

## PERCEPTIONS OF UNDERGRADUATE NURSING STUDENTS REGARDING OSPE/OSCE EXAMINATION AT PRIVATE COLLEGES IN HAYATABAD PESHAWAR KP

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### Abstract

#### **Background:**

Objective structured clinical examination and objective structured practical examination (OSCE/OSPE) is the most popular method for the assessment of clinical skills in nursing education. There are different methods for evaluating clinical competencies in medical field students, among which the objective structured clinical examination/ objective structured practical examination OSCE/OSPE is considered the most reliable and effective way to assess clinical skills.

#### **Aim/Objectives:**

Aim of this study was to identify the perception of undergraduate nursing students regarding OSCE/OSPE type of examination.

#### **Methods:**

A quantitative descriptive Cross-sectional design was used in this study. Non probability convenience sampling technique was used. Data were collected from 152 students of Northwest College of nursing and Rahman College of nursing through a constructed and modified questionnaire incorporating 5-point Likert type rating scale (Likert scale questioner) consist of 22 items statements.

#### **Result:**

The Results showed that Students perceived the OSCE/OSPE exams as a challenging and difficult. Among 152 participants regarding exam difficulty about 70% (n=106) were strongly agree, 20% (n=30) were agree, 7% (n=11) were disagree and 3% (n=5) were strongly disagree. The study results showed that the OSCE/OSPE examination helps in improving the students Clinical Knowledge, attitude and practice and also improve evidence based practice. The study included 152 participants, out of which 60% (n=92) were strongly agree, 30% (n=31) were agree, 12% (n=19) were disagree and only 6.5 % (n=10) were strongly disagree.

**Conclusion:**

The study concluded that the OSCE/OSPE exams are challenging and time consuming exams for students but still improve students' knowledge, attitude and skills. Evidence based practice also improved with these exams. OSCE/OSPE exams should be reviewed and updated to make easy handling by the students.

**1. Introduction**

**1.1 Background:**

OSCE (Objective structured clinical examination) is a clinical assessment method, Introduced by Ronaldao Harden in Scotland in 1957 it measure clinical performance components that traditional examination cannot be. OSPE (Objective Structured practical Examination) is an extension of OSCE , first described in 1975 and last explained with detail in 1979 by harden and his team in duden. (1)

OSPE (The Objective Structured practical Examination) is an evaluative tool that can be utilized to assess health care professionals in a clinical setting. It assesses competency, based on objective testing through direct observation. It is precise and objective tool that allowing uniform testing of students for a wide range of clinical skills. Whereas OSCE (Objective structured clinical examination) is a well-recognized assessment approach commonly employed in the health sciences. It is an assessment tool in which the components of clinical competence such as physical examination, simple procedures and interpretation of lab results are tested. OSCE provides a practical and real-world learning experience, utilizing a structured and unbiased format to evaluate clinical skill performance and competence across various skills. (1)(4)

The OSCE/OSPE content and scoring process adhere to standardized criteria, and an established scoring tool or checklist is used to assess examinees' performance (1).

During the OSCE/OSPE students rotate through multiple stations, spending a fixed amount of time at each one. They transition to the next station upon a signal, often a bell ring, typically moving in a clockwise direction. Each OSCE/OSPE, station focuses on specific clinical competencies. (1)(2)(3). The time allotted for each station is the same, usually about 4 to 5 minutes, with an additional 30 seconds allowed

for students to move between stations and make any final comments. The number of OSCE/OSPE stations can vary from 12 to 20, and students can start at any station and complete the cycle. (5)(6)

OSCE/OSPE stations demand careful preparation and organization. Each station requiring specific tools and equipment, and using simulated patients or advanced simulators. OSCE/OSPE is based on one student being evaluated by one or two impartial examiners or many students by one examiner, and they are authorized to dismiss students who make decisions in an unsystematic manner.

The OSCE/OSPE method allows students to showcase their complete knowledge, skills, and abilities. It serves multiple purposes, acting as both a summative assessment to evaluate individuals' practical skills performance and a formative evaluation to provide students with valuable feedback during the learning process. It is often praised as an engaging teaching approach that promotes active learning, fosters logical and critical thinking, and avoids passive learning. (4).

The nursing profession is known for dedicating a significant amount of time to activities that assess competence. These activities are crucial for nurses' caring role and are central to their education. One essential aspect of nursing education is the evaluation of clinical competence, and the OSCE/OSPE is a highly valued method for this purpose. OSCE/OSPE is an effective method and is recommended for undergraduate nursing programs as it enhance the quality of nursing education. (7)(8)

It was designed to address the limitations of traditional assessment methods, especially for evaluating skills and attitudes that cannot be adequately measured through written exams. The OSCE/OSPE involves scenario-based assessments, where students must demonstrate safe and effective management of specific skills.

