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PERCEPTIONS OF THE RELEVANT STAKEHOLDERS REGARDING OSCE AS AN EFFECTIVE ASSESSMENT METHOD IN NURSING EXAMINATION

Original Research

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Acknowledgement: The authors express gratitude to all participants for their valuable contributions to this study.

Conflict of Interest: None
Grant Support & Financial Support: None

ABSTRACT

Background: Objective Structured Clinical Examination (OSCE) is a widely recognized method for assessing clinical competencies in nursing education, offering a structured and objective evaluation of students' psychomotor, cognitive, and affective domains. Unlike conventional practical examinations, OSCE reduces subjectivity and enhances reliability. Despite its proven effectiveness, its implementation in nursing education in developing countries remains limited. Understanding stakeholder perceptions is crucial for optimizing OSCE execution. This study explores the views of students, examiners, and policymakers on OSCE as an assessment tool in nursing education.

Objective: To explore the perceptions of relevant stakeholders regarding OSCE as an effective assessment tool in nursing examinations.

Methods: A qualitative exploratory-descriptive study was conducted among ten stakeholders, including six Bachelor of Science in Nursing (BSN) students and four nursing faculty members. Participants were selected using purposive sampling. Data were collected through in-depth individual interviews, audio-recorded with consent. Transcribed data were analyzed using thematic analysis following Lincoln and Guba's framework to ensure credibility, dependability, confirmability, and transferability. Ethical approval was obtained from the ethical committee of Rehman Medical Institute.

Results: Three main themes emerged: perceptions regarding OSCE, resources for OSCE, and challenges faced during OSCE. Within these, subthemes included purpose, station design, benefits, reliability, validity, availability of standardized patients, integration of technology, space constraints, student anxiety (80%), examiner bias (70%), inadequate resources (75%), and exam content leaks (60%). While 90% of respondents considered OSCE fair and systematic, 85% acknowledged its role in skill enhancement, and 88% found it beneficial in boosting student confidence. However, 65% identified limited standardized patient availability as a barrier.

Conclusion: Stakeholders viewed OSCE as a valid and effective assessment method in nursing education. Ensuring adequate resources, examiner training, and structured student preparation is essential for optimizing OSCE implementation.

Keywords: Assessment tool, Clinical competency, Nursing education, OSCE, Psychomotor skills, Stakeholder perceptions, Standardized patient

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INTRODUCTION

The assessment of clinical and practical competencies is a fundamental aspect of nursing education, ensuring that students develop the necessary skills to provide safe and effective patient care. Evaluating these competencies should be not only instructive but also conducive to active learning. While theoretical examinations primarily focus on assessing knowledge, clinical assessments aim to evaluate students' cognitive, psychomotor, and affective domains, which are integral to nursing practice. Given that clinical proficiency forms the core of a nurse's professional role, reliable and valid methods for assessing nursing students' competencies are crucial. Assessment and teaching methodologies are continuously evolving to meet this need, with Objective Structured Clinical Examination (OSCE) emerging as a widely recognized and robust assessment tool (1). OSCE, first introduced by Harden in 1975, is designed to provide a standardized, structured, and objective evaluation of students' clinical competencies. It is a multi-system assessment method that examines students' clinical skills, attitudes, and cognitive abilities using real or simulated patients (2). Unlike traditional examinations, OSCE ensures a controlled and uniform evaluation process by requiring students to rotate through a circuit of standardized stations, each assessing different competencies. These stations typically include "question stations," where students respond to clinical queries, and "procedure stations," where examiners directly observe performance (3). Grading is based on structured checklists and predefined criteria, ensuring consistency and minimizing subjectivity in assessment (4). OSCEs have become the gold standard for performance-based clinical assessment because they allow multiple students to be tested under identical conditions, enhancing the reliability and validity of the evaluation (5).

