

## RESEARCH ARTICLE

### THE STUDENT VOICE TO IMPROVE OSCE

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#### ABSTRACT

*Background: Nursing education is not only about cognitive field but also include the affective and psychomotor domains. Nursing involves "hands-on" psychomotor skills and clinical decisions in the affective and psychomotor domains which needs to be evaluate in a method that cover both domains. The most important goal of student's assessment is promoting learning process and improvement of educational programs quality. through different methods of assessment OSCE(An objective structured clinical examination) could be mentioned as an appropriate way for evaluating the medical students specially nursing students.it is undeniable that the student's attitude toward evaluation methods, as a main client of education programs, could be highly effective and valuable for educational systems*

*objective: present study is conducted to investigate the student's views toward OSCE, to find out the present problems in this evaluation method.*

*Design: A qualitative, exploratory study.*

*Methods: For this qualitative study, twenty-five students who experienced OSCEin their university were selected purposively. The data were collected by using semi structured interviews. The interviews were verbatim transcribed and analyzed according to the qualitative content analysis based on Graneheim and Lundman method.*

*Findings: Two main themes emerging during data analysis were: 1- Management aspects problem, that includes 3 categories: 1) supervisor's behavior, 2) time management,3) Facilities, and 2- Educational aspects problem including three categories of 1) Simulation, 2) Educational background, 3) Question design which are key factors in conducting a more rational and helpful OSCE exam.*

*Conclusion: the result of the present study could be highly effective in promoting both clinical skills evaluation and educational programs. Using this kind of methods requires revision on education method, using more student-center methods in teaching and providing facilities to bring students to the real world of profession helping them to improve their ability in clinical decision making for their career prospect.*

**Keywords:** OSCE, nursing, educational system, evaluation



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## INTRODUCTION

Nursing education is not only about cognitive field but also include the affective and psychomotor domains. Nursing involves “hands-on” psychomotor skills and clinical decisions in the affective and psychomotor domains which needs to be evaluate in a method that cover both domains. The most important goal of student’s assessment is promoting learning process and improvement of educational programs quality(Lee, Ho, Yu, & Chao, 2020). An objective structured clinical examination (OSCE) is a modern type of examination often used in health sciences. The OSCEI exam is actually an opportunity to test the ability to combine knowledge, clinical skills and communication skills with patients. OSCE is not really a test, but an evaluation method that takes into account the following: multiple stations are designed, different abilities are tested at each station, learners go through all the stations, the content of the test for the audience is fixed and all learners are judged by the same tools and under predetermined standards(Elbilgahy, Eltaib, & Mohamed, 2020). In an OSCE test with a large number of testers and stations, students are grouped and each examiner at each station evaluates a certain number of students. In such a test, there are several factors that can cause errors, including; The abilities of different students, the strictness or ease of the examiners, the difference in the patient profiles and the difference in the difficulty of the stations, so holding a test that meets all of the above is very important to minimize scoring errors(Lawson, 2006). Better decision-making and achieving better educational policies and practices requires the co-thinking, participation and understanding of the experiences of educational experts in the relevant field. Knowing students’ opinions about educational activities as customers of the educational system, especially when there is a change in the teaching process, will be very valuable for teachers as owners of the educational process(Halliday, Kern, Garrett, & Turnbull, 2019).

Nursing as a scientific and clinical discipline is evolving. The purpose of the Bachelor of Nursing training program is to train graduates who, by receiving the theoretical and practical training planned over a four-year period, acquire the necessary competencies to effectively perform professional roles and tasks. The mission and goal of nursing schools is to ensure that these capabilities are acquired by graduates to enter the field of service delivery. Achieving this requires that education officials, in addition to continuous and scheduled monitoring of student learning during the course, before graduation and

reside in the clinical field as a nursing plan force, by holding a practical test of the rate Ensure that students achieve the minimum professional qualifications(Halliday et al., 2019).

Teachers at McMaster University School of Nursing first used it in 1984 to assess nursing skills in the primary care of third-year students(Bulfone, Zanini, Tosolini, & Zuliani, 2006). Baxter et al. Consider the implementation of a management program and action-oriented model that reduce the gap between what is learned during study and its application in the real work environment, as a scientific method in changing management methods to solve problems in the evolution of the method Training, explaining new methods and combining new and old methods as well as changing and improving clinical evaluation methods have been identified. Identifying and managing related processes in the educational system and implementing new knowledge in the clinical work environment with optimal educational planning improves the efficiency and effectiveness of the educational organization in achieving its goals(Lawson, 2006).

