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KNOWLEDGE, ATTITUDE AND EXPLORING THE OPINION TOWARDS OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) AMONG THE NURSING FACULTY: A MIXED METHOD APPROACH

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Abstract

Background

The Objective Structured Clinical Examination (OSCE) is an innovative assessment tool that evaluates clinical skills objectively and fairly. Although widely practiced internationally, its adoption in nursing education within Pakistan remains limited. Faculty members play a critical role in ensuring the effective planning, implementation, and evaluation of OSCE, yet their knowledge and perceptions remain underexplored.

Aim

This study aimed to assess the knowledge, attitudes, and perceptions of nursing faculty in Lahore, Pakistan, regarding the application of OSCE in nursing education.

Methods

A mixed-methods design was employed, involving a cross-sectional survey of 160 nursing faculty members from selected institutions in Lahore and in-depth interviews with 12 participants. A validated questionnaire assessed knowledge and attitudes quantitatively, while semi-structured interviews provided qualitative insights.

Results

Findings revealed that 42.5% of participants demonstrated good knowledge of OSCE, and 59.4% reported positive attitudes toward its implementation. Knowledge levels were significantly associated with younger age and higher qualifications, while positive attitudes correlated with teaching experience. Thematic analysis of qualitative data highlighted five major themes: perceived benefits of OSCE (fairness, objectivity), implementation challenges (limited resources, workload), lack of faculty training, impact on students (skill enhancement and anxiety), and the need for institutional support.

Conclusion

The study concludes that nursing faculty generally recognize OSCE as a valuable assessment method, but resource constraints and inadequate training hinder its effectiveness. Strengthening faculty development programs, ensuring

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institutional support, and promoting collaborative efforts are essential for sustainable integration of OSCE into nursing education in Pakistan.

INTRODUCTION

The Objective Structured Clinical Examination (OSCE) is a standardized method of assessing clinical competence through stations where learners demonstrate skills in communication, clinical reasoning, and technical performance under observation (Harden, 2016). In nursing education, OSCE is valued for its fairness and objectivity, providing an alternative to traditional examinations often criticized for subjectivity (Bartfay & Rombough, 2018). Knowledge refers to the faculty's awareness and understanding of OSCE design, purpose, and processes, while attitude reflects their feelings, beliefs, and acceptance toward its implementation (Ajzen, 1991). Perception denotes the interpretation of OSCE's usefulness, challenges, and impact on learning outcomes (Polit & Beck, 2021). Faculty perspectives are essential as they shape curriculum integration and sustainability of such assessment methods in nursing education (Pierre et al., 2004).

The prevalence of OSCE in health professions has expanded worldwide, with more than 80% of medical and nursing schools in developed countries utilizing it for student assessment (Barman, 2005). In South Asia, implementation remains uneven, with higher adoption in medical education than in nursing institutions (Al-Wardy, 2010). In Pakistan, limited reports suggest that only a small proportion of nursing schools have integrated OSCE, often on a pilot basis (Baig et al., 2014). Most institutions still rely on traditional written and viva examinations, which are insufficient to evaluate complex clinical competencies (Ali et al., 2018). The scarcity of local evidence on faculty readiness and perceptions regarding OSCE represents a gap in nursing education research (Shahzad et al., 2020).

OSCE ensures a structured and objective evaluation by minimizing examiner bias, offering equal opportunity to all students, and improving assessment reliability (Patricio et al., 2013). In nursing, it measures domains such as patient assessment, communication, technical procedures, and professional behavior, which are critical for safe practice (Mitchell et al., 2009). Studies indicate that OSCE promotes active learning, enhances student preparation, and provides immediate feedback, contributing to skill mastery (Selim et al., 2012). Nursing faculty serve as designers, examiners, and evaluators within this process, and their role directly influences the quality of implementation (Mubuuke et al., 2017).

Evidence shows that faculty knowledge and training are critical for successful OSCE integration (Pierre et al., 2004). Faculty lacking adequate training may face challenges in station development, checklist preparation, and standardized assessment practices (Jahan et al., 2016). Attitude also plays a role; positive faculty perceptions are linked to better adoption and refinement of OSCE (Rushforth, 2007). Negative perceptions related to workload, time constraints, and anxiety in students may hinder acceptance (Mitchell et al., 2009). Understanding faculty readiness helps in addressing these barriers effectively (Zayyan, 2011).