In contrast, traditional assessment methods such as the Conventional Practical Examination (CPE) have long been used to assess nursing students' competencies. However, CPE has been criticized for its subjectivity and lack of continuous assessment, as students are often graded based on their responses to questions at the end of the examination rather than being systematically evaluated throughout the process (6). This approach primarily tests knowledge rather than clinical skills or attitudes, making it a less effective measure of overall competency (7). Given these limitations, there is growing support for OSCE as a superior alternative, with studies indicating that it is a valid and reliable tool for assessing clinical performance in nursing education (8). Additionally, OSCE offers educators greater opportunities to provide feedback, guide students' learning, and ultimately enhance their clinical practice (9). Its structured approach contributes to patient safety, risk reduction, and the promotion of higher clinical standards, making it an essential component of modern nursing education (10). Despite its global recognition, OSCE remains underutilized in many developing countries, including Pakistan. In Khyber Pakhtunkhwa (KPK), OSCE is still a relatively new concept in nursing education, with limited implementation and research on its effectiveness. While its structure and administration are well-documented, little is known about how key stakeholders—such as students, educators, and policymakers—perceive this assessment method. Understanding their perspectives is critical for refining and improving OSCE implementation to ensure its effectiveness and acceptance. In 2022, Khyber Medical University Peshawar introduced OSCE as a clinical assessment method alongside traditional theory examinations, such as multiple-choice questions (MCQs). However, the experiences and opinions of relevant stakeholders regarding this transition remain largely unexplored.

This study aims to bridge this gap by investigating the perceptions of stakeholders regarding OSCE as a clinical assessment tool in nursing examinations. By gathering insights from students, educators, and policymakers, the study seeks to evaluate the strengths and limitations of the current OSCE model and provide recommendations for optimizing its use in nursing education.

METHODS

An exploratory-descriptive qualitative research design was employed to gain in-depth insights into the perceptions of stakeholders regarding the Objective Structured Clinical Examination (OSCE) as an assessment method in nursing education. The study population comprised students, examiners, and policymakers, with a specific focus on students enrolled in the second and fourth semesters of the Bachelor of Science in Nursing (BSN) program at a well-reputed nursing college in Peshawar. Participants were selected through purposive sampling, ensuring that only students who had experienced OSCE for the first time and teachers actively involved in OSCE assessments were included in the study. This approach facilitated the collection of rich, relevant, and meaningful data from individuals directly engaged with the assessment process. Data collection was conducted through in-depth interviews using open-ended questions to allow participants to express their views freely. Prior to participation, informed consent was obtained from all individuals, ensuring voluntary involvement and adherence to ethical research principles. Data saturation was achieved after interviewing ten participants,

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indicating that no new themes or perspectives emerged beyond this point. Interviews were audio-recorded with participants' permission and subsequently transcribed verbatim after translation into English to maintain accuracy and authenticity.

Thematic analysis was utilized to systematically analyze the data, identifying key themes and patterns that emerged from participants' responses. To ensure the trustworthiness of findings, Lincoln and Guba's framework was applied, addressing credibility, dependability, confirmability, and transferability. Ethical approval for the study was obtained from the ethical committee of Rehman Medical Institute, and permission for data collection was secured from the relevant department heads. The study adhered to all ethical guidelines for research involving human subjects, ensuring confidentiality and respect for participant autonomy.

RESULTS

The study included ten participants, comprising six students enrolled in the Bachelor of Science in Nursing (BSN) program at a private nursing college in Peshawar who had recently undertaken the Objective Structured Clinical Examination (OSCE), along with four teachers from different nursing institutes involved in OSCE assessments. Thematic analysis of the collected data revealed three main categories: perceptions regarding OSCE, resources available for its conduction, and challenges encountered during its implementation. Each category was further divided into subthemes, offering a comprehensive understanding of stakeholders' views. Participants demonstrated a generally positive attitude toward OSCE, acknowledging its role in enhancing objectivity and fairness in clinical assessments. The primary purpose of OSCE, as highlighted by respondents, was to standardize the evaluation process, eliminate examiner bias, and ensure an equal grading system for all students. Additionally, it was perceived as an effective method to assess not only cognitive knowledge but also psychomotor and affective domains, providing a more holistic evaluation of students' competencies. The structured format of OSCE was considered beneficial in integrating theoretical knowledge with practical skills, which was seen as an essential requirement for professional nursing practice.