## METHOD

**Aim/s:** the present study is conducted to investigate the student’s view points toward OSCE exam, considering the merits and disadvantages of this method, and including their suggestions in assessment toward best evaluation.

**Design:** A qualitative, exploratory study.

**Participant recruitment:** the sample were enrolled in study from December 15th 2020 to December 20th 2020.

**Sample:** The study population will be selected from nursing students. Criteria for student entry were passing all theory units and being eligible for the OSCEand willingness to participate in the study and expression of experiences.

**Data collection:** The main method of data collection was semi-structured interviews. The time of the interviews and the appropriate place were determined by the participants. In the interview, the nurses were encouraged to share their experiences with the clinical nursing competency test at the end of the course. They were asked the question, "Tell me about the OSCE test you took?" "What were the problems you saw during the test?" And "What suggestions do you have for solving this problem?" Exploratory questions continued based on the nurses’ experiences and access to more in-depth information, asking them to cite concrete examples as examples. The duration of the

interviews was 30 to 45 minutes, depending on the circumstances and the desire of the participants. Sampling and interviews continued until the data saturation was achieved. Saturation occurs when no new data are obtained from the following interviews and the data are the repetition of what was previously collected. In the present study, according to the research team, after conducting 15 interviews, data saturation was achieved and to ensure that no new data would be obtained; four more interviews were conducted with students.

### Statistical analysis

The interviews were verbatim transcribed and were read through several times to obtain a sense of the whole. Data analysis was done using a conventional content analysis method. In this method, the researcher does not use previous theories or studies to do primary coding. As the data analysis proceeds, initial coding is planned, reviewed, and modified. To implement conventional content analysis, Graneheim and Lundman's proposed steps were used. These steps included: (1) transcribing the entire interview immediately after each interview, (2) reading the whole text for comprehensive understand of its contents; (3) identify the meaning units and primary codes; (4) classifying similar primary codes in more condensed units and comprehensive categories; and (5) modifying the primary categories by research team; and (6) revealing the implicit meaning and hidden content of categories. To verify the coding method, three nursing professors, specialist in these fields of nursing researches checked the codes and verified them. To confirm the reliability, the Cohen Kappa coefficient formula was applied. Kappa coefficient was used to verify percent agreement across evaluators. In this study, the agreement between the two evaluators was 0.74, which

represents 74% of the agreement between them. MAXQDA software 10.0R250412 (developed and distributed by VERBI Software Company in Berlin, Germany) was used to manage of data. Trustworthiness means the assurance degree about data accurateness. To achieve the trustworthiness, the methods proposed by Lincoln and Guba were used. Credibility of the data was assessed by researcher long-term engagement with data, indirectly participants' perspectives during the research, transcribing interviews instantly and reviewing the interview with participants to confirm the accuracy of transcriptions compared to what they had answered. to achieve conformability of data, two external nursing PHD supervisors with research experiences in qualitative study evaluated the interviews, primary coding and the categories. To ensure dependability, the raw data, codes and categories were kept for audit purposes, and all procedures of the study and details were noted and recorded. For transferability, the sampling with maximum diversity was used.

### RESULTS

Fifteen nursing students collaborated with the present study. The mean current age of students was 22 (standard deviation [SD] = 2.57) years, 55% of the students were male. Two main themes emerging during data analysis were: 1- Management aspects problem, that includes 3 categories: 1) supervisor's behavior, 2) time management, 3) Facilities, and 2- Educational aspects problem including three categories of 1) Simulation, 2) Educational background, 3) Question design. The number of subcategories and their emerged codes from meaning unites are provided for Management aspects problem and Educational aspects problem have been shown in table 1, and table 2 respectively.

