

**Nursing Students' Perception with the Objective Structured Clinical Examination (OSCE):
A Quantitative Cross-Sectional Study in Private Colleges of Peshawar, Pakistan**

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Background: As an alternative to the existing methods of assessing clinical performance, objective structural clinical examination is a method of assessing clinical competence that involves testing the components of competence in a planned or structured manner. In a clinical context, more structured health care providers can be evaluated using the OSCE, a flexible, multifunctional assessment instrument.

Methods: A quantitative descriptive cross-sectional study was conducted using non-probability convenient sampling was used. Using Rao software, 243 samples are determined to be the sample size. Data was gathered using a modified version of the Student Evaluation of Objective Structure Clinical Examination Questionnaire, which has a Cronbach's alpha reliability calculation of 0.87. Software SPSS version 25 was used to analyse the data statistically.

Results: Total males were 67.1% and females 32.9% respectively. The total mean perception score revealed a moderate level of OSCE perception about (60.5%) while 19.8% showed low and 19.8% high perception levels. The perception ratings of female students were substantially higher than those of male students ($p < 0.001$). Additionally, compared to first-year students, fourth-year students had considerably more favorable opinions ($p < 0.001$). The Cronbach's alpha coefficients were computed for the overall scale in order to assess the internal consistency reliability of the instrument, Student Evaluation of OSCE Questionnaire. Strong internal consistency was demonstrated by the questionnaire (Cronbach's $\alpha = 0.87$).

Conclusion: According to the results, nursing students view the Objective structure clinical examination as a somewhat useful evaluation tool. The OSCE experience and its educational value may be further improved by focused enhancements to examiner training, instruction clarity, and student orientation.

Keywords: Nursing, Perception, BSN, OSCE, Private College

INTRODUCTION

The art and science of teaching and studying medicine, or medical education, has advanced significantly. Because it evaluated the execution of professional behaviors using actors and staged scenarios, Harden's OSCE significantly altered the evaluation of professional competence.¹ In the past, simulation was first employed in the class room following World War II. With the use of technology, student nurses can now learn scenarios, develop critical thinking, practice receiving feedback, and gain insight into lived experiences.² A narrative examination of some of the major concerns influencing the use of OSCE in nursing student assessments show that both under graduate and graduate students are now routinely assessed using the OSCE.³

The OSCE may be used to evaluate students in a reliable, impartial, consistent, and standardized way. It is carried out at a number of clinical stations that mimic real-world clinical settings. Clinical specimens, simulated or actual patients, and other clinical materials

may be included in the constantly changing OSCE format. Diagnosing a condition, communicating, and counseling are the main areas of assessment for OSCE.⁴ Additionally, the length, number, and interdependence of OSCE stations must be carefully considered in order to balance the potentially conflicting requirements of validity and reliability. A medical professional's professional competence is categorized into knowledge, patient care, interpersonal and communication skills, professionalism, practice-based learning and improvement, and systems-based practice the six interrelated areas recognized by the ACGME.⁵ Over time, OSCEs have been used to assess students' clinical skills both before and after graduation using actual patients, by demonstrating students' abilities in various stations and removing the influence of intermediate variables. OSCE is currently one of the best examination methods available. It can quickly assess students' professional and fundamental skills as well as identify educational objectives in a variety of

areas, such as recognition, sentimentalization, and psychic dynamic aspects.⁶ Despite all the benefits, OSCE reliability is not guaranteed by the mere standardization of stations and checklists. It must be evaluated on a regular basis, and feedback from relevant organizations is crucial to enhancing the exam's administration, structure, and design.⁷ There were challenges and issues with the OSCE's implementation particularly with regard to its features and time-consuming nature these issues and shortcomings were insignificant, and the method was advised to be used in all educational groups. All of these issues, in addition to the lack of resources and experience, might make OSCE implementation in underdeveloped nation's challenging.⁸ According to earlier research, OSCE may make students more anxious, which eventually lowers their performance. The way that OSCE is viewed and understood by faculty and students is crucial to its effective use. Standardizing the environment or station presents additional difficulties.⁹

