



An Evaluation of the Osce as a Tool for Clinical Assessment in Second-Year Medical Students at Umm Al-Qura University: Students' Views

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Abstract Background: The Objective Structured Clinical Examination (OSCE) is a commonly used assessment tool for medical students. Cognitive, psychomotor, and professional behavior are some of the competencies assessed by the tool. Understanding how students perceive OSCE is critical in ensuring that it is optimally designed, fair, and educational, particularly during early clinical training. **Purpose:** The objective of this study was to evaluate the perceptions of second-year medical students regarding the OSCE at Umm Al-Qura University, encompassing aspects such as preparation, design, fairness, validity, reliability, and stress. **Methods:** The study incorporated a cross-sectional descriptive analytical research design. Self-administered questionnaires were distributed to the second-year medical students after completing the OSCE assessment. Perception across five domains, including preparation and resources, design and experience, fairness and effectiveness, validity and reliability, and stress and anxiety were evaluated. Descriptive statistics such as medians and interquartile ranges were calculated. Cronbach's alpha was used to assess the internal consistency of the questionnaire, and the chi-square tests were utilized to evaluate the associations between gender and selected perception items, with significance set at $p < 0.05$. **Results:** 252 students were involved in the study, yielding a response rate of 54.4%. The median age was 20 years (Interquartile range = 1). The majority of the respondents were female ($n = 128, 50.8\%$) compared to males ($n = 124, 49.2\%$). Overall, students reported positive attitudes towards the OSCE in all domains, with a median score of 4 for most of the items. Internal consistency the survey ranged from good to acceptable across all domains (Cronbach's alpha range: 0.695 – 0.844). Based on the chi-square analysis, there were no significant gender differences for the selected perception items; however, a significant association was found between gender and perception of OSCE validity ($\chi^2 (2, N = 252) = 7.06, p = 0.03$). Male students demonstrated that they were more likely to agree that OSCE scores reflected essential clinical skills compared to females. **Conclusion:** Generally, the OSCE was perceived as a fair, valid, and effective assessment tool by the second-year medical students. However, the moderate response rate (54.4%) represents a limitation that may affect generalizability. The findings support the use of OSCE as an assessment tool in early medical training and highlight opportunities to improve student support and assessment design.

Key Words OSCE, Medical Students, Clinical Assessment, Student Perceptions, Undergraduate Medical Students

INTRODUCTION

Medical students are often subjected to rigorous and demanding examinations to ensure that they are effectively prepared to offer care [1]. Some of the examinations include Computer-Based Tests (CBTs), student project assessments, Elective Study evaluations (ESE), and OSCEs. The OSCE is considered one of the most significant evaluations in helping ensure that students possess the medical skills critical for providing services to society [2]. The examination was first introduced into practice in the 1970s by Ronald Harden to

enhance the evaluation of clinical competence by addressing the limitations of the previously used methods. The traditional methods relied on the long cases supplemented by short cases, and various gaps were identified in the approach [2]. Some of the identified gaps, according to Dewan *et al.* [3], included inadequate standardization of patients and examiners, evaluation by only a limited number of examiners, and the absence of structured feedback from both the students and examiners, which reduced the reliability and validity of the assessment.

The OSCE has been recognized as the most robust and structured approach for evaluating clinical competence and is considered the primary component of undergraduate medical examinations [2,3]. However as noted by Elshama *et al.* [4], the effectiveness of OSCE also depends on implementation quality, resource availability and contextual factors. According to Alaskar *et al.* [5], the OSCE involves a practical, real-world method of learning and assessment implemented in a structured and objective manner to allow evaluation of clinical performance and performance across a range of abilities. Some of the tested abilities include cognitive, psychomotor, and professional behavior [1]. Various existing pieces of evidence, including Dewan *et al.* [3], Manuaba and Yani [1], and Pathak *et al.* [6], support the integration of OSCE in both formative and summative assessment purposes. Summative assessments are incorporated to help evaluate whether a student has achieved the required level of knowledge and skills critical for advancing to the next level of academic study [2]. Conversely, formative assessments are conducted at various points throughout the academic year to provide feedback, allowing students understand and monitor their learning progress. In addition, they allow instructors to adjust their teaching strategies and learning activities based on student performance, thus supporting targeted improvement and promoting enhanced learning in areas where students demonstrate weakness [2].