This method eliminates the issue of relying on luck when assessing students in real-world clinical settings with actual patients. (9)(10)

OSCE/OSPE offers a quick and efficient evaluation, enabling instructors to provide prompt feedback to students about identified clinical deficiencies and improving skills, that promotes active learning, fosters logical and critical thinking, empirical knowledge and develop self-confidence, and avoids passive learning. Furthermore, OSCE/OSPE as an assessment approach, is designed to explore the decision-making processes and improve clinical skills, communication abilities, medical/surgical procedures, and prescription practices (6).

OSCE/OSPE is a good way of assessing students, should help them learn better, perform well and develop their skills. The objectives of OSCE/OSPE are to test students' factual knowledge, clinical competence, analytical thinking, and communication skills.

### 1.2 Research Question

What are the perceptions of undergraduate nursing students regarding OSPE/OSCE examination?

### 1.3 Objective

To identify the perception of undergraduate nursing students regarding OSPE/OSCE examination.

### 1.4 Significance of Study

In Khyber Pakhtunkhwa (KPK) OSPE/OSCE examinations has introduced Since 2022, however students have varies perception regarding OSCE/OSPE examinations, it is essential to identify students perception related to this newly introduce assessments strategy from their point of view.

There is no recent published study in kpk regarding perception of nursing students about OSPE/OSCE method of examination. Therefore, identifying student perceptions are vital when preparing them to undergo the OSCE/OSPE examination to enhance their readiness to display cognitive, affective, and psychomotor skills promptly and precisely, to

lessen their fear and anxiety provoked by OSCE/OSPE.

The perception of students in kpk regarding OSCE/OSPE is not clear. Therefore, it is important to identify perception about OSCE/OSPE from the perspective of the student, since they are the main stakeholders.

## 2. Literature Review

Besides its merits and demerits, according to students perception it have some positive and negative impact on students too as literature indicated that students often criticize OSCE/OSPE for making them feel inhibit, as OSCE/OSPE creates the highest levels of anxiety, students need to prepare more for OSCE/OSPE as compared to other exams (11).

A study indicated that half of the participants had negative perceptions of nursing education practical examinations, while others suggested adjusting the examination standards. Despite this, OSCE/OSPE is a standard assessment method in nursing that integrates theory with practice, bridging the academic and clinical gap. It is also used in higher education to prepare for advanced nurse practitioner positions (12) (13).

A recent study highlighted that clinical scenario-based education and reflective thinking effectively enhanced nurses' knowledge and attitude. In Saudi Arabia, the Saudi commission for health specialties (SCFHS) is responsible for postgraduate education and assessment standards for healthcare professionals. Since 1979, OSCE/OSPE has been used as an assessment method in many health sciences institutions, including in the SCFHS OSCE/OSPE manual of 2014. At imam Abdurrahman bin Faisal University, this assessment method has been used to evaluate medical students' competency since 2013. (14)(15)(16)

Similarly, a retrospective study at Bhopal, found that two-thirds of students perceived OSCE/OSPE as an accurate tool to measure clinical skill, independent of their personalities and social relations, while also providing opportunities to learn in a virtual setting. (6)

In a recent study that aimed to assess the attitude of 150 undergraduate nursing students towards

OSCE/OSPE, it was found that 118 students (85.51%) had a favorable attitude, and 19 students (13.77%) had a moderately favorable attitude towards OSCE/OSPE (17).

Researchers pointed out that students in Saudi Arabia commonly perceive OSCE/OSPE as a fair clinical assessment method, a perception supported by several studies. OSCE/OSPE is appreciated for its unbiased model in evaluating psychomotor skills, and its standardized scoring method that tests a broad spectrum of clinical skills. Moreover, utilizing OSCE/OSPE can improve communication skills, and it has been advocated as a learning outcome assessment tool for practical skills. As a result, OSCE/OSPE is increasingly being used to evaluate clinical and soft skills in various healthcare disciplines and settings. (2) (14) (18) (19).