International studies reveal varying faculty attitudes toward OSCE. Research from the Middle East and Africa indicates generally positive acceptance but highlights resource limitations and lack of institutional support as key challenges (Al-Wardy, 2010; Mubuuke et al., 2017). European and North American nursing programs report OSCE as a gold-standard assessment, integrated at undergraduate and postgraduate levels (Patricio et al., 2013). Comparatively, South Asian nursing institutions show cautious adoption due to financial, infrastructural, and training limitations (Baig et al., 2014). Faculty in these settings often express the need for structured orientation and administrative support for successful implementation (Ali et al., 2018).

In Pakistan, nursing education is evolving under the regulation of Pakistan Nursing and Midwifery Council (PNMC), yet practical assessment strategies remain underdeveloped (Shahzad et al., 2020). Many institutions lack simulation laboratories and standardized patient resources, which are

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prerequisites for OSCE (Baig et al., 2014). Faculty report insufficient exposure and limited continuing professional development opportunities, contributing to low readiness for OSCE (Ali et al., 2018). This gap calls for targeted research on faculty knowledge, attitudes, and perceptions to inform policy and curriculum reforms.

The assessment of nursing faculty perspectives in Lahore, Pakistan, holds significance in identifying barriers and opportunities for OSCE integration. Lahore represents one of the largest hubs of nursing education in the country, with diverse public and private institutions (Shahzad et al., 2020). Faculty input can guide institutional planning, training initiatives, and resource allocation, ensuring alignment with global standards of competency-based education (Rushforth, 2007). Understanding faculty perspectives not only strengthens teaching and learning practices but also ensures the development of safe, competent, and practice-ready nurses for Pakistan's healthcare system (Patricio et al., 2013).

Methodology

This study employed a mixed-methods design to comprehensively examine nursing faculty knowledge, attitudes, and perceptions regarding the Objective Structured Clinical Examination (OSCE). The quantitative component was a descriptive cross-sectional survey that provided measurable data on knowledge and attitudes, while the qualitative component adopted a phenomenological approach using semi-structured interviews to explore in-depth experiences and perceptions. The study was conducted at Shaikha Fatima College of Nursing and Allied Health Sciences, a semi-government institution affiliated with Sheikh Zayed Hospital, Lahore. This hospital is recognized for providing tertiary-level healthcare and serves as a teaching hospital for multiple health disciplines. Nursing faculty at the college were selected as the unit of analysis because of their direct involvement in assessment practices and their influence on students' clinical preparation. The duration of the study was nine months following ethical approval from the Institutional Review Board (IRB).

The target population consisted of nursing faculty members actively involved in teaching and assessment at Shaikha Fatima College of Nursing. Eligibility criteria included registered nurses, both male and female, aged between 23–45 years, with a minimum of two years of teaching experience. Faculty members with administrative responsibilities, those on contract or rotational posts, and individuals who had received OSCE-related training in the past six months were excluded. A non-probability convenience sampling technique was used to recruit participants. For the quantitative component, a sample size of 160 participants was determined using the general rule of five observations per variable, as the study contained 32 variables. For the qualitative component, 12 faculty members were interviewed until data saturation was achieved, which is consistent with recommended sample sizes in phenomenological studies.

Data Collection and Analysis

Data were collected using three tools: a structured questionnaire, a semi-structured interview guide, and a demographic form. The structured knowledge questionnaire comprised 15 multiple-choice questions adapted from Fagerström (2021), with scoring categorized into good (≥75%), average (60–74%), and poor (≤60%) knowledge levels. Attitudes were assessed through a 10-item Likert scale ranging from strongly disagree to strongly agree, with total scores categorized into positive, neutral, and negative attitudes. Semi-structured interviews lasting 25–40 minutes were conducted with consenting participants, focusing on faculty perceptions, challenges, and recommendations for OSCE implementation. Interviews were audio-recorded, transcribed verbatim, and analyzed using content analysis. Four researchers independently reviewed transcripts, applied open and focal coding, and identified emerging themes. Quantitative data were analyzed statistically using SPSS, with descriptive statistics summarizing demographic characteristics and knowledge/attitude scores, while Cronbach's alpha established reliability (0.72 for knowledge, 0.79 for attitudes). The integration of both data strands ensured a comprehensive understanding of faculty perspectives toward OSCE in nursing education.