Some of the benefits linked to OSCE include improved student self-confidence, knowledge, decision-making, clinical competence, and communication skills. However, the main challenges facing this approach are that it is expensive to secure and maintain the resources, and it is time-consuming [8]. Manuaba and Yani [1] noted that medical students commonly experience increased stress, anxiety, and sleep disturbance while preparing for the OSCE. Additional concerns encountered by students include limited time allocation during OSCE stations and difficulty in understanding exam instructions [1]. The attitude of students towards the OSCE is of particular interest because it influences their learning behavior, performance in examinations, and overall attitude towards this assessment approach. Thus, it is important to understand the experience of learners to support the effective design of the OSCE.

The OSCE has been widely used in both undergraduate and postgraduate medical education, with most studies concentrated on senior medical students or cohorts of clinical years [5-7]. Little research has been conducted to examine how junior medical students, particularly those at early stages of acquiring clinical skills, view the OSCE in terms of preparation, fairness, validity, and stress. In addition, there are limited recent studies focusing on medical students' perceptions of the OSCE within Saudi Arabian medical schools, where the curricular setting and evaluation methods might not be similar to those documented elsewhere. Studies conducted in Saudi Arabian medical schools have explored student perceptions of OSCE implementation, highlighting generally positive attitudes toward its structure, fairness, and

educational value. However, these studies have predominantly focused on students in advanced clinical years, with limited attention given to early-stage learners [8,9]. Thus, there is a need to address these gaps to help ensure that OSCE design and implementation are developmentally viable and educationally and instructionally useful.

The objective of this study was to provide novel and context specific insights by evaluating the perceptions of second-year medical students regarding the OSCE at Umm Al-Qura University, encompassing aspects such as preparation, design, fairness, validity, reliability, and stress. In the preclinical and early clinical years, the OSCE was an integral part of the clinical assessment at Umm Al-Qura University. Second-year medical students constitute a special group because they are in the process of leaving the basic sciences and entering the field of applied clinical competencies. At this stage, learners are developing core clinical competencies, professional behaviors, and communication skills that are essential for subsequent training. Hence, assessing their perceptions is critical in providing insights into the appropriateness of OSCEs at the point of training and areas where structural aspect is to be enhanced.

METHODS

OSCE Setting

The OSCE was administered during the formal summative clinical examination of Second-year medical students at the Umm Al-Qura University. The examination consisted of five standardized stations and was duplicated across ten parallel circuits to fit the student cohort. Fifty trained examiners were involved in the assessment. The duration for each assessment was fixed at five minutes, with an extra minute spent on the transition between stations. Out of the 5 stations, two were used to measure history-taking skills, two were utilized to assess the skills in physical examination, and one was used to evaluate professional attitude and communication skills.

The stations were designed to reflect the learning objectives of the second-year program and the evaluation of the core clinical skills essential for early clinical training. The station-specific structured checklist comprising 10-20 items was utilized to assess the level of student performance. All the items of the checklist were assigned a score based on the predefined key skills to promote objectivity and inter-examiner consistency. Before the examination, examiner orientation and calibration were conducted. During this session, examiners reviewed station objectives, scoring rubrics, and anticipated performance levels to ensure consistent interpretation and use of the assessment criteria. Although various examiners were involved in the assessment, formal inter-rater reliability was not statistically measured. Structured orientations, standardized checklists, and pre-examination calibration meetings among examiners assigned to the same station were incorporated to enhance consistency.