OSCE is not without its challenges. It requires a lot of material and human resources, as well as enough time to prepare. Additionally, it might have to rely on hypothetical situations and topics that don't necessarily mirror actual clinical scenarios.¹⁰ Examiners must also standardize their final exams and have adequate training or experience. Although checklists are useful for standardizing OSCE, their rigidity might be viewed as a drawback. In certain places, it might be challenging and resource-intensive to find trained standardized patients.¹¹ In OSCE, examiners are essential. They are in charge of determining the areas of concentration for the test, creating stations, administering the OSCE, and giving students feedback.¹² In order to improve the sustainability of clinical assessments, such research may also guide improved resource allocation and the development of faculty training programs. It is crucial to align OSCE methods with practical skills and patient safety standards as outcomes-based learning gains traction in healthcare education.¹³

It is possible to improve the legitimacy of OSCE processes, and a culture of ongoing academic development can be strengthened by including student input into their improvement. Gaining insight into nursing students' perspectives also helps to create learner-centered environments that reduce stress and encourage meaningful participation especially when using interventions like pre-exam briefings and post-exam debriefings.¹⁴ Therefore, this study's objective is to quantitatively analyze how nursing students at private institutions in Peshawar perceive and feel about the OSCE. The aim is to determine the advantages and disadvantages of the existing evaluation method and provide evidence-based suggestions for improving the assessment of clinical abilities in comparable educational and socioeconomic settings.¹⁵

Medical schools have experienced several challenges from society, patients, physicians, and students during the past thirty years. In addition to technical expertise and knowledge, multidisciplinary care, counseling, evidence- and system-based care, and analytical and communication skills are all necessary for the successful and efficient delivery of healthcare.¹⁶ According to Saher AS (2022), Conventional tests are one-shot, indirect, norm-referenced, speed-based, and counterfeit. These tests assess students' abilities at a given moment.¹⁵ Test results, however, don't reveal anything about a student's development. Likewise, they are unable to determine the student's level of difficulty during the test.¹⁷ To evaluate students' perception level with the Objective Structured Clinical Examination (OSCE) as an assessment tool in a private college and to analyze the comparison between first and fourth year nursing students' perception level.

METHODS

A cross-sectional survey technique was utilised to provide a brief overview of nursing initially and fourth year students' perspectives and experiences in OSCE education. This approach allowed for the identification of trends, opportunities for development, and strengths without requiring several follow-ups. Rufaidah Nursing College, Razi College of Nursing, Global College of Nursing, and Khyber Nursing Colleges are the four private sector colleges in Peshawar, Pakistan, where the study was carried out. Ethical approval was obtained from the Ethical Review Committee of Prime foundation (ERC No. Prime/ERC/2026-36). The research took place between August 2025 and January 2026, a duration of six months. Using an online RAOSOFT calculator with an 80% response distribution, a 95% confidence interval, and a 5% margin of error, the sample size was calculated to be 243 people. All first- to fourth-year BSN students at the selected Peshawar institutions make up the sample size; Pakistan would be included in the 243 samples.

The sampling methodology will be used to identify people with rich knowledge who can fulfil the study objective. For the sample, non-probability convenient sampling ought to be employed. Non-probability convenience sampling is a helpful method for assessing nursing first and fourth year students' perceptions of objective structure clinical assessment since it offers quick access to a specific population and circumvents time or resource constraints. Sample selection is the process of selecting participants from individuals while establishing inclusion and exclusion criteria.

Students who have registered in the second semester or above (third and fourth years) of the BSN program, have completed an OSCE at least once, and would like to participate in the study and provide informed permission were included. Students in their first semester or those who haven't taken an OSCE have little to no OSCE experience. The research did not include students who chose not to participate or who failed to show up for the data collecting period. The

investigation was carried out from July to December of 2025, a span of six months. The Peshawar Medical College's Ethical Review Board granted approval. Every male and female first- and fourth-year student who took part in the study gave their consent. According to the information page, study subjects were recruited with the correct guidelines.