Results and Analysis

The number of respondents was 110 people; the vast majority were women (70 %), and most of them were

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aged 31 to 40 (45 %), with 23 to 30 (40 %) and 41 to 45 years old (15 %). Regarding education, more than half of them held a Bachelor's degree in nursing (55%), another quarter (25%) had a Master's degree in Nursing, and one in every five (20%) was a diploma holder. The experience level was 2-5 years in half of the respondents, 6-10 years in 35 %, and over 10 years of experience in 15 %t of the respondents. OSCE formal training was reported by 40 % of the participants, although 60 % had nothing of that kind. The data in marital status revealed, 65 % were married and 35 % were unmarried. [table 1].

Table 4.1 Demographic Characteristics of Nursing Faculty Participants (N = 160)

Demographic Variable	Categories	Frequency (n)	Percentage (%)
Age (years)	23–30	64	40.0
	31–40	72	45.0
	41–45	24	15.0
Gender	Male	48	30.0
	Female	112	70.0
Highest Qualification	Diploma	32	20.0
	Bachelor's Degree (BSN)	88	55.0
	Master's Degree (MSN)	40	25.0
Years of Experience	2–5 years	80	50.0
	6–10 years	56	35.0
	>10 years	24	15.0
Training on OSCE	Yes	64	40.0
	No	96	60.0
Marital Status	Married	104	65.0
	Unmarried	56	35.0

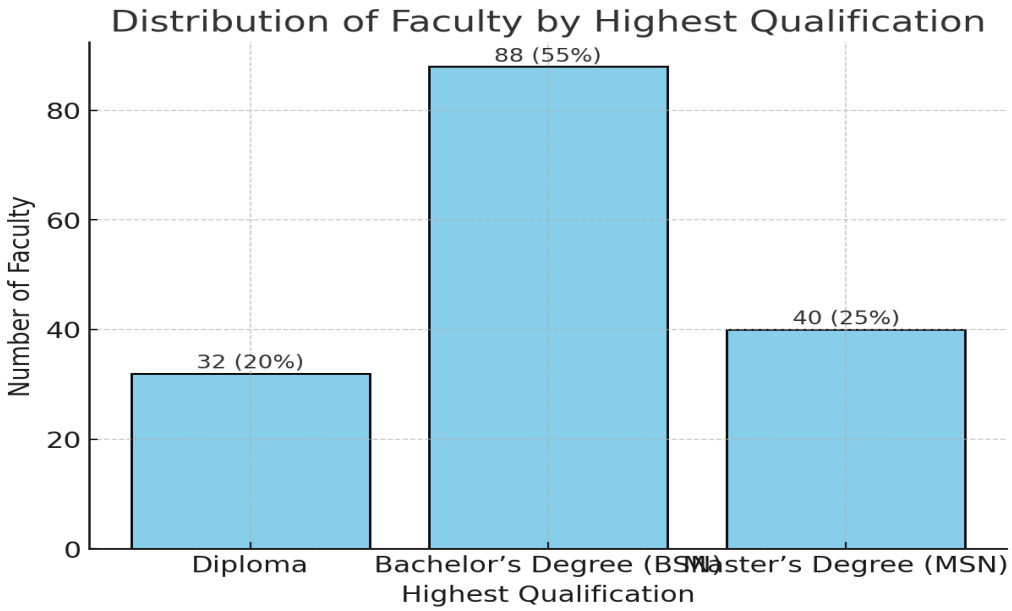

Figure 4.3 Qualification of Participants

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Figure 3 shows that most nursing faculty hold a Bachelor's degree (55%), indicating a solid undergraduate academic foundation. A smaller proportion possess Master's degrees (25%) and Diplomas (20%), reflecting varying levels of academic advancement.

The findings in Table 2 reveal that while a considerable proportion of nursing faculty (42.5%) demonstrated good knowledge regarding OSCE, a significant portion still fell into average (35%) and poor (22.5%) categories. This indicates that although awareness exists, knowledge gaps remain prevalent, potentially limiting the optimal implementation of OSCE in nursing education. The presence of more than one-fifth of participants in the poor knowledge group highlights the urgent need for structured training and continuous professional development. Overall, the results suggest a moderate knowledge base that requires strengthening through workshops and faculty development initiatives.