Table 1. meaning unites, Condensed meaning units, codes, and categories of Management aspects problem theme)

Meaning units (examples)	Condensed meaning units	Code	Category	Theme
1-Oh my god! how stressful it was, you cannot believe me that I was shaking, you know the professor was staring at me and it's kind of make me nervous(participant3)	-Exam was stressful	-stress		
2-What was that? professor was staring at me throughout the exam, her way of looking sent me negative signals that you are completely wrong (participant 1)	-professor was staring at me	-supervisor department		
3-Oh my god, my bad chance, why my supervisor was Mr. Kamala? of course he hates me, he never let me pass(participant7)	-negative signals from supervisor	-negative vibes	supervisor's behavior	
	-it was chance based evaluation	-chance		
	-the supervisor hates me	-intrapersonal relationship		
		-unfair judgment		
1-I kept one eye on o'clock for not getting run out of time, when there is a time limitation, to be honest I cannot focus at all worrying about time management (participant 11)	-Keeping eye on o'clock			
2-It was so bad because of time limitation I was in hurry and I mixed all the steps for such a simple procedure! I have been disappointed of my performance since exam day (participant 15)	-There was time limitation	-hurry up		
3-The time specified to each station was not suitable at all; sometimes I was short of time and sometimes I left with extra time, I think it requires more management (participant 4)	-I was in hurry	-time limitation	time management	
	-I mixed everything	-confusion		
	-Unsuitable time design	-time design		Management aspects
1-It was too warm, my brain stops working in hot weather, i was sweating there combined with stress (participant 6)	-Warm environment			
2-I was thirsty cause of stress I wish they provided some bottle of water then I was able to perform better (participant 9)	-I was sweating	-temperature		
3-Oops what a bad odor was there, why they did not provide air conditioner? I could not breath at all (participant 13)	-I was thirsty	-ventilation		
4-The space specified was very small so that the stations were completely side by side. You were able to know what I going on in previous or next station. while dressing the Maryam's sound for education grasped my attention completely, and I was there not my own station (participant 12)	-Bothering odor	-odor		
	- The space specified was very small	-small space	Facilities	
	- It was crowded	-noisy environment		
	-it was noisy	-distraction		
	-I lost my attention	-crowded environment		

Table 2. meaning unites, Condensed meaning units, codes and categories of physical Educational aspects problem theme)

Meaning units (examples)	Condensed meaning units	Code	Category	Theme
<p>1-What kind of exam it was? it just covered the handy skills of a nurse, so what about our knowledge? What is the use of critical thinking then? I cannot understand (participant 8)</p> <p>2-I think they did not consider our ability in physical examination at all, it looks it's not our responsibility at all, while it was one of the most interesting knowledge that we acquired (participant 3)</p> <p>3-I always think that techniques of communication with patient is the most important step for start an effective care, but they did not mark us on this skill at all (participant 1)</p> <p>4-They need to pay more attention for scenarios, it was not challenging at all! so what about critical thinking? What about evidenced-based care? (participant 7)</p>	<p>-it just covered the handy skills</p> <p>-they ignored the importance of knowledge</p> <p>- they did not consider our ability in physical examination</p> <p>-we were not marked on our communication skills with patient</p> <p>-the scenario was not challenging</p> <p>- evidenced based care</p> <p>-critical thinking importance</p>	<p>-ignorance of knowledge</p> <p>- evidenced based care</p> <p>-critical thinking importance</p> <p>-communication skills</p> <p>-scenario design</p> <p>-physical examination</p>	<p>Question design</p>	
<p>1-It is not fair at all; they did not teach us in a clinical method as they asked us to perform today (participant 6)</p> <p>2-I have never been to such an environment of exam before; as I entered the exam hall, I lost an amount of my time to see what is going on? What should I do? Where to go? I got confused to be honest (participant 14)</p> <p>3-It was such a good method of evaluation, even though we had not such an experience before, they need to build strong background to reinforce the efficiency of method (participant 9)</p>	<p>-it is not a fair evaluation</p> <p>- they did not teach us in this way</p> <p>- I have never been to such an environment</p> <p>- I got confused</p> <p>- we had not such an experience before</p>	<p>-evaluation accuracy</p> <p>-teaching method</p> <p>-unfamiliar environment</p> <p>-lack of similar experience</p>	<p>Educational background</p>	<p>Educational aspects</p>
<p>1-What kind of model it was!!! I spoke too much to educate her, but her most effort and reaction was shaking head, I felt I am speaking to myself; I mean there was no feedback to motivate me (participant 5)</p> <p>2-What did they take us for? How can I educate a master student while I am studying bachelor still? It was much better if they choose their model from general population that need to learn and motivate you to educate (participant 15)</p> <p>3-If they aim to simulate the hospital environment then why they did not consider Patient companion? I think they play a key role in evaluation the nurse ability to handle the situation (participant 6)</p>	<p>-no reaction from models</p> <p>- I felt I am speaking to myself</p> <p>- there was no feedback to motivate me</p> <p>- there is no scene of education while model is more educated than you</p> <p>-the importance of patient companion</p> <p>-simulation the hospital environment</p> <p>-nurse ability to handle real situation</p>	<p>-environmental simulation</p> <p>-patient simulation</p> <p>-patient companion simulation</p> <p>-real situation simulation</p>	<p>Simulation</p>	

