean 95% CI	Mean± S.D	Mean 95% CI
History taken	7.4± 1.7	7.1 : 7.7	5.8± 2.5	5.5 : 6.2	5.7± 2.3	5.4 : 6.1
F- test	27.9					
P	0.000					
Physical examination	13.8± 5.9	12.8 : 14.7	11.1± 6.4	10.1 : 12.11	9.9± 5.5	9.1 : 10.7
F- test	17.8					
P	0.000					
Interpersonal skills	33.4± 5.3	32.6 : 43.3	31.9± 8.2	30.6 : 33.2	31.2± 7.8	29.9 : 32.3
F- test	4.3					
P	0.014					
Health education	10.1± 2.4	9.7 : 10.5	9.1± 3.3	8.5 : 9.5	7.3± 3.4	6.7 : 7.8
F- test	32.8					
P	0.000					
Total score	64.8± 10.5 ^a	63.2 : 66.5	57.9± 15.2 ^b	55.6 : 60.3	54.2± 15.00 ^c	51.8 : 56.5
F- test	24.8					
P	0.000					

Table (3) shows the distribution of students according to their level of performance at the three simulated patient stations. More than half of students demonstrate a good level of performance at layperson with staff member station followed by nearly one-third at staff member playing double roles station. On the other hand, the poorest level of performance was observed at two Staff member station among 31.8% of students.

Table (3): Distribution of students according to their level of performance at different three simulated patient stations

Simulated patient stations	Level of performance of students N= 160									
	Poor		Fair		Good		Very good		Excellent	
	N	%	N	%	N	%	N	%	N	%
Lay person with staff member examiner	3	1.9	31	19.4	88	55	25	15.6	13	8.2
Mean± S.D	44± 4.3		52.2± 2.4		63.7± 4.1		75.7± 2.5		86.9± 3.9	
Staff member playing double roles	45	28.1	28	17.5	52	32.5	26	16.25	9	5.6
Mean± S.D	39.3± 7.1		52.5± 2.5		63.7± 4.4		74.7± 2.5		86.8± 3.5	
Two Staff member	51	31.8	47	29.4	39	24.4	16	10	7	4.4
Mean± S.D	37.5± 7.3		52.3± 2.2		63.7± 4.2		76.2± 2.4		84.6± 4.5	

Regarding to stress exposure in multiple simulated patient exam, students viewed it as the most stressful stations among the whole of OSCE stations. More than one quarter of students (n= 17) felt more comfort with lay person rather than interviewing staff members. They add that lay person station is the least stressful station followed by staff member playing double roles which is less stressful, than two staff members station.

"The lay people station was less stressful because I was able to give health education easily" (GA: SE1: S2,5, SE 2: S

8-10, SE 3: S3,4,6,9, SE 4: S 1,5-8, SE 6: S 1, 6, 10)

More than one quarter of students (n= 20) considered the time factor and presence of examiners as observers to be other causes of stress.

"Time factor and presence of examiners as observers are other factors of stress" (GA: SE1: S1,2,5, SE 2: S 7-10, SE 3: S3, 4, 6, 9, SE 4: S 1,5-8, SE6: S 1,3, 6, 10)

"The presence of observer in simulated patient stations made it stressful for me" (GA: SE1: S1, 2, 5, SE2: S 7-10, SE 3: S3, 4, 6, 9, SE4: S 1, 5-, SE 6: S 1, 3, 6, 10)

In relation to the fairness and objectivity of OSCE, eight students described multiple simulated patient exam as an objective method of evaluation, and the most reliable one was the lay person with staff member as they felt that they were interviewing a real patient. *"A lay people station was more objective and near to reality"* (GA: SE1: S1, 2, SE2: 2, 10, SE3: S5, 6, SE6: S7, 8)

On the other hand, two students preferred stations of two staff members, and described it as more objective, *"Staff to staff station was the most fair"* (GA: SE 1: S1, SE 3: S4)

The level of difficulty of simulated patient stations as perceived by few students depended greatly upon the type of health condition that included in the scenario (n= 6).

"The Typhoid scenario was difficult, for me the AIDS scenario was the most difficult one, and the pregnancy toxemia scenario

is the easiest" (GA: SE 4: S2, 3, SE6: S5, 7, SE 3: S1, 6)

Some students (n= 14) described the lay person station as difficult, for the reason of that lay persons have limited information about the health condition they were acting. These information did not beyond the mentioned information in the scenario, *"The lay person station was the most difficult, they do not have enough information about the health condition that the act"* (GA: SE3: S1, 2, 4, 5, SE4: S2, 1, 4, 7).