Table 2 Knowledge Levels of Faculty Regarding OSCE (N = 160)

Knowledge Category	Frequency (n)	Percentage (%)
Good (≥ 75%)	68	42.5
Average (60–74%)	56	35.0
Poor (< 60%)	36	22.5

The results in Table 3 show that a majority of faculty members (59.4%) demonstrated a positive attitude towards OSCE, reflecting an overall acceptance of this evaluation method. However, nearly one-third (30%) held neutral views, indicating hesitancy or uncertainty about its effectiveness. A small but notable proportion (10.6%) expressed negative attitudes, which may hinder the successful adoption of OSCE in nursing education. These findings suggest that while attitudes are generally favorable, targeted orientation sessions and sensitization programs are needed to address doubts and resistance among faculty.

Table 3 Attitude Levels of Faculty Regarding OSCE (N = 160)

Attitude Category	Frequency (n)	Percentage (%)
Positive (≥ 70%)	95	59.4
Neutral (50–69%)	48	30.0
Negative (< 49%)	17	10.6

The chi-square analysis shows that age group (χ^2 = 7.25, p = 0.027) and qualification (χ^2 = 9.42, p = 0.009) were significantly associated with faculty knowledge regarding OSCE, indicating that younger faculty and those with higher qualifications possessed better knowledge. In contrast, gender (χ^2 = 0.86, p = 0.354) and teaching experience (χ^2 = 5.13, p = 0.077) were not significantly related to knowledge, suggesting that knowledge levels were not influenced by these variables. This highlights the role of academic preparation and age in shaping awareness of OSCE more than gender or years of teaching experience.

Table 4 Association Between Demographic Variables and Knowledge Levels (Chi-Square Test)

Variable	χ^2 Value	df	p-value	Significant
Age Group vs Knowledge	7.25	2	0.027	Yes

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Gender vs Knowledge	0.86	1	0.354	No
Qualification vs Knowledge	9.42	2	0.009	Yes
Teaching Experience vs Knowledge	5.13	2	0.077	No

The interviews with faculty revealed five broad themes: perceived benefits of OSCE, highlighting its fairness, objectivity, and standardization; challenges in implementation, including workload, time constraints, and infrastructural gaps; faculty preparedness, with emphasis on lack of training, support, and clear assessment criteria; impact on students, showing both improved competence and increased anxiety; and recommendations, where faculty suggested workshops, stronger institutional support, and inter-college collaboration to strengthen OSCE practices.

Table 5 Emergent Themes and Sub-Themes from Faculty Interviews (N = 12)

Themes	Sub-Themes	Description	Supporting Quotes.
Perceived Benefits of OSCE	Standardization of assessment	OSCE ensures uniformity in testing across all students, minimizing examiner subjectivity.	*"I feel OSCE brings uniformity; every student is tested on the same clinical task in the same way, which minimizes bias from examiners."* (P5)
	Fair and transparent evaluation	Provides equal opportunity for students to demonstrate skills, reducing favoritism.	*"Unlike traditional exams where the examiner's mood could affect grading, OSCE ensures that each student is given equal opportunity to demonstrate their skills."* (P9)
	Objective skill measurement	OSCE assesses both knowledge and practical competence rather than theory alone.	*"It is not only theory-based; OSCE tests actual performance, which shows us how well students can apply knowledge in real-life scenarios."* (P12)
Challenges in Implementation	Time and resource constraints	OSCE requires considerable planning, materials, and logistics compared to traditional exams.	*"Arranging stations, preparing checklists, and managing logistics is very time-consuming compared to regular exams."* (P3)
	Faculty workload and stress	Conducting OSCE increases workload for faculty, causing stress and fatigue.	*"We are already overburdened with teaching, and OSCE adds additional responsibilities, which makes it exhausting."* (P8)
	Infrastructural limitations	Lack of adequate space, equipment, and standardized settings hinder smooth implementation.	*"Our institution lacks enough space and equipment for OSCE, which creates practical barriers in its smooth implementation."* (P2)
Faculty Preparedness	Need for formal training	Faculty require structured training to effectively conduct and evaluate OSCE.	*"I never received structured training on OSCE, so initially I was unsure how to conduct or evaluate effectively."* (P1)
	Lack of institutional support	Administrative guidance and resources are often	*"There is little guidance or support from administration when we conduct*