## DISCUSSION

we emerged two main themes from all of the conducted interviews as Management aspects problems, and Educational aspects problems

**Management aspects problems:** we categorized the supervisor behavior management, time management and the availability of facilities in managerial problem as all of the aforementioned items require handling and management that are discussed below in detail

**supervisor's behavior:** in our study 65% of our participants reported that the way the examiner looks at them during the exam can either increase or decrease their confidence in performance and they state it is such a so-called "negative impulse" that easily can effect on their action similar to our result there are several studies that state the supportive feedback by the professors in OSCE exam improve and reinforce confidence through immediate debriefing and by providing an opportunity to remediate their performance by developing own judgments about their skills (Alaidarous, Mohamed, Masuadi, Wali, & AlMalki, 2016; Ha, 2016; Kelly et al., 2016). therefore the examiner behavior can play a key role to improve the student performance during the exam as it can also increase the stress level of participant so that they can not show their ability in different procedures asked in stations. (McWilliam & Botwinski, 2010). In order to improve OSCE's position in clinical evaluations, it is necessary for trainers to receive adequate training in this regard. (Salehi, Salehi, Shakour, & Haghani, 2018)

**Time management:** In line with the results of the present study on mismanagement in allocating appropriate time for each station, Biranvand (2017) (Beiranvand, Hosseinabadi, & Fatemeh, 2017), McWilliam (2010) (McWilliam & Botwinski, 2010), and Majumder (2019) (Majumder et al., 2019) also stated that students complained of insufficient time to perform the required procedures at each station. in a study conducted by John (2020) many students had concerns about the time for the demonstration of skills which was in contrast to the studies carried out by Small, Pretorius (Bradley & Postlethwaite, 2003) and AbdAlla and Mohammed (Mahmoud & Mostafa, 2011), where the student nurses felt that they had been given enough time to complete the procedures. in present study students state that in some stations the time was more than required amount and some times they face lack of time to finish the procedure that means the time specified to each station should be based on the type of procedure and also those who design the exam need to consider the fact that the pace of action and learning in different from person to person and they should consider the maximum time for each procedure . time limitation can increase the anxiety and stress as the students mentioned they are in hurry and confuse the steps

of procedures and some of them stated that they waste their time and get nervous during the OSCE and it is related to the 'fear of unknown' similar to the study conducted by Fidment (Fidment, 2012). Chehrzad et al. in their study showed that Sufficient time allocated for evaluation is one of the factors that create a favorable perspective in students (Chehrzad, Mirzaei, & Kazemnejad, 2004)

**Facilities:** the environment selected for exam hall should meet the fundamentals of a standard room so that able students to perform correctly free of any concern, in our study factors such as room temperature, ventilation, bothering odor, and also the availability of water in case of need were some concerning subjects reported by student. Bindu John in his study reported that some of the students felt that OSCE stations were not well arranged and equipment were not working well (John). In a study conducted among student midwives, Jay had reported similar findings, which were found to increase their anxiety (Jay, 2007). it is undeniable that provide the sufficient equipment and facilities are the foundation for exam hall design so that the participant focus on test without any concern and distraction in term of equipment shortage . Hosseini et al. In their study stated that factors such as adequate equipment and facilities of the test, suitable physical environment, good conditions for holding the test are the factors that facilitate the test (Hosseini, Fatehi, Eslamian, & Zamani, 2011).

**Educational aspects problems:** question design, educational background, and simulation are categorized for educational aspects problem.