To find out how nursing students in Peshawar, Pakistan, perceive the clinical learning test, a study instrument known as the Student Evaluation of OSCE Questionnaire was developed. A standardised, self-administered questionnaire with two sections was used to gather data. First Section comprised demographic variables, including age, gender, academic year, institution, number of OSCEs attended and training related to OSCE. 2nd Section included the Student Evaluation of OSCE Questionnaire, which assessed students' perceptions of the Objective Structured Clinical Examination. This section consisted of 13 items evaluating various aspects of the OSCE, such as fairness, coverage of knowledge and clinical skills, level of stress and intimidation, adequacy of time at stations, clarity of required information, organization and administration of the examination, and opportunities for compensating strengths across stations. Respondents assess each item on a five-point Likert scale, where 1 represents "deeply disagree," 2 "disagree," 3 "neither disagree nor agree," 4 "agree," and 5 "strongly agree."¹⁸ Higher scores frequently indicate more positive judgments of the Objective Structured Clinical Examination, whereas lower ratings indicate dissatisfaction or negative experiences. The instrument was designed to capture students' overall perception of the effectiveness and structure of the OSCE as a method of clinical assessment.

SPSS version 25 was used to analyse data on healthcare first and fourth year students' perceptions of the Objective Structured Clinical Examination. Both descriptive as well as infer statistical techniques were used to analyse the data. In addition to describing nursing students' opinions of the OSCE, descriptive statistics such as means, standard deviations, frequencies, and percentages were utilized to summarize demographic characteristics including gender, academic year, and college. Tables were used to illustrate important trends and differences in the data. Inferential statistics were applied to examine group differences and relationships among variables. Independent Samples t-tests were used to compare mean perception scores between male and female students and between junior and senior (first-year versus final-year) students.

RESULT

Using a modified version of the Student Evaluation of OSCE Survey from Peshawar, Pakistan, data was gathered in person using a Cronbach's alpha reliability calculation of 0.87. The questionnaire in question has a pilot test result of 0.83. Pierre, R. B. (2004) created the Student Evaluation of OSCE Questionnaire, which uses

a five-point Likert scale to assess learning in a clinical setting.

Table 1: Socio-demographic Characteristics of the Participants (N = 243)

Characteristics	Category	Percentage (%) and Frequency (n)
Gender	Male	67.1% (163)
	Female	32.9% (80)
	Total	100% (243)
Academic year	1 st year	56.8% (138)
	2 nd year	43.2% (105)
	Total	100% (243)
College	Rufaidah College	38.3% (93)
	Razi College	24.7% (60)
	Khyber College	16.5% (40)
	Global College	20.6% (50)
	Total	100% (243)

There were 243 participants in all, according to Table 1. 243 people from all demographic categories (100%) made up the sample. Males made up 67.1% (n = 163) of the sample, while females made up 32.9% (n = 80), indicating a male majority in the gender distribution. First-year students made up 56.8% (n = 138) of participants in terms of academic year, whilst second-year students made up 43.2% (n = 105), suggesting a marginally larger participation of junior students. Regarding college affiliation, Rufaidah college contributed the largest proportion of respondents (38.3%, n = 93), followed by Razi college (24.7%, n = 60), Global college (20.6%, n = 50), and Khyber college (16.5%, n = 40).

According to the study, the 243 nursing students' overall perception scores, which range from 7 to 35, have a mean of 21.0 and a standard deviation of 5.0, as shown in table 2? Perception levels were categorized as low (<16), moderate (16–26), and high (>26) based on predetermined category cutoffs. Students generally had a moderately positive opinion of the OSCE, as indicated by the mean score of 21.0, which is in the moderate perception category. The large range of results, however, suggests that individual perceptions differed greatly, with some students reporting extremely low perception levels and others very high ones. This disparity notes the necessity to conduct more studies of the impact that the impressions formed by the students about the OSCE depend on the institutional and demographic factors, such as gender, academic year, and college.