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		insufficient.	OSCE, which leaves faculty on their own." (P11)
	Uncertainty in assessment criteria	Faculty feel unclear about what aspects to prioritize in evaluation.	"Sometimes we are not clear about what to prioritize—knowledge, communication, or technical skill—because no proper orientation was given." (P6)
Impact on Students	Improved clinical competence	Students develop stronger hands-on skills and apply theory more effectively.	"Students are forced to think critically and apply skills, which makes them better prepared for clinical practice." (P10)
	Heightened anxiety and stress	The high-stakes nature of OSCE causes nervousness and underperformance in some students.	"Many students become very nervous during OSCE; even the best ones sometimes underperform due to exam pressure." (P7)
	Motivation for active learning	OSCE motivates students to prepare thoroughly and practice clinical skills.	"Unlike written exams, OSCE motivates students to practice procedures beforehand, which improves their confidence and performance." (P4)
Recommendations	More training workshops	Faculty emphasize the need for structured and frequent OSCE-related training.	"If faculty get regular workshops on OSCE, we can be more confident and consistent in assessment." (P2)
	Administrative and logistical support	Institutional backing is required for equipment, manpower, and scheduling.	"Without proper space, equipment, and scheduling, OSCE cannot run smoothly; management must step in." (P4)
	Collaboration and sharing best practices	Networking with other institutions can improve OSCE strategies.	"We should create a forum where faculty from different nursing colleges share experiences and strategies to improve OSCE implementation." (P9)

Discussion

This research proved that most of the study population was female, which was in line with a wider gender distribution of the nursing profession. Nursing remains traditionally a female dominated profession in most of countries and faculty mirror this unbalanced representation. Similarly, Sweety (2024) noted that nursing education in India is dominated by women in the profession as they constitute the largest number of teaching faculty.

Majority of the faculty was between the ages of 31 to 40 years with the next major group being between 23 and 30 years. This implies that a big percentage of faculty members are early and mid-career professionals. Similar findings were made by Almisnid (2023), who discovered that younger nursing faculty in Saudi Arabia was more conversant with contemporary clinical assessment techniques such as OSCE, as compared to the older generation. Yeates et al. (2025) mention that at some institutions, the aging faculty workforce makes it a challenge to plan succession and new strategies toward assessment adoption.

In the analysis of the level of education, most of the participants had an undergraduate degree, whereas fewer had either a postgraduate or diploma degree. These findings indicate an average academic progress as well as lack of higher specialization According to a study by Chan (2023), high-resource settings have already managed to find nursing faculty with

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advanced degrees that enhance their capability of delivering OSCE. The identified gap in the present study presupposes that there is a risk that faculty should be advanced academically in order to match the global standards in teaching and assessment.

The number of years of experience that the participants had revealed that half of them were within two to five years. This portrays a comparatively inexperienced workforce in terms of career exposure. A similar process occurs in Khyber Pakhtunkhwa, explained Khan (2022): since most faculty members lack experience in teaching, they lack confidence in OSCE administration. Conversely, Schwill et al. (2020) pointed out to settings where veterans of faculty and even peer assessors with a proficient level of experience offered more stable OSCE methods, affirming the power of expanse in experience, as a support to improve OSCE-based delivery.

Most faculty in this study did not report receiving any formal training on OSCE prior to use, as 60 percent indicated not having any training on OSCE. This observation strengthens practice lines drawn by Kibuuka (2025) who ascertained that poor faculty training has been a key factor to successful OSCE adoption in sub-Saharan Africa. As Rehman et al. (2025) revealed, professional workshops were important in enhancing knowledge and attitudes of faculty members as they were identified as superior. Even favorably-attitudined faculty might not be able to administer OSCE consistently unless repeatedly trained.

Married faculty were predominant as shown by the analysis of marital status which is in line with findings by Sweety et al. (2024) who indicated similar demographic trends where they found dominance of married staff members in nursing colleges in India. Although marital status is not related directly to OSCE delivery, it has been reported in the literature as applicable in work - life balancing and faculty performance particularly in poorly endowed institutions.

Faculty knowledge levels showed a result below half that was indicating good knowledge, and proportions in the average and poor category were high. Similar levels of knowledge deficiency are identified by Almisnid (2023), who explains it by the underrepresentation of faculties in OSCE exposure during training. In their systematic review, Vincent et al. (2022) reported that although a large proportion of educators recognised that OSCE is a reliable method (large proportions were 92%-66%), many educators had incomplete knowledge concerning the structure and administration of OSCE, which indicates a potential high level of awareness limited only to some aspects of an otherwise versatile method.