Another six students considered scenarios not clear enough because they needed more manifestations to be mentioned. While other students (n=14) described the scenario statements clear enough, *"Some questions were not clear; there was a need for including more manifestation"*. (GA: SE 1: S3, 4, SE2: S 5, 6, SE3: S1, 2, 5, 6, SE4: S1, 9, SE5: S1, 2, 8, SE6: S 2, 3)

Feelings and interpersonal relations affect the acceptance of students to simulated patient stations. The interpersonal relations were described in terms of cooperation of examiners to help students, some students (n= 15) expect more clarification from examiner to enable them to catch the correct answer. In addition, facial expression of examiners sometimes affects the students' confidence about their answers. Some students did not like staff member to play the role of simulated patient because some of them may loss control of their facial expression, which indicates that students are going to a wrong answers. *"Staff members were not cooperative"*(GA: SE 1: S5, 6, SE2: S1, 2, SE 3: S8, 10, SE 4: S2, 10, SE5: S6, 7, S4- 6),*"The staff understands the scenario and can facilitate my decision about the condition"* (G A: SE1: S7, 9, SE2: S3, 8, SE3: S4, 5, SE4: S1, 7, SE5: S9, 10, SE6: 7, 8)

Examiners' experience with OSCE:

The majority of examiners (n=14) found OSCE an objective, fair and comprehensive evaluation method. *"OSCE is an objective and comprehensive method of evaluation"*, (G= group, SE= session E= examiner), (GB SE1: S3, SE 2: S5). In addition, they found OSCE to have advantages for both students and staff members. Most of examiners (n=12) said, *"OSCE is a very useful experience that measures several skills of students and add new skills to staff"* (GB: SE1: E1-7, SE2: E2, 3, 6- 8).

Examiners described the surrounding environment as unsuitable for the exam due to the large number of students, and the absence of air-conditioning at some stations. *"The environment was not suitable in the computer stations due to the crowding and the absence of air conditioning. But it was suitable at skill lab and simulated patient stations"* (GB: SE1: E 2, 7, 8)

In addition, a large number of examiners (n=13) described the exam statements to be clear, but the allocated time for all stations was inadequate, "Statements were clear" (GB: SE1:E1, 3-6, SE2: E2 -8, "Time was not enough at all stations" (GB: SE1: E2-7, SE2: E3-8).

However, examiners accepted multiple simulated patient exam, as they found it a proper method to simulate the reality, and a good opportunity to observe the students' behaviors with a patient, "OSCE give chance to observe how students will behave as if they deal with a real patient" (GB: SE1: E 2, 4, 7, 8, SE2: E5,6,8).

Regarding to staff members who played double roles, they did not feel any confusion, and they felt and behaved like a patient. "I felt and behaved like a patient" (GB: SE1: E 1- 4, 7, 8, SE2: E1-6, 8), "I did not feel any confusion" (GB: SE1: E 1- 5, 8, SE2: E2-6,8). Only two examiners mentioned that they experienced pressure from students.

"Some students tried to extract the correct answer by asking a direct question", "I felt imposing by students, they asking a direct question such as "do you complain of bilharzias or ascaris" to obtain the answer of the exam", "I was stressed when some students tried to get my approval for their answers and/ or the health education that they give (GB: SE1: E 3,4).

One examiner found that double roles station may make staff overloaded when starting to write the student's marks, while students' were starting to ask again about the scenario. "I felt confused between the double roles as patient and examiner for a while if examinee ask about scenario condition once again, but I did not loss control", "I was overloaded". (GB: SE1: E 3)

As regards to lay person station, two staff members found it typically simulating the reality, but it was difficult to train lay persons who did not show enough cooperation. In addition, lay persons kept in their minds the scenario dialog only, and

they could not answer any more questions that students arise. *"When students were asking about the manifestations or risk factors that were not mentioned in the scenario the lay person could not answer"* (GB: SE2: E 3, 4)

Examiners found that the two staff station is less exhausting, and facilitating the evaluation process, but it needs a large number of staff members. *"Two staff station does not provoke exhaustion, but the examiners may loss concentration"* (GB: SE2: E 1, 6), *"Two staff station needs a great number of staff members"* (GB: SE1:E1-6, 8 GB: SE2: E2,3, 5-8), *"Two staff station is better, it facilitates the evaluation process"* (GB: SE1: E 2, 4, 7, 8, SE2: E5, 6, 8)

Examiners described the students' challenges with OSCE in terms of large number of students and shortage of staff members, which makes students to wait for a long time, accordingly; their anxiety increased. Ten staff members out of

sixteen recommended staff with double role station to be used in the next academic year. *"It is better to use examiner as a patient at the same time"* (GB: SE1: E1, 3, 5, SE2: E2, 4)

Discussion:

Objective Structured Clinical Examination (OSCE) is a practical test to assess specific clinical skills, which is a well established method of assessing clinical competence. ^(8,22, 23) The study findings present important perspectives of admitted students to OSCE at community health nursing course. A student's view about OSCE is approximately similar in several studies. They view OSCE as helpful in identifying areas of weakness; it is a comprehensive, fair, and objective evaluation method ^(3, 10, 24). The present study showed general positive views of students toward OSCE in terms of proper organization, objectivity, and fairness. In addition, they described it as a comprehensive either for covering most of

learned topics and course objectives, or the scope of measured skills especially intellectual skills. One benefit of this comprehensive evaluation method is collection of marks as mentioned by one third of participants. These results are confirmed by the quantitative marks of the registered students (table1), as nearly half of them demonstrate excellent scores and a minimal percentage had a fair scores, although the variation of performance level within the three types of examination that used in OSCE.