Research Design

A cross-sectional descriptive design was incorporated in the study to measure the students' perceptions regarding the OSCE. This design was considered suitable for the study because it allowed focusing on the experiences and views of

students at one instance after they had gone through the clinical examination. However, the limitation of this design is that it does not allow for the evaluation of changes in perceptions over time or the establishment of causal relationships [10]. Descriptive and comparative analyses were utilized in the study to enable exploration of patterns in student perceptions and identification of potential areas of improvement in the OSCE implementation.

Participants

The study sample comprised all medical students in the second year ($N = 463$) who completed the OSCE during the 2025 academic year. All eligible students were invited to participate in the study, which was voluntary. The questionnaire was completed by 252 students, and the response rate was 54.4%. The moderate response rate highlighted the possibility of non-response bias, as the views of non-respondents may have systematically differed from those who participated; hence, this could limit the generalizability of the findings to the entire student cohort. Students who did not fully complete the questionnaire or declined to participate in the study were excluded from the analysis.

Survey Instrument Development

The structured, self-administered questionnaire that was utilized in the study to collect data was developed based on previously published instruments used to assess medical students' perceptions of the OSCE. Some minor adjustments were made to the questionnaire to ensure it aligned with the local educational context and the structure and objectives of the OSCE at Umm Al-Qura University. The final questionnaire consisted of 23 questions, which were divided into five parts: (1) perception of OSCE preparation and resources, (2) design and experience, (3) fairness and effectiveness, (4) validity and reliability, and (5) stress and anxiety. The responses were documented in a five-point Likert scale, which ranged between "Strongly Agree" and "Strongly Disagree." The faculty members who were knowledgeable about medical education reviewed the questionnaire to ensure that the content was clear and the face validity was reliable [11]. Formal evaluation of the construct was not performed, which represents a limitation of the study. The internal consistency of the instrument was, however, assessed using Cronbach's alpha, demonstrating acceptable to good reliability across the measured domains.

Data Collection Procedures

Data was collected electronically using Google Forms. All second-year medical students at Umm Al-Qura University were invited to participate in the study by completing an online survey after completing the OSCE examination, to ensure that responses reflected their immediate experience. Data collection was conducted over five weeks. Participation was anonymous, and no personally identifiable information was collected. The students were first informed about the aim of the research, voluntary participation, and confidentiality of the responses. Agreeing to complete the questionnaire was considered to indicate informed consent.

Data Analysis Plan

The raw data collected was downloaded from Google Sheets and converted into a CSV file to allow analysis. Before data analysis, the quality and validity of the data were improved through data cleaning. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 28. Both descriptive and inferential approaches were utilized to analyze the data. The demographic characteristics and responses to the questionnaires were summarized using descriptive statistics. For categorical variables, particularly gender was analyzed using frequencies and percentages, while the Likert-scale responses were described using medians and interquartile ranges. Inferential statistics, using chi-square tests, were conducted to help identify the relationship between demographic variables and perception of the OSCE among students, especially gender. A p-value of less than 0.05 was considered statistically significant.

Ethical Consideration

Ethical approval for this study was obtained from the Biomedical Research Ethics Committee at Umm Al-Qura University, Makka, Saudi Arabia (IRB No: HAPO-02-K-012-2025-12-3139). The research adhered to the principles of ethical study that deal with human subjects. The study was also optional, and students were informed that their choice to participate or not would not affect their academic status or their grades in examinations. All collected information was treated with the utmost confidentiality and was used solely in the context of the current study.

RESULTS

A total of 252 second-year students completed the survey, yielding a response rate of 54.4%. The median age of participants was 20 years (Interquartile range (IQR): 1, range: 19-23 years). The majority of participants were female ($n = 128$, 50.8%), compared to males ($n = 124$, 49.2%). Table 1 demonstrates participants' demographics. Median and IQR values are provided for each question in Tables 2–6.