The faculty majority showed favorable attitudes towards OSCE which indicates the awareness of its being a fair and reliable instrument. Positive faculty acceptance of OSCE in India, specifically in Punjab, has been reported in Sweety (2024) citing the change in the examiner bias factor. However, there was a high percentage of neutral and negative attitudes remaining in this study. Placing similar emphasis on professional uncertainties, Khan (2022) made mention of faculty skepticism in Khyber Pakhtunkhwa, which he attributes to workload, and lack of institutional resources. The results indicate that although acceptance is common, there is reluctance that is associated with structural issues.

The chi-square analysis revealed that there was significant effect of age and qualification on knowledge, whereas, teaching experience and gender did not have significant effect. These findings are in accordance with the results of Almisnid (2023), who also found out that younger and academically more developed faculty had more knowledge about Oak street clinic examinations. Stevens (2023) stated a positive correlation between the greater academic preparation and the increased awareness of other assessment tools such as the presence of rubrics and the use of OSCE. The lack of correlation with gender and experience reflects the findings of Sweety (2024) that deems the gap in knowledge to have more to do with training and education than differences in demographies.

The attitude of the faculty toward OSCE was found to be associated significantly with age and teaching experience thus indicating that maturity and professional exposure would contribute to the development of more positive perceptions about OSCE. This is reflective of what Rehman et al. (2025) have stated about a more positive attitude being instilled by training and by having a longer period of exposure. Conversely, attitude was neither

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associated with qualification or gender and this corresponds with the findings of Yusuf (2021), who reported that student/faculty perceptions of OSCE was not necessarily related to demographic aspects.

Conclusion:

The study explored the knowledge, attitudes, and opinions of nursing faculty regarding the Objective Structured Clinical Examination (OSCE) using a mixed-methods approach. The findings revealed that while nearly half of the faculty demonstrated good knowledge and the majority expressed positive attitudes, considerable gaps in awareness, preparedness, and consistency remain. Younger and more academically qualified faculty showed stronger knowledge, whereas attitudes were more positively shaped by age and teaching experience. These results suggest that faculty development and exposure play a critical role in shaping both knowledge and perceptions of OSCE.

Qualitative insights enriched the quantitative findings by highlighting both the perceived benefits and challenges of OSCE. Faculty recognized OSCE as a fair, standardized, and objective method that improves students' clinical competence and promotes active learning. However, they also expressed concerns regarding its resource-intensive nature, faculty workload, infrastructural limitations, and the anxiety it induces among students. The lack of formal training and institutional support further constrained effective implementation.

Overall, the study concludes that OSCE is widely accepted as a valuable tool in nursing education, but its successful integration depends on addressing barriers related to training, resources, and institutional support. Strengthening faculty preparedness, investing in infrastructure, and fostering collaboration among institutions are critical steps for ensuring that OSCE is implemented consistently and effectively to enhance nursing education and clinical competency.

Recommendations

1. **Faculty Development Programs:** Organize regular, structured training sessions and calibration workshops for nursing faculty to enhance their understanding, confidence, and consistency in implementing OSCE.

2. **Mock OSCE Sessions:** Conduct trial or simulation-based OSCEs for both faculty and students to familiarize them with procedures, reduce anxiety, and improve assessment readiness.

3. **Resource Enhancement:** Allocate adequate resources, including functional equipment, sufficient station setups, and trained standardized patients, to ensure smooth and fair examination processes.

4. **Standardization and Guidelines:** Develop clear institutional guidelines and standardized assessment tools to minimize variability between examiners and ensure fairness.

5. **Continuous Improvement:** Establish a feedback mechanism for faculty and students after each OSCE to identify challenges, update scenarios, and incorporate evolving clinical practices.

6. **Collaborative Sharing of Best Practices:** Encourage inter-institutional collaboration to share experiences, station designs, and evaluation methods to strengthen OSCE quality nationwide.

Qualitative outcomes identified the strong importance that faculty placed on standardization, fairness, and objective assessment of skills on OSCE. According to the responses given by the participants, OSCE reduced bias in examiners and provided equal opportunities, and this was consistent with the results of Vincent et al. (2022), who recognized fairness and transparency as the most reported advantages of OSCE across research studies. The findings by Zhang et al. (2023) further confirmed this opinion, referring to the findings that newly registered nurses in China assessed OSCE as more objective than the traditional exams.

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