The present study is in agreement with several studies that used OSCE for students in different health sciences. Health sciences' students approved that OSCE covers a wide range of clinical skills, competencies and, knowledge; in addition, chance of failing was minimal, as reported by Awaisu et al 2007 and Pierre et al 2004 (3, 10). Furthermore, the present study in agreement with Khursheed et al 2007 who mentioned that the majority of students

agreed that the given tasks of OSCE were clear and easily understood.⁽²⁵⁾ On the other hand, some participants of the present study had negative perspectives regarding to OSCE. These negative perspectives were expressed in terms of limited allocated time in some stations that provoke feeling of stress among students. This negative view reported in other studies to be intimidating and more stressful than other assessment format (3, 10, 24). Specifically, when OSCE introduced to nursing students in Ireland, it was perceived to be a meaningful and fair form of assessment, although they acknowledge the OSCE as a stressful experience (26, 27).

Results of examiners' experience with OSCE approved the positive and negative views of students about OSCE in terms of objectivity, comprehensiveness, and wide range of evaluated skills. This findings in agreement with Iqbal et al 2009, who reported that all staff members who

participated in their study perceived OSCE to be an excellent tool for summative assessment that portray the level of different skills of each examinee ⁽²⁴⁾. In addition, they discussed that time limitation, uncomfortable environment at some stations, waiting for long time due to large number of students and shortage of staff members are the reasons of students' anxiety. This in agreement with Barman 2005 who recommended triplications of OSCE circuits was to reduce time and subsequently students' anxiety will be reduced ⁽⁴⁾.

Nowadays, simulation is taking an important place in training and evaluation of healthcare professionals. As regarding to multiple simulated patient exam, students found it the most difficult and stressful one. They referred feeling of stress to the presence of observer, level of cooperation and uncontrolled facial expression of simulated patients. Stress was decreased at Layperson with staff

member as they felt more comfort to obtain health history, performing assessment and giving health education. Feeling of stress and difficulty was provoked at stations where staff members playing double roles, but it extremely exceeded at two Staff member's station. The uncooperative simulated patients viewed by students to be lay person who have limited information about the condition that they are acting, or staff members who disappoint their trails in obtaining a direct answer about the condition that mentioned in the scenario. Findings of Khursheed et al 2007 and Peckler et al 2009 confirmed the present study in relation to effect of simulator's response or behavior on students' performance in OSCE ^(25, 28). Examiners declared that they found difficulty to train laypersons and they did not demonstrate enough cooperation during exam. These findings are confirmed by a study conducted at Michigan University which revealed that lay persons did not portray

the patient in the manner expected ⁽²⁹⁾. Furthermore, examiners pointed out that students tried hardly to pull out the correct answer from them.

There was variability in students' views about objectivity and fairness of multiple simulated patient exam. Some students referred objectivity and fairness to the reality in simulation that they felt in layperson with staff examiner station. While others found staff stations is more objective due to the understanding of staff members to the health condition when they acting as simulated patient. So it could be an advantage of using staff members to act as simulated patient in the highlight of the findings of Lovell et al 1998 who stated that medical student- simulated patient understood the purpose of simulation and medical condition portrayed ⁽²⁹⁾. Students have a suspicion that the objectivity of the evaluation will be reduced when staff member acting as simulated patient, especially when playing double role.

Concerning this point staff member revealed that they felt confusion between the double roles they acting for seconds, but they did not loss control at all. Quantitative marks confirm the view of students regarding different type of simulated patient stations. Students obtained the highest marks at "layperson with staff member examiner" station followed by "staff playing double role" station.

Examiners stated that multiple simulated patient exam is a chance to closely observe students' performance in a well reality-simulating situation. The present study is confirmed by several studies which recommended using SP in assessing nursing students for the reason that examiners and students found it a reliable and valid means of assessment ^(30- 32).

Conclusion:

In conclusion, all the academic staff members were satisfied with applying OSCE in community Health Nursing course;

they appreciated the learning experience and the objectivity manner of the exam.

Some students indicated that OSCE was stressful but they felt they well prepared and appreciated the efficacy and relevance of this assessment method. While other students described OSCE to be, stress provoking experience and requires considerable preparation effort for students and examiners. All students mentioned the electronic exam stations and procedure demonstration stations were clear, earn marks also time and environment were suitable, while multiple simulated patients were the most stressful stations and the time was not enough. Most of participants approved to use one staff member to act as simulated patient and examiner at the same time.

Recommendations

- 1- Use OSCE in formative and summative evaluation
- 2-Persons who acts as a simulated patient must be understand the objective of OSCE

and trained well on essential issues which are:

- How to act like a patient
- How to use scenario information properly
- Controlling of non- verbal communication

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