Table 3 data shows that the perception levels of the 243 nursing students show that most of the respondents (147 students; 60.5) had moderate perception about the OSCE. Low and high perceptions were equally reported by the same number of pupils (48 students each; 19.8%). There are equal distributions on both ends along with the major majority group in the middle.

Those findings suggest that despite most students enjoying the OSCE quite well, there still is a significant number of students who had a mixed experience, either overwhelmingly positive or negatively so. The presence of such diversity in the perception indicates that additional analysis is necessary to determine the factors associated with this, including institutional environment, academic year, or gender differences, that could lead to the difference in the experience and the attitude students had towards the OSCE.

The findings in table 4 indicate that male and female students' perception scores differ statistically significantly ($t(198) = -5.02, p < .001$). It was evident that female students fared better in perception than their male counterparts, with a mean difference of -2.70 . The 95% CI, which ranged from -3.76 to -1.64 , supported the magnitude of this change. The assumption of equal variances was satisfied since Levene's test for equality of variances was not significant ($p = .130$).

There was also a significant difference between academic years, with a mean difference of -4.50 ($t(138) = -7.45, p < .001$). This suggests that the perception scores of fourth-year students were much higher than

those of first-year students. The result is further supported by the 95% CI, which ranged from -5.67 to -3.33 . Despite being almost significant ($p = .080$), Levene's test supported the assumption of equal variances for the purposes of this investigation.

According to these results, students' opinions on the OSCE are highly influenced by their gender and academic year, with female students and those who are more senior (4th year) generally having more favorable opinions.

Table 5 demonstrated that Cronbach's alpha coefficients were computed for the overall scale in order to assess the internal consistency reliability of the instrument utilized in this study, the Student Evaluation of OSCE Questionnaire. The research was based on responses from a sample of 243 nursing students from private schools in Peshawar, Pakistan. The 13-item questionnaire's overall Cronbach's alpha score was 0.87, which is considered acceptable by established reliability criteria. This suggests that the questionnaire's elements assess a unified idea and that it is a reliable instrument for determining students' perceptions of the OSCE's implementation.

Table 2: Showed Perception Score Summary

	N	Minimum	Maximum	Mean	Std. deviation	Category	Category cutoff score range
Total perception Score	243	7	35	21.0	5.0	Low perception	< 16
Total N	243	-	-	-	-	Moderate perception	16 - 26
-	-	-	-	-	-	High perception	> 26

Table 3: showed perception score distribution

Perception Level	Frequency	Percentage (%)
Low	48	19.8%
Moderate	147	60.5%
High	48	19.8%
Total	243	100%

Table 4: Comparison of first-year versus fourth-year students' perceptions and those of males and females

Comparison	t(df)	p-value	Mean Difference	95% CI of the difference	
				Lower limit	Upper limit
Male vs Female	-5.02(198)	.130	-2.70	-3.76	-1.64
1 st vs 4 th Year	-7.45(138)	.080	-4.50	-5.67	-3.33

Table 5: Student Assessment of OSCE Questionnaire Internal Consistency Reliability (Cronbach's Alpha)

Scale	No. of Items	Cronbach's Alpha (α)	Interpretation
Overall Questionnaire	13	0.87	Strong internal coherence

Discussion

The objective of the study was to determine the level of perceptions of nursing students regarding the OSCE among the nursing schools in Peshawar which are privately owned. A study of the results of 243 students indicates that the level of their perceptions towards OSCE is mostly moderate. These findings have significant implications on the development, administration, and improvement of clinical assessment

in nursing education. The systematic and standardized nature of the method of evaluation of clinical competency in the OSCE renders it a favorite instrument in the education of health professionals. The results of the study are consistent with the findings of other studies which have considered the OSCE as the just and unbiased method to assess a range of skills including the clinical judgment, communication, and psychomotor skills. Most of the students (60.5) in our

research study revealed moderate levels of perceptions which implied a generally positive but not specifically noticeable attitude towards the testing process.¹⁹