Reliability Analysis

Cronbach's alpha was used to assess the internal consistency reliability of the questionnaire. Perceptions of the OSCE preparation and resources domain ($\alpha = 0.830$), design and experience ($\alpha = 0.822$), and fairness and effectiveness ($\alpha = 0.844$) demonstrated good reliability. Perceptions of the OSCE validity and reliability ($\alpha = 0.796$) and stress and anxiety ($\alpha = 0.695$) domains demonstrated acceptable reliability. The slightly lower reliability observed in the stress and anxiety domain may be attributed to the small number of items (3 questions), confusing or ambiguous questions, limited group of respondents, and measurement of more than one specific type of stress simultaneously.

Perception of OSCE Preparation and Resources

There was a positive perception of OSCE preparation among students (Table 2). The median scores for all six items were 4. Hence, highlighting that curriculum, learning resources, and

Table 1: Demographic Characteristics of Participants (N = 252)

Variable	n (%), Median (IQR)
Age (years)	20 (1)
Age range (years)	19–23
Gender	
Male	124 (49.2)
Female	128 (50.8)

Table 2: Students' Perception of OSCE Preparation and Resources (N = 252)

Item	Median (IQR)	Strongly disagree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Strongly Agree n(%)
Prepared based on the curriculum	4(2)	0	20(7.9)	62(24.6)	94(37.3)	76(30.2)
Courses provided helpful resources	4(2)	5(2)	21(8.3)	48(19)	105(41.7)	73(29)
Revising clinical skills was valuable	4(1)	1(0.4)	16(6.3)	42(16.7)	97(38.5)	96(38.1)
The orientation session was helpful	4(2)	3(1.2)	15(6)	46(18.3)	104(41.3)	84(33.3)
Staff answered OSCE queries	4(1)	1(0.4)	8(3.2)	48(19)	96(38.1)	99(39.3)
I was fully informed about the nature of the exam	4(1)	1(0.4)	12(4.8)	30(11.9)	90(35.7)	119(47.2)

Table 3: Students' Perception of OSCE Design and Experience

Item	Median (IQR)	Strongly Disagree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Strongly Agree n(%)
OSCE appropriate for second-year students	4(2)	6(2.4)	17(6.7)	43(17.1)	97(38.5)	89(35.3)
Stations reflected taught skills	4(1)	2(8)	13(5.2)	39(15.5)	106(42.1)	92(36.5)
Instructions were clear	4(2)	2(8)	24(9.5)	43(17.1)	95(37.7)	88(34.9)
Time per station was sufficient	4(2)	11(4.4)	41(16.3)	47(18.7)	81(32.1)	72(28.6)
Quality of OSCE rooms was sufficient	4(2)	9(3.6)	17(6.7)	39(15.5)	96(38.1)	91(36.1)
OSCE environment was organized	4(2)	12(4.8)	19(7.5)	43(17.1)	100(39.7)	78(31)

Table 4: Students' Perception of OSCE Fairness and Effectiveness

Item	Median (IQR)	Strongly Disagree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Strongly Agree n(%)
OSCE assessed abroad range of relevant skills	4(1)	3(1.2)	10(4)	42(16.7)	111(44)	86(34.1)
OSCE was a fair and accurate assessment.	4(2)	6(2.4)	24(9.5)	47(18.7)	97(38.5)	78(31)
OSCE helped identify areas for clinical improvement	4(1)	5(2)	16(6.3)	38(15.1)	100(39.7)	93(36.9)
OSCE is an important assessment and reduces failure risk	4(2)	3(1.2)	14(5.6)	51(20.2)	104(41.3)	80(31.7)

Table 5: Students' Perception of OSCE Validity and Reliability

Item	Median (IQR)	Strongly Disagree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Strongly Agree n(%)
OSCE scores provide a true measure of essential clinical skills	4(2)	6(2.4)	19(7.5)	58(23)	93(36.9)	76(30.2)
OSCE scoring is standardized and consistent	4(2)	5(2)	11(4.4)	67(26.6)	98(38.9)	71(28.2)
The OSCE is a practical and useful learning experience	4(1)	2(0.8)	7(2.8)	36(14.3)	110(43.7)	97(38.5)
Personality, ethnicity, and gender do not influence OSCE scores	4(2)	9(3.6)	17(6.7)	54(21.4)	80(31.7)	92(36.5)