A cross-sectional study at King Abdul-Aziz University explored medical students' and interneers' perceptions about factors affecting their exam performance, with 83.5% of the students perceiving that formative assessment and feedback improve their performance associated with OSCE/OSPE. Most students reported that OSCE/OSPE is the most common assessment that can cause exam anxiety. Additionally, students believed that examiners' personalities, the presence of multiple examiners in one station, their gender and technical problems could impact their performance in OSCE/OSPE. (20) (21)

Similar to other universities, Prince Sultan Military College of Health Sciences (PSMCHS) in Dhahran, Saudi Arabia, uses OSCE/OSPE since 2018 to assess and evaluate students' clinical skills and identify any gaps in their abilities. (22)

Another study "attitude towards nursing education practical exam among M.Sc. Nursing students" revealed that 58% of the students had a negative attitude towards OSCE/OSPE, and 57% suggested some transition in the OSCE/OSPE type of examination, this study also stress the importance of integrating OSCE/OSPE within a curriculum alongside other evaluation methods. Their study also indicates that OSCE/OSPE are most effective in undergraduate nursing curriculum, assessing safe practice in

psychomotor skills and associated declarative and schematic knowledge. (3).

A study showed that OSCE/OSPE has been found a superior assessment tool for evaluating clinical students as compared to other traditional methods of examination. (9) (10)

Despite OSCE/OSPE growing popularity in practical exams for undergraduate nursing programs, its implementation in nursing education faces some drawbacks and obstacles that limit its applicability. One such challenge is the need for numerous examiners, with two per station, to maintain objectivity in the OSCE/OSPE examination. Additionally, students' unfamiliarity with the OSCE/OSPE exam and scoring criteria can make its implementation difficult. Studies have shown that students sometimes struggle to connect the OSCE/OSPE experience with clinical practice (22)

Moreover, many students experience high levels of stress during an OSCE/OSPE, which may negatively impact their performance and, in turn, undermine the validity and reliability of the OSCE/OSPE. There have been anecdotal reports of nursing students complaining that the OSCE/OSPE is stressful, and they feel the time allocated for each station is insufficient. (3) (7)

### 3. METHODS

#### 3.1 Research design

A quantitative descriptive Cross-sectional design was used.

#### 3.2 Research Setting

The study was conducted in Northwest College of nursing Peshawar and Rehman College of nursing Peshawar kpk.

#### 3.3 Study population

The population for this study was BS Nursing Students from 2 selected nursing colleges in kpk. The total population was 247 Generic BSN students, including Students from semester 2<sup>nd</sup> and 4<sup>th</sup>.

### 3.4 Inclusion criteria

Those Students who were fulfilled the inclusion criteria were included in the study. The inclusion criteria for this study were; Students of the generic BSN four year program appear in OSCE/OSPE examination in 1<sup>st</sup> and 3<sup>rd</sup> semester irrespective of their gender.

### 3.5 Exclusion criteria

Those students who were developed mental illness after the OSCE/OSPE examination and those who were not willing to participate were excluded.

### 3.6 Sampling technique

Non probability Convenience sampling technique were used in this study as that researchers choose subjects who are readily available and easily accessible to them from the population they are studying.(6)

### 3.7 Data Collection Tools

A constructed and validated a detail questioner incorporating 5-point Likert type rating scale (Likert scale questioner) showing strongly agree, agree ,neutral, disagree and strongly disagree, were used. The questionnaire was consisted of two parts; the first part of the questionnaire related to demographic variable and the second part of the questionnaire contained 23-questions, with reliability coefficient of 0.72 which show reliability.(4)

### 3.8 Procedure

A printed copy of selected questioner and then distributed in Northwest College of nursing and

Rahman College of nursing Peshawar after the permission of the principals of those colleges, lastly the collected data from students were analyzed through SPSS version 2028. Median of each item were calculated for differences between mean score.

### 3.9 Ethical Consideration

Approval for this study was gotten from IRB of Northwest Institute of Health Sciences Peshawar. Permission was obtained from participant institute for data collection and informed consent was given to participants after full descriptions of study purposes, benefits and risk involved.

### 3.10 Study Duration

The duration of this study was 6 months (July, 2023-December, 2023).

## 4. RESULT

### 4.1 Demographic Information

In the dataset, information was collected from a total of 152 respondents. No data is missing for any of the variables, indicating a complete dataset. The breakdown of respondents includes details on gender, semester, and college affiliation. Among them, 77 participants identified as male, constituting 50.7% of the total. On the other hand, 75 participants identified as female, making up 49.3% of the total. The cumulative percentages indicate that the entire dataset has been considered, with males representing 50.7% and females representing 49.3% of the respondents. A shown in Table no1.

*Table no 1: Demographic Data*  
**Gender of respondent**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	77	50.7	50.7	50.7
	Female	75	49.3	49.3	100.0
	Total	152	100.0	100.0	

### 4.2 Perception of Students Regarding OSCE/OSPE Exam

#### 4.2.a Exam Difficulty:

The Results showed that Students perceived the OSCE/OSPE exams as a challenging and difficult. Among 152 participants regarding exam

difficulty about 70% (n=106) were strongly agree, 20% (n=30) were agree, 7% (n=11) were disagree

and 3% (n=5) were strongly disagree. As shown in the below Table no, 2.

