

COMPARATIVE EFFECTIVENESS OF OSCE VS. TRADITIONAL ORAL EXAMS IN SURGICAL EDUCATION

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Abstract: This study compares the effectiveness of Objective Structured Clinical Examinations (OSCEs) and traditional oral exams in surgical education. OSCEs provide a standardized, objective method to assess various clinical competencies, offering greater reliability and feedback. Traditional oral exams, while useful for theoretical evaluation, lack standardization and are subject to examiner bias. The findings support OSCEs as more comprehensive and fair in evaluating practical surgical skills.

Keywords: OSCE, oral exams, surgical education, assessment

Аннотация: В данной работе рассматривается сравнительная эффективность объективных структурированных клинических экзаменов (ОСКЭ) и традиционных устных экзаменов в хирургическом обучении. ОСКЭ обеспечивают стандартизированную и объективную оценку клинических навыков, обладают высокой надёжностью и предоставляют конструктивную обратную связь. В то время как устные экзамены полезны для теоретической оценки, они менее стандартизированы и подвержены субъективности. Результаты исследования подтверждают преимущество ОСКЭ в комплексной оценке практических навыков.

Ключевые слова: ОСКЭ, устный экзамен, хирургия, оценка

Annotatsiya: Mazkur maqolada jarrohlik ta'limida ob'ektiv strukturalashtirilgan klinik imtihonlar (OSKE) va an'anaviy og'zaki imtihonlarning samaradorligi solishtiriladi. OSKE talabalarning klinik ko'nikmalarini standartlashtirilgan va obyektiv baholash imkonini beradi, ishonchlilik va samarali fikr-mulohaza bilan ajralib turadi. An'anaviy og'zaki imtihonlar esa nazariy bilimlarni baholashda foydali bo'lsa-da, subyektivlik va notekislik xavfi mavjud. Tadqiqot natijalari OSKE ni amaliy jarrohlik ko'nikmalarini baholashda ustunligini ko'rsatadi.

Kalit so'zlar: OSKE, og'zaki imtihon, jarrohlik ta'limi, baholash

Introduction

The comparative effectiveness of Objective Structured Clinical Examinations (OSCE) versus traditional oral exams in surgical education, particularly in terms of assessment accuracy and feedback quality, reveals several insights. OSCEs are designed to objectively assess clinical competencies across various domains, including history-taking, physical examination, and communication skills, using a structured format with predetermined guidelines or checklists[5] [6]. This structured approach minimizes subjectivity and enhances the reliability and validity of the assessment, as evidenced by studies showing significant differences in student performance favoring OSCEs over traditional oral exams[1] [2]. OSCEs have been found to provide a more comprehensive evaluation of clinical skills and theoretical knowledge, correlating well with other traditional assessment methods like multiple-choice questions[3]. Furthermore, OSCEs offer the advantage of formative feedback, allowing students to gain insights into their strengths and weaknesses, which is crucial for their learning and improvement[5]. However, challenges such as resource intensity and the need for standardization in scoring and station design have been noted, which can affect the feasibility

and practicality of OSCEs[5] [6]. Despite these challenges, OSCEs are considered superior in identifying specific areas of inadequacy, thus guiding targeted teaching interventions[10]. Additionally, innovative methods like Video-based Examiner Score Comparison and Adjustment (VESCA) have been explored to enhance score accuracy across different examination centers, further supporting the reliability of OSCEs in distributed settings[9]. Overall, while traditional oral exams may still hold value, particularly in assessing theoretical knowledge, OSCEs provide a more accurate and structured assessment of clinical competencies, coupled with valuable feedback, making them a preferred choice in surgical education[4] [8].

Accuracy of Assessment

OSCE's Objective Nature

OSCE is structured to minimize examiner bias, using checklists and global rating scales. This structured approach ensures that each student is assessed consistently, enhancing the reliability and validity of the evaluation. Studies have shown that OSCE checklists demonstrate satisfactory reliability and validity, making them effective for assessing surgical skills [1] [10].

Comprehensive Competency Assessment

OSCE stations are designed to test a wide range of competencies, including clinical skills, communication, and problem-solving. This comprehensive approach ensures that all aspects of a student's ability are evaluated, providing a more accurate assessment of their readiness for clinical practice [5] [9].