Table 6: Students' Perceptions of OSCE Stress and Anxiety

Item	Median (IQR)	Strongly disagree n(%)	Disagree n(%)	Neutral n(%)	Agree n(%)	Strongly Agree n(%)
Felt a manageable level of stress and anxiety during the OSCE	4(2)	23(9.1)	38(15.1)	53(21)	72(28.6)	66(26.2)
The OSCE is less stressful than other examinations	3(2)	54(21.4)	69(27.4)	47(18.7)	34(13.5)	48(19)
Generally, I am satisfied with the clinical examination	4(2)	5(2)	11(4.4)	70(27.8)	97(38.5)	69(27.4)

preparatory activities effectively supported OSCE preparation. Over two-thirds of the participants agreed or strongly agreed that they were all prepared to take the OSCE and were well informed about the format of the examination. The level of staff responsiveness toward the OSCE-related questions and the utility of the orientation were also rated well.

Perception of OSCE Design and Experience

The majority of the students reported that they had a positive perception of the OSCE design and implementation, as shown in Table 3. The median scores of all items were 4, thus indicating that respondents agreed that OSCE stations were appropriate for second-year students, aligned with clinical

skills that were taught and supported by clear instructions. However, even though most of the respondents agreed that time allocation per person was sufficient, this item demonstrated relatively neutral responses and disagreement when compared with other design-related items.

Perception of OSCE Fairness and Effectiveness

The students significantly perceived the OSCE as a fair and effective assessment tool (Table 4). All items in this domain were scored with a median of 4, with the majority of students concurring that the OSCE assessed a broad range of relevant skills, accurately reflecting their clinical abilities, and helped them identify areas they needed to improve. OSCE was also considered a relevant evaluation procedure that can help decrease the chances of exam failure.

Perception of OSCE Validity and Reliability

As demonstrated in Table 5, students' perception regarding OSCE validity and reliability was generally positive. The majority of the respondents responded that OSCE scores provided a true measure of essential skills, that scoring is standardized and consistent, and that the OSCE represents a practical and useful learning experience. Additionally, most of the respondents expressed that personal factors such as personality, ethnicity, and gender did not affect OSCE scores.

Perception of Stress and Anxiety

Table 6 includes a summary of findings related to stress and anxiety. The median score for perceived stress during the OSCE was 4, hence indicating agreement that stress levels were manageable. Perception regarding OSCE stress compared to the written test had some distribution, with a median score of 3. General satisfaction with clinical examination remained high, with most students reporting agreement or strong agreement.

Gender Differences in OSCE Perceptions

Based on the chi-square analysis, no significant association was revealed between gender and perceptions of OSCE preparedness, time adequacy, fairness, or stress levels ($p > 0.05$). However, a significant association was noted between gender and perceptions of OSCE validity, with male students more likely than their female counterparts to agree that OSCE scores provide a true measure of essential clinical skills ($\chi^2(2, N = 252) = 7.06, p = .03$). This finding may be influenced by differences in learning experiences, confidence levels, or prior exposure to clinical training [12].

DISCUSSION

The purpose of the study was to evaluate the perception of second-year medical students on OSCE as a clinical assessment tool at Umm Al-Qura University. Overall, based on the study findings, students reported generally positive perceptions of the OSCE across all assessed domains, including preparation and resources, design and experience, fairness and effectiveness, validity and reliability, and stress and anxiety. Hence, supporting the use of OSCE as an

appropriate tool for formative and summative assessment in early phases of clinical training. These findings align with Dolot *et al.*'s [13] retrospective study involving 85 medical students. The authors found that the exam structure of the OSCE was highly rated in statements linked to students' readiness to undertake the exam. Additionally, the organization of the OSCE received the highest score regarding the suitability of the examination environment. The students perceived the environment as conducive and free from disturbance. In terms of validity and reliability, the students highly rated the OSCE for being conducted fairly, without discrimination based on ethnicity, race, culture, and gender [13].