The design of OSCE stations was an integral aspect discussed by participants. The assessment typically involved five stations, including two observation stations, two question-and-answer stations, and one psychomotor skill station. These stations covered various clinical skills such as taking oral temperature, measuring blood pressure, and performing mouth care. The structured nature of OSCE was perceived as systematic and comprehensive, ensuring that all relevant competencies were assessed uniformly. The benefits of OSCE were widely recognized, with participants emphasizing its ability to provide an organized, unbiased, and thorough evaluation process. It was noted that OSCE minimized the perception of examiner favoritism, reduced student anxiety related to subjective assessments, and ensured coverage of the entire curriculum. Respondents also indicated that OSCE fostered greater confidence among students by reinforcing their practical skills through repeated practice. Graduates who underwent OSCE were perceived as more competent and confident in clinical settings compared to those assessed through traditional examination methods.

The reliability and validity of OSCE as an assessment tool were also discussed. While respondents acknowledged its structured format as valid and reliable, concerns were raised regarding its execution. Some participants highlighted that although OSCE is theoretically a reliable assessment method, issues such as procedural inconsistencies, examiner variations, and potential information leaks before the examination could compromise its effectiveness. Ensuring standardized equipment and strict procedural adherence was seen as critical to maintaining the credibility of OSCE outcomes. The study also identified significant resource-related challenges in OSCE implementation. Many participants expressed dissatisfaction with the availability of resources, including standardized patients, technological integration, and space for conducting the examination. The use of standardized patients was highlighted as a crucial element in OSCE, yet limitations in training and availability posed a challenge. Some institutions relied on student role-play to simulate patient conditions, which, although effective to some extent, was not always a substitute for trained standardized patients. The integration of technology was recognized as a potential solution to enhance fairness and efficiency in OSCE. Participants suggested the use of digital tools, such as online OSCE formats and video recording of assessments, to minimize examiner bias and improve the accuracy of grading. Space constraints in examination centers were also identified as a limiting factor, with some institutions reducing the number of stations due to insufficient facilities.

Challenges faced by students and examiners during OSCE were extensively discussed. Students reported experiencing significant stress and anxiety, particularly due to a lack of prior exposure to the OSCE format. Many students expressed concerns over the strictness of examiners and perceived bias in evaluation. Some participants indicated that certain examiners appeared to be more demanding towards specific students, affecting their performance. Furthermore, students reported inadequate guidance regarding OSCE expectations, leading to confusion and uncertainty during the examination. Implementation challenges included resistance to change, lack of trained faculty, and logistical difficulties in executing OSCE effectively. Some respondents noted that teachers were not adequately trained in OSCE assessment methods, leading to inconsistencies in evaluation. Additionally, procedural lapses, such as information leaks about

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exam content before the assessment, were identified as significant concerns. Participants reported instances where students who took the OSCE earlier in the sequence shared details with their peers, compromising the integrity of the examination. The need for stricter supervision, enhanced security measures, and standardized examiner training was emphasized to mitigate these issues.

Bias in OSCE assessment was another recurring concern, with participants highlighting instances where examiners exhibited favoritism towards certain students. Respondents suggested that greater transparency, objective marking criteria, and the use of external observers could help address this issue. Ensuring fairness and impartiality in OSCE was considered essential to maintaining its credibility as a clinical assessment tool.

Table 1: Themes and subthemes Emerged

Themes	Subthemes
Perceptions regarding OSCE	Purpose of OSCE
	Stations design
	Benefits
	Reliability and validity
Resources for OSCE	Standardized patient
	Integration of technology
	Space availability
Challenges regarding OSCE	Faced by Students
	Implementation challenges
	Biasedness