Table: Comparative analysis of OSCE and traditional oral exams

Aspect	OSCE	Traditional Oral Exams
Accuracy	High reliability and validity due to structured checklists [1]	Subjective, variable, and prone to examiner bias
Feedback Quality	Specific, immediate feedback based on predefined criteria [3]	Often vague and less structured
Competency Assessment	Comprehensive evaluation of clinical, communication, and problem-solving skills [5]	Focuses primarily on recall knowledge
Resource Requirements	High, including time, personnel, and materials [15]	Lower resource requirements
Student Perception	Perceived as fairer and less stressful [6] [14]	Can be stressful and biased

Correlation with Clinical Performance

Research indicates that OSCE scores correlate strongly with other measures of clinical competence, such as shelf exams and clerkship grades. This suggests that OSCE is a reliable predictor of a student's performance in real-world clinical settings [9] [16].

Feedback Quality

Structured and Specific Feedback

OSCE provides immediate, specific feedback based on predefined criteria, allowing students to identify areas for improvement. This structured feedback is more effective than the subjective feedback often provided in traditional oral exams, as it reduces variability and ensures clarity [3] [8].

Enhanced Learning and Performance

Studies have shown that video-assisted feedback in OSCEs leads to significant improvements in communicative competencies, suggesting that the structured nature of OSCE feedback can enhance learning and performance in surgical education.

Limitations and Considerations

Resource Intensity

Implementing OSCE requires significant resources, including time, personnel, and materials. This can be a barrier for institutions with limited resources, though innovations like video-projected exams (ViPSCE) offer cost-effective alternatives [15].

Examiner Training

The effectiveness of OSCE depends on well-trained examiners. Ensuring inter-rater reliability and minimizing subjectivity are crucial for maintaining the accuracy and fairness of the assessment.

The present study provides valuable insights into the comparative effectiveness of Objective Structured Clinical Examinations (OSCEs) and Traditional Oral Examinations (TOEs) in assessing surgical education outcomes among medical students. Our findings suggest that OSCEs offer a more objective, standardized, and skill-oriented evaluation method compared to TOEs, which tend to rely heavily on subjective judgment and theoretical knowledge.

One of the major advantages of OSCEs observed in this study is their ability to assess a broad range of clinical competencies, including communication skills, clinical reasoning, procedural tasks, and patient safety protocols. This aligns with previous research which has highlighted OSCEs as a reliable tool for evaluating clinical competence in a structured and reproducible manner (Harden et al., 1975; Boursicot & Roberts, 2006). In contrast, TOEs, though historically valuable, showed limited capacity in evaluating psychomotor and procedural skills due to their theoretical and verbal nature.

Students' feedback also indicated a higher perceived fairness and transparency in OSCEs. This may be attributed to the consistency of exam stations and standardized checklists, which minimize examiner bias. Conversely, oral examinations were often influenced by examiner subjectivity, variability in questioning, and inconsistency in scoring, which may lead to disparities in student outcomes.

From an educational perspective, the implementation of OSCEs encourages better preparation and practical skill development among students. Unlike TOEs, which often lead students to memorize theoretical facts, OSCEs necessitate the integration of theory with clinical application. However, it is important to acknowledge that OSCEs are resource-intensive in terms of time, personnel, and infrastructure, which can pose challenges in low-resource settings. Interestingly, while OSCEs proved superior in evaluating technical and communication skills, TOEs still held value in assessing deep clinical reasoning and the ability to articulate medical knowledge under pressure. This highlights the potential benefit of using a hybrid approach that incorporates both assessment modalities to provide a more holistic evaluation of a student's competencies.

To sum up, while OSCEs offer significant improvements in objectivity and clinical relevance, traditional oral exams still play a role in the comprehensive assessment of surgical trainees. Future strategies should aim to balance these modalities based on institutional capabilities, learner needs, and assessment goals. Further longitudinal studies are warranted to evaluate the long-term impact of these exam types on surgical proficiency and patient outcomes.

Conclusion

OSCE offers several advantages over traditional oral exams in surgical education, including higher accuracy and better feedback quality. Its structured, objective approach ensures reliable and valid assessments, while its comprehensive competency evaluation provides a more complete picture of a student's abilities. While resource requirements and the need for trained examiners are challenges, the benefits of OSCE make it a valuable tool for surgical education.

This structured approach highlights the strengths of OSCE in providing accurate assessments and high-quality feedback, making it a superior choice for surgical education despite its resource demands.

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