Regarding perceptions of OSCE preparation and resources, the students expressed positive responses, with the majority emphasizing that the curriculum, materials, and orientation programs were sufficient to prepare them to take examinations. Proper preparation has been demonstrated to minimize the uncertainty and ensure positive alignment to teaching goals and assessment strategies, especially in junior medical learners who are in the process of developing foundational clinical skills [14]. Students' perception of the OSCE design and experience was generally positive. Most students agreed that the OSCE stations reflected taught skills and were appropriate for their level of training. Clear station instructions and an organized examination environment were also positively rated, hence demonstrating the importance of standardized station design and logistical planning in maintaining assessment quality. However, students' perception of time allocation was relatively lower, thus implying that station timing should be further reviewed so as to ensure that students have enough time to demonstrate competency without unnecessary pressure. The positive perception of the OSCE observed in the current study aligns with the findings of Fouad *et al.* [15]. The authors conducted a study to investigate how students and staff at the Faculty of Medicine, Suez Canal University, perceived OSCE as a clinical assessment. They found that a large majority of students (88%) agreed that the OSCE should remain as a core assessment method, and 83% perceived it as a valuable practical exam that provided relevant experience.

In the current study, the majority of the students considered the OSCE as a fair and effective tool for assessing clinical skills and for identifying areas of their weakness. According to Sarfraz *et al.* [16] and Alaskar *et al.* [5], OSCE has been identified as effective in assessing various competencies, including communication, clinical reasoning, and procedural skills, hence enabling students to sufficiently prepare themselves for practice and preventing potential future failure. Students generally agreed that OSCE scores provided a valid measure of essential clinical skills, and the grading was standardized. Similar findings were also reported by Majumder *et al.* [17], who conducted a study involving final-year medical students and examiners. Majumder *et al.* [17] found that the participants had a positive opinion regarding the attributes, organization, validity, and reliability of OSCEs. The students involved in

the study acknowledged that OSCE is a true measure of essential clinical skills and practical learning experience.

Regarding the current study, it is important to note that there existed a considerable range of gender variance in the perceptions of the validity of OSCE, with male students more prone than female students to agree that OSCE scores would accurately reflect clinical competence. Although it is not clear why the difference exists, it might be associated with differences in assessment confidence, performance anxiety, or previous experiences of assessments [12]. This finding highlights the need for a qualitative study to explain this concept further.

Even though some students stated that they were under manageable stress during the OSCE, there was a mixed reaction in relation to perceptions of OSCE-related stress compared with the written examination. About half of the students did not agree that the OSCE is less stressful compared to the written test, thus indicating the existence of emotional stress from performance-based testing. These findings align with those of Stojiljkovic *et al.* [18], who noted that OSCEs are anxiety-inducing due to time limitations, examiner observation, and the high-stakes nature of clinical performance assessment. However, the general satisfaction with the clinical examination was still high, indicating that students can view OSCE-related stress as a tolerable aspect of clinical evaluation.

Cronbach's alpha value of 0.695 for the stress domain shows questionable/or marginal internal consistency reliability (since it falls short of conventional threshold), and hence it does not determine the underlying concept for stress as desired. Beside small number of items/ questions providing lower alpha values, confusing or ambiguous questions may cause the respondents to inconsistent replies. Furthermore, the limited group of respondents may decrease stability for the estimate of reliability. Additionally, more than one specific type of stress might be measured by the domain simultaneously. There is an important role of cultural and social dynamics on how the students perceive the OSCE in Saudi Arabia that influences gender interactions and communication rubrics.