The major conclusions that the study makes are significant discrepancies of perception between different subgroups. Female students scored much higher in comparison to their male counterparts. This is consistent with previous studies, which have found that student females may be more conscientious during clinical assessments perhaps due to superior preparation or an increase in sensitivity to structured learning environments.²⁰ Also, the fourth-year students exhibited far more perception levels as compared to 1st-year students. This could be attributed to the fact that they are more used to clinical settings and assessment systems which unavoidably increases their self-confidence and comfort with OSCE forms. This causes student perception to predict pleasure and engagement besides indicating quality of the OSCE.²¹

These positive outcomes were accompanied by a low percentage of perception in about 20% of students. This is worth research since dissatisfaction may impact motivation, learning outcomes and performance. Some of the negative perceptions are likely to be due to the operational flaws. Challenges such as time limits, lack of structured feedback, uneven examiners, and unrealistic clinical stations are the usual factors that result in student dissatisfaction in OSCEs in developing countries such as Pakistan, which have been reported in published literature and supported by studies.²²

Another interesting aspect of this study is the good internal reliability of Student Evaluation of OSCE Questionnaire (Cronbachs 0.87), meaning the instrument has managed to measure the appropriate elements. This indicates that students could comprehend the questionnaires of the survey and provide clear consistent responses, which justifies the findings. The effects of stress on OSCE encounters is among the significant issues that were discussed in the recent study. OSCEs are demonstrated to reduce anxiety and raise student confidence despite the high stakes associated with the test, with the assistance of practice, post-exam debriefing, and orientation.²³

The study's moderate mean perception scores might be a result of the participating institutions' inconsistent or nonexistent use of these support techniques. Recent pedagogical trends support the integration of formative components, even though the OSCE is primarily considered a summative tool in the majority of Pakistani institutions. Before the final summative assessments, students may improve their performance and reflect on their mistakes using feedback-rich formative OSCEs, which boost learning. According to our research, including these formative procedures may improve perception ratings, particularly for populations with lower performance levels.²⁴ Lastly, the results of this study are contextually relevant since they help close a significant gap in OSCE-related research that focuses on the private sector in Peshawar. Localized

data is crucial for focused interventions since this region has particular difficulties with regard to student demographics, teacher training, and academic resources.²⁵

Strength and Weakness

This study offers insightful information on students' clinical and interpersonal skills, ability to solve problems, ability to make decisions, and other critical clinical competencies. The OSCE provides a more dependable evaluation method by lessening the impact of examinee and patient factors. The OSCE stations' reusability encourages efficiency, and uniform exam settings improve fairness by guaranteeing that every student takes the same test and producing more objective exam outcomes. In the end, both student performance and the efficacy of the teaching program are improved by this thorough evaluation approach.

There are also a number of restrictions to this study that one cannot understand how perceptions evolve with time or after repeated exposure to OSCE because the research design is cross-sectional and the only variables recorded were perceptions at one point in time and thus a longitudinal design would have provided firmer evidence of changing patterns in the perception of students. The research was focused on gender and academic year as the two significant variables that affect the perception over other possibly significant variables such as previous achievement, language, faculty participation, hours of clinical rotation, or student approach to learning.

Conclusion

The researchers were examining the perceptions of nursing students tested regarding the Objective Structured Clinical Examination (OSCE) in the Peshawar, Pakistan schools of the private category. The internal consistency was displayed to be high since The Cronbachs alpha of the instrument stood at 0.87. Nevertheless, 19.8 percent of the participants said that their negative attitude was intensified by practical problems like the lack of time and vague guidelines. Since many students thought the OSCE was a high-stakes test, exam anxiety was a major problem. Overall, 60.5% of students had moderate views, with differences by gender and academic year. Compared to their male and first-year peers, female and fourth-year students reported much higher perception ratings, most likely as a result of their more extensive clinical experience. One prevalent disadvantage was performance anxiety. According to the results, to improve students' OSCE experiences, programs that address these inequalities and place a high priority on inclusion, examiner preparation, and stress management are necessary.

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