**Simulation:** Careful planning and designing of OSCE stations according to the competence required can simulate real clinical situation and become appropriate tool for assessment (Chen, Hou, Lin, & Tung, 2015). Results of Bindu John study (2020) stated that a number of students had difficulty communicating with selected mannequins and models; students perceived that mannequins lack reality, and it is difficult to demonstrate all the skills. To create a real-life environment and to facilitate communication, use of microphone equipment has been suggested in one of the studies by the teachers to give mannequins a 'voice', in response to the students to create a real-life environment (John, 2020). In a study by Muldoon et al. (2014) Third-year midwifery students had no idea whether OSCE was appropriate as a clinical competency assessment strategy or a fair test, stating that OSCE could not reflect real-world clinical situations and was not an opportunity to demonstrate clinical skills. (Muldoon, Biesty, & Smith, 2014). in line with mentioned studies , the results of our study present lack of reality in environment designed for test , uneducated patients in term of behavior and reaction to student , and the absence of motivator feedbacks. Students also complained that one of model in education station was chosen from master student that they knew in university ; "she is more knowledgeable than me and I think

there is no need for education and to be honest I was worry to say something incorrect and it bothered me “ as participant number 4 stated.one of our participant (participant 6)mentioned the importance of presence of Patient companion in real situation that could be highly impressive in evaluation of student ability to handle the environment, that have not been mentioned in any study so far.by and large all the aforementioned findings suggest replanning to design an environment similar to a small hospital, so that the students could imagine themselves in a real situation and increase their confidence. The finding of our study also showed that the models need to be trained in term of how to react, how to speak, and how to communicate with the student.

Educational background: OSCE designers should think of ways to reduce anxiety and worry in students. For example, one of the suggested methods is to spend time preparing students for the exam at the end of each course. Holding a test similar to the main test for students with high stress or introductory workshops and pre-test question and answer sessions will help students.(Muldoon et al., 2014)

Adherence to standards in OSCE is one of the crucial factors in this field. If the learner does not receive the necessary training on how to pass the test stations correctly(As' adi & Akbar, 2010), the confusion caused by the test and unfamiliarity with the conditions and OSCE restrictions can cause student anxiety and stress.(Bagheri, Forotgheh, & Fallah, 2012). Fidment (2013) also pays attention to the role of preparing students before the exam and in this regard suggests providing clear and explicit information about the expectations of the exam and familiarizing students with similar conditions of the exam.(Fidment, 2012).our participant declared that they had not any similar experience before and the method of teaching they have been delivered does not meet the requirement for such a test and stated that it is not fair at all to be evaluated in this method. Different ways of preparing for OSCE assessment, including repeated practice sessions, lecturer-led theory and practice orientation, individual preparation and practicing in the lab in groups and discussing the assessment strategies allows the consolidation of knowledge and skills and is found to increase students' confidence and help them to face the exam in a better way. The pre-test preparation stage is one of the important stages of the test(Salehi et al., 2018). Skrzypek, et al. found that most of students are pleased with the introduction information about OSCE that was given before the examination.(Skrzypek et al., 2017)

Question design: In a study conducted by Alami and Safari (2014)The results showed the importance of scenario design and its effect on

student evaluation.(Allami & Saffari, 2014).all of our participants declared that the exam purpose was just evaluation of handy-skills and the type of questions did not consider the level of knowledge ,critical thinking and the ability to communicate with the patient; they stated that handy skills are valuable to be evaluated in combination with knowledge. According to our finding in students view the questions designed were not challenging in a way make the students to think and then decide what to do and how .in contrast with our results, the results of Biranvand (2017) study showed that the majority of students (80%) consider this test as a fair method for assessing students' discretion because it evaluates a wide range of information(Beiranvand et al., 2017).

limitations: One of the important limitations of this study was the lack of control over the effects of unfamiliar clinical test conditions for test takers because they have not experienced such a method before and this study was conducted in an environment with a small sample size that we cannot generalize the findings of this study to all nursing students.

#### CONCLUSIONS

OSCE causes high levels of anxiety in students, which is a major obstacle to how well they perform during the test. Therefore, paying attention to these issues in holding OSCE can improve the students' perspective. Considering all the aforementioned factors in education in management of test could be highly effective to improve the quality of test. Using this kind of methods requires revision on education method, using more student-center methods in teaching and providing facilities to bring students to the real world of profession helping them to improve their ability in clinical decision making for their career prospect.

#### ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

The university Institutional Review Boards approved the study in December 2020. The participants received an information letter describing the purpose of the study and they were given the opportunity to ask questions and consider all options before providing informed consent prior to the interviews. Participants' consent was obtained. The consent process will be available in both English and Kurdish and an interpreter will be available. Consent will be documented. The patient will be given a copy of the consent form.

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#### AUTHOR'S CONTRIBUTIONS

The author has agreed on the final version.

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