The stress levels of second-year students that were reported in the current study seem to be relatively low when compared with the results provided in studies that involved senior medical students. Nasir *et al.* [19] discovered that over 50% of the final-year medical students felt nervous in OSCEs, with nearly half expressing concerns regarding inter-evaluator variability. Similarly, Majumder *et al.* [17] found that stress was one of the major issues for final-year students reported concerns about OSCEs, despite the overall positive perception of OSCEs. Such differences could be explained by the differences in examination stakes, clinical complexity, and performance expectations between junior and senior learners. Hence, this finding highlights the importance of tailoring OSCE design and student support strategies to the learners' stage of training.

Strengths and Limitations

The major strength of this study is that a large sample size was utilized. Also, various OSCE-related domains were

assessed, hence providing a comprehensive evaluation of student perceptions. However, some of the study limitations that need to be taken into consideration include, the research was based on self-reported data, which could introduce potential response bias. The cross-sectional design utilized in the study provided information on perceptions of respondents at one moment in time, and attitudinal change was not measured at various training levels. In addition, the results based on a single institution (Umm Al-Qura University) may limit generalizability to other medical schools with different curricula structures. Furthermore, the qualitative findings were not included to complement the study, and the response rate was moderate. Some of the other limitations were moderate response rate, potential social desirability bias, single institution setting, self-administered questionnaire methodology, and Lack of qualitative data to complement survey findings.

Implications for Practice and Future Research

The findings of this study support the use of OSCE as the primary assessment approach for junior medical students. Changes such as increasing the station timing during the OSCE, improving stress management strategies, and enhancing the transparency of scoring processes could promote student experience. Future research should consider including qualitative approaches or longitudinal designs to help inform the specific changes critical for enhancing this assessment design.

CONCLUSION

The objective of this study was to evaluate the perceptions of second-year medical students in Umm Al-Qura University regarding the OSCE. A total of 252 students were involved in the study, yielding a 54.4% response rate. Students reported favorable views regarding the OSCE preparation, design, fairness, validity, and educational value, hence supporting the OSCE as an effective assessment tool for junior medical students. Stress linked to the OSCE was reported; however, the majority of the students perceived it as manageable and expressed overall satisfaction with the clinical examination. Future studies should consider incorporating qualitative and longitudinal approaches to provide more insights into students' experiences to allow the implementation of effective interventions to address identified issues.

Ethical Approval

Ethical approval for this study was obtained from the Biomedical Research Ethics Committee at Umm Al-Qura University, Makkah, Saudi Arabia (IRB No: HAPO-02-K-012-2025-12-3139). All methods and procedures used in the present study were in accordance with the Declaration of Helsinki of 1964, as revised in 2013. The written informed consent was obtained from all participants.

Availability of Data and Materials

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Disclosure and conflicts of interest

The author declares that she has no conflicts of interest.