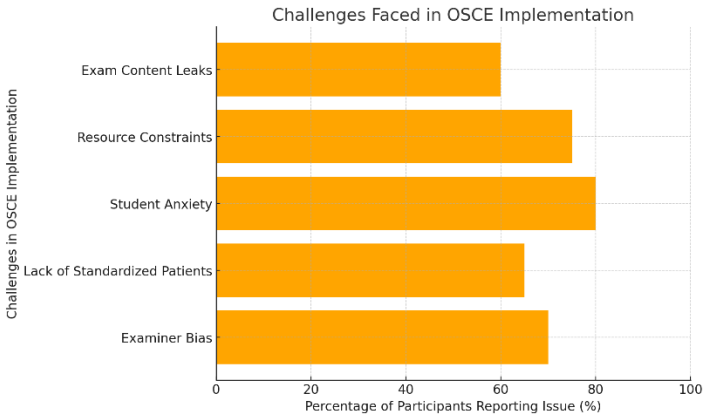


Figure 2 Challenges Faced in OSCE Implementation

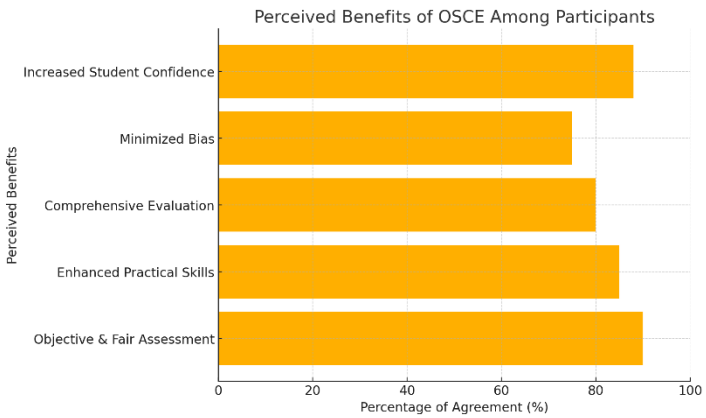


Figure 1 Perceived Benefits of OSCE Among Participants

DISCUSSION

The introduction of the Objective Structured Clinical Examination (OSCE) as a formal assessment method in nursing education by Khyber Medical University in 2022 was a significant step towards modernizing clinical evaluations. OSCE has long been regarded as a standardized and objective tool for assessing clinical competence, with proven advantages over traditional assessment methods since its inception. The findings of this study align with existing literature, reinforcing that OSCE is an effective method for evaluating the psychomotor and cognitive domains of nursing students. Given the practical nature of nursing, ensuring an objective assessment of clinical skills is essential, and OSCE has been recognized for its role in enhancing fairness and reducing examiner bias in grading. This is consistent with previous studies that have demonstrated OSCE's ability to minimize subjective evaluations and promote uniformity in clinical skill assessments (11-13). The structured format of OSCE, which includes multiple stations assessing different competencies, was well-received by participants. The findings suggest that a five-station design—comprising observational, question-answer, and psychomotor activity stations—provides a systematic approach to clinical evaluation. This structure is consistent with global standards, as previous research has shown that OSCE stations effectively assess diverse clinical competencies in a controlled manner. In contrast

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to traditional multiple-choice question (MCQ)-based assessments, OSCE evaluates real-time clinical decision-making, procedural skills, and professional behavior, making it a more comprehensive assessment tool (14). Participants acknowledged the reliability and validity of OSCE as a format, although concerns were raised about its practical implementation. This aligns with prior research indicating that while OSCE is conceptually robust, its validity is highly dependent on proper execution, examiner training, and logistical feasibility (14,15).

The availability of resources plays a crucial role in the effectiveness of OSCE. This study identified limitations in standardized patient availability, technological integration, and space constraints, which hinder optimal OSCE implementation. The use of standardized patients enhances the realism of clinical assessments, but many institutions relied on student role-play as a substitute, which may not fully replicate clinical scenarios. Previous studies have highlighted that standardized patient training improves OSCE effectiveness, reinforcing the need for structured role-play training programs (16). Integration of technology in OSCE has been recognized as a key factor in ensuring fairness and accuracy in assessments. Digitalization of grading systems, video monitoring for reducing bias, and virtual OSCE simulations have been suggested as potential solutions to enhance objectivity and transparency. Previous research has also indicated that incorporating digital tools in OSCE improves examiner reliability and ensures uniform evaluation criteria (17). Space limitations emerged as a barrier in OSCE execution, with some institutions reducing the number of stations due to inadequate facilities. The need for adequate infrastructure to accommodate the full range of clinical skill assessments remains a crucial factor in ensuring OSCE's effectiveness as an assessment tool (18,19). Challenges associated with OSCE implementation were prominently reported, particularly regarding student anxiety, unfamiliarity with the format, and examiner bias. Many students experienced heightened stress levels due to the high-stakes nature of OSCE, a finding that aligns with previous research indicating that OSCE induces greater anxiety compared to written examinations. However, studies have also suggested that structured preparation and exposure to OSCE formats can mitigate stress and improve student performance (18). The lack of prior orientation regarding OSCE procedures was another issue highlighted in this study. Many students encountered the examination format for the first time without adequate preparatory guidance, which impacted their confidence and performance. Prior research supports the implementation of structured OSCE preparation programs, such as mock OSCEs and peer-led training, to improve student familiarity with the assessment method and reduce associated anxiety (19,20).