*Table No, 2: Exam Difficulty*

Participants		n	%age
Participants	Strongly Agree	106	70%
	Agree	30	20%
	Disagree	11	7%
	Strongly Disagree	5	3%
		152	100%

#### 4.2. b. Improving Students Skills:

The study results showed that the OSCE/OSPE examination helps in improving the students Clinical Knowledge, attitude and practice and also improve evidence based practice. The study

included 152 participants, out of which 60% (n=92) were strongly agree, 30% (n=31) were agree , 12% (n=19) were disagree and only 6.5 % (n=10) were strongly disagree.

*Table No, 3: Improving Students Skills*

Participants		n	%age
Participants	Strongly Agree	92	60%
	Agree	31	20%
	Disagree	19	12%
	Strongly Disagree	10	6.5%
		152	100%

## 5. DISCUSSION

There are various methods for evaluating clinical competencies in medical field students, with the OSCE/OSPE considered the most reliable and effective way to assess clinical skills. OSCE holds the status of the most popular method for assessing clinical skills in nursing education (1). This study aims to identify nursing students' perceptions of OSCE as an assessment method for clinical skills in private sectors in Peshawar, KPK, and Pakistan.

Our findings revealed that 56% of the students experienced stress during OSCE, aligning with previous research indicating the stressful and anxiety-inducing nature of the OSCE environment [5]. Specifically, 71.4% of participants implied elevated stress levels due to inadequate preparation or orientation during their formative evaluation (24). Previous studies

also reported that a majority of students experience high levels of stress during OSCE, potentially affecting their performance and undermining the validity and reliability of OSCEs (7).

To alleviate anxiety and stress levels, it was proposed to enhance the OSCE procedure by expanding pre-examination training and introducing a mixed learning approach (25). Urging academic faculty to take thoughtful preparation measures to reduce stress during OSCE or eliminate it was also recommended (26). Proper orientation and clinical skills practice before OSCE were suggested to reduce stress during the actual examination (27). A study concluded that stressors could be decreased with better planning and familiarizing students with the stations and limitations of OSCE through practice during the term. (28)

Regarding fairness, more than half of the respondents (53%, n=80) agreed that OSCE is fair in terms of grades given by examiners. Other research supports these findings, with over two-thirds of participants perceiving OSCE as a fair testing tool for knowledge and clinical skills [29]. Students in Saudi Arabia commonly perceived OSCE as a fair clinical assessment method [18]. Another study indicated that nearly two-thirds of students perceive OSCE as fair in student evaluation [1]. Another study found that 65% of students considered OSPE as a fair examination method and 69% felt it provides a true measure of essential clinical skills. (30)

Moreover, OSCE was found to be an unbiased and standardized method for evaluation compared to traditional clinical practical examinations [31, 32]. About half of the students (n=70) agreed that OSCE decreases the element of luck or chances in practical examinations, aligning with a previous study that declared OSCE eliminates the “luck of the draw” problem and the risk of harm occurring to a patient. (10). In terms of time allocation for each station in OSCE, nearly half of the students (47.4%) in our research agreed to the statement. This finding is supported by a similar study in Nigeria, where 55% of students agreed with the statement [3]. Our findings also align with a study, where 77.3% of respondents perceived that the time allocated for each station is adequate [33]. During OSCE, students typically rotate through 12-15 or even 20 stations, spending about 4-5 minutes at each station, with an additional 30 seconds allowed for moving between stations to complete any final comments. [5, 6].

### Conclusion

This study focuses on the perceptions of BS Nursing students from private colleges in Peshawar regarding the Objective Structured Clinical Examination/ Objective Structured practical Examination OSCE/OSPE. The study concluded that nursing students have both positive and negative perceptions of OSCE/OSPE. The positive aspects include viewing OSCE as a fair examination, reducing the element of luck, being a good form of

examination, and demonstrating reliability and recall of knowledge. On the other hand, students perceive OSCE as a stressful and challenging form of examination, representing the negative aspects of OSCE/OSPE.

### Recommendations

It is recommended that when undertaking OSCE/OSPE type of examination it is needed to familiarize and train students by faculty prior to examination will alleviate stress in students.

### Limitations

This study has certain limitations, and it is crucial to acknowledge them. Firstly, it focus on the KPK region, implies that the findings may not generalize across the entire country. Secondly, the utilization of a non-probability sampling method (convenience sampling), could introduce bias and limit generalizability. To overcome these constraints, future research should include other provinces and adopt probability-based sampling methods to ensure more robust and representative results.

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