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REFERENCES

- [1] Manuaba I.B.A.P. and Yani M.V.W. "Evaluation of the implementation of objective structural clinical examination (OSCE) in the faculty of medicine: a literature review." *Bali Medical Journal*, vol. 12, no. 1, 2023, pp. 1163-1166. <https://doi.org/10.15562/bmj.v12i1.4383>
- [2] Al-Hashimi K. *et al.* "Formative objective structured clinical examinations (OSCEs) as an assessment tool in UK undergraduate medical education: a review of its utility." *Cureus*, vol. 15, no. 5, 2023, pp. e38519. <https://doi.org/10.7759/cureus.38519>
- [3] Dewan P. *et al.* "Objective structured clinical examination for teaching and assessment: evidence-based critique." *Clinical Epidemiology and Global Health*, vol. 25, 2024, pp. 101477. <https://doi.org/10.1016/j.cegh.2023.101477>
- [4] Elshama S.S. "How to design and apply an Objective Structured Clinical Examination (OSCE) in medical education?" *Iberoamerican Journal of Medicine*, vol. 3, no. 1, 2020, pp. 51-55. <https://doi.org/10.5281/ZENODO.4247763>
- [5] Alaskar A. *et al.* "Health science students' perceptions about Objective Structured Clinical Examination (OSCE) as a method of clinical evaluation." *Electronic Journal of General Medicine*, vol. 19, no. 6, 2022, pp. em416. <https://doi.org/10.29333/ejgm/12466>
- [6] Pathak A. *et al.* "Evaluating the role of Objective Structured Clinical Examination as a summative assessment tool in undergraduate and postgraduate psychiatry residents." *Cureus*, vol. 16, no. 8, 2024, pp. e67640. <https://doi.org/10.7759/cureus.67640>
- [7] Hawezzy D.J. *et al.* "Perception of undergraduate medical students and examiners towards grand objective structured clinical examination." *BMC Medical Education*, vol. 24, no. 1, 2024, p. 1392. <https://doi.org/10.1186/s12909-024-06388-w>
- [8] Alnazzawi A.A. "Dental staff members' perception regarding Objective Structured Clinical Examination (OSCE): an experience from Saudi Arabia." *Dentistry Journal*, vol. 13, no. 9, 2025, pp. 423. <https://doi.org/10.3390/dj13090423>
- [9] Alrashed F.A. *et al.* "Medical students' perspectives on the role of OSPE and OSCE in the educational journey and contribution to career development: a cross-sectional study." *Medicine*, vol. 105, no. 3, 2026, pp. e47233. <https://doi.org/10.1097/MD.00000000000047233>
- [10] Wang X. and Cheng Z. "Cross-sectional studies: strengths, weaknesses, and recommendations." *Chest*, vol. 158, no. 1S, 2020, pp. S65-S71. <https://doi.org/10.1016/j.chest.2020.03.012>
- [11] Mohammadi E. and Salajegheh M. "Developing and validating a questionnaire for evaluation faculty members' retention in medical science universities." *Journal of Medical Education Development*, vol. 18, no. 2, 2025, pp. 105-112. <https://doi.org/10.61882/edcj.18.2.121>
- [12] Oyeka D.O. and Oyeka C.A. "Assessment of the influence of age and gender on acquired skills by engineering students." *Discover Education*, vol. 3, no. 1, 2024. <https://doi.org/10.1007/s44217-024-00249-w>
- [13] Dolot J.F. *et al.* "Persepsi Mahasiswa terhadap Objective Structured Clinical Examination (OSCE) Fakultas Kedokteran Universitas Sam Ratulangi 2023." *E-Clinic*, vol. 12, no. 3, 2024, pp. 421-427. <https://doi.org/10.35790/eci.v12i3.54913>
- [14] Asad M. "Clinical skills at the undergraduate level: what are we trying to assess?" *Isra Medical Journal*, vol. 16, no. 1, 2024, pp. 1-2. <https://doi.org/10.55282/imj.ed65>
- [15] Fouad S. *et al.* "Perception of students, staff and simulated patients towards objective structured clinical examination (OSCE)." *Education in Medicine Journal*, vol. 11, no. 2, 2019, pp. 27-42. <https://doi.org/10.21315/eimj2019.11.2.4>
- [16] Sarfraz F. *et al.* "OSCE: an effective tool of assessment for medical students." *Pakistan Journal of Medical and Health Sciences*, vol. 15, no. 8, 2021, pp. 2235-2239. <https://doi.org/10.53350/pjmhs211582235>
- [17] Majumder M.A.A. *et al.* "An evaluative study of objective structured clinical examination (OSCE): students and examiners perspectives." *Advances in Medical Education and Practice*, vol. 10, 2019, pp. 387-397. <https://doi.org/10.2147/AMEP.S197275>
- [18] Stojiljkovic M. *et al.* "The storm within: exploring first-year nursing students' experiences of the Objective Structured Clinical Examination." *SAGE Journals*, vol. 12, 2025. <https://doi.org/10.1177/23333936251400692>
- [19] Nasir A.A. *et al.* "Medical students' perception of objective structured clinical examination: a feedback for process improvement." *Journal of Surgical Education*, vol. 71, no. 5, 2014, pp. 701-706. <https://doi.org/10.1016/j.jsurg.2014.02.010>