Bias in OSCE assessments was another concern raised by participants, with reports of examiner favoritism and potential information leaks before examinations. These issues undermine the objectivity and fairness of OSCE, compromising its credibility as an assessment tool. Previous studies have identified examiner bias as a common challenge in OSCE implementation, emphasizing the need for standardized grading rubrics, external examiners, and digital monitoring to ensure impartial evaluations (20). Additionally, the leakage of OSCE scenarios before the examination was reported, which could significantly impact assessment integrity. Prior literature suggests that secure examination protocols, randomization of stations, and the inclusion of external observers can help mitigate this risk (21). Despite these challenges, OSCE remains a superior assessment tool for clinical competency evaluation compared to traditional methods. The structured nature of OSCE ensures comprehensive assessment coverage, reinforcing its reliability in evaluating nursing students' practical skills. However, the successful implementation of OSCE requires strategic improvements, including enhanced faculty training, increased resource allocation, and the adoption of digital assessment technologies. The role of faculty in OSCE administration is critical, as prior studies have emphasized the importance of examiner training in maintaining assessment validity and reliability (22). Strengthening faculty orientation programs and refining examiner evaluation protocols can contribute to minimizing inconsistencies in OSCE grading (22).

While this study provides valuable insights into OSCE perceptions and challenges, certain limitations should be acknowledged. The study was conducted shortly after OSCE implementation in affiliated nursing institutes, which may have influenced participant responses due to limited exposure to the assessment method. Data collection relied solely on in-depth interviews, which, while providing rich qualitative insights, may not fully capture the breadth of stakeholder perspectives. Interviews conducted in Urdu were translated into English, which could introduce subtle interpretative biases. Future studies should employ mixed-method approaches, incorporating quantitative analysis, observational studies, and document reviews to gain a more comprehensive understanding of OSCE effectiveness. Longitudinal research examining student performance trends over multiple OSCE cycles would provide further insights into its long-term impact on nursing education (12). OSCE represents a progressive shift in clinical competency assessment, offering a structured, objective, and comprehensive evaluation approach. While initial challenges in implementation exist, refining OSCE administration through standardized examiner training, improved resource allocation, and digital integration can enhance its effectiveness. Continued research and feedback-driven modifications are essential to optimize OSCE as a clinical assessment tool, ensuring its long-term sustainability and impact on nursing education.

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CONCLUSION

The findings of this study provide valuable insights into the perceptions of students and examiners regarding the Objective Structured Clinical Examination (OSCE) as an assessment tool in nursing education. The results indicate that OSCE is widely regarded as a fair, effective, valid, and reliable method for evaluating clinical competencies. Its structured format enhances objectivity, minimizes bias, and ensures comprehensive skill assessment, making it a significant improvement over traditional evaluation methods. However, challenges such as student stress, resource limitations, and examiner subjectivity must be addressed to optimize its implementation. Providing adequate resources, ensuring examiner impartiality, and conducting pre-OSCE workshops can enhance its effectiveness and reduce anxiety among students. The adoption of OSCE represents a progressive shift towards competency-based assessment in nursing education, contributing to the development of more skilled and confident healthcare professionals.

AUTHOR CONTRIBUTIONS

Author	Contribution
Rehan Ullah*	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Zulfeqar Ali	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published
Salman Nasib	Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published
Bareera Shahid	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Farwa Shakeel	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Maryam Bibi	Substantial Contribution to study design and Data Analysis Has given Final Approval of the version to be published

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