RESEARCH ARTICLE

Students' perceptions on OSPE in anatomy subject.

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Abstract:

Objective structured practical examination (OSPE) is globally implemented in medical cluster programs as a tool of assessment. OSPE in preclinical subjects, however, focuses on empowerment of theoretical competency. The aim of this study is to evaluate students' perceptions on OSPE in anatomy subject. The study involved 26 undergraduate physiotherapy and occupational therapy students in the first semester. All students were subjected to two OSPEs within one semester. A conventional 30 stations OSPE were conducted in two batches. Survey results indicate that OSPE significantly motivates students to pay closer attention during both theoretical and practical sessions. Most students perceived OSPE as a fair and unbiased assessment method, expressing satisfaction with the marks received and the impartiality of examiners. Positive response on post-OSPE feedback highlights the effectiveness of informative feedback sessions in identifying mistakes and providing guidance for improvement. Despite its benefits, OSPE is associated with stress, and some students reported variability in marking subjective questions. Introducing mock OSPE sessions could alleviate stress and improve preparedness by familiarizing students with the format. In conclusion, while OSPE effectively promotes active learning and fair assessment, continuous improvements in its implementation are essential to address identified challenges and maximize its effectiveness as a robust assessment tool. Future research should focus on standardizing marking criteria for subjective questions, developing more effective feedback mechanisms, and exploring diverse teaching methodologies.

Keywords: anatomy, assessment, OSPE, perception, students

1. INTRODUCTION

The landscape of medical education is in a continuum of evolution with the objective of not only equipping students with foundational knowledge but also ensuring the development of critical practical skills. In the pursuit of creating proficient healthcare professionals, the ability to accurately assess both the theoretical and practical competencies of students is indispensable. Within this context, OSPE has emerged as a transformative approach in preclinical education. OSPE was first introduced (R. M. G. Harden et al., 1975) as a clinical assessment for undergraduate medical students at Dundee University. OSPE grew tremendously popular since then and has been practiced in other preclinical subjects and other faculties like dentistry, midwifery and pharmacy (Saurabh et al., 2021; Sekhon et al., 2023; Vishwakarma et al., 2016). Distinct from traditional assessment methods, which predominantly focus on cognitive recall, OSPEs are designed to systematically evaluate the practical and clinical skills that are vital for future clinical practice (R. M. Harden & Cairncross, 1980). These structured examinations reflect active learning participation, applied knowledge, and an alignment with the realistic demands of healthcare delivery (Yaqinuddin et al., 2013). By mimicking clinical scenarios within a controlled setting, OSPEs offer students an invaluable opportunity to demonstrate and refine their capabilities in a manner that written assessments cannot capture (Zafar et al., 2013).

Beyond OSPE, several other assessment tools are commonly used in preclinical subjects to evaluate students' knowledge and skills. These include the traditional written examination, computer-based assessments, laboratory practical, oral presentation, case-based assessments (CBA), portfolios, self and peer assessments. Each assessment tool serves different educational goals and learning outcomes. For example, written exams emphasize retention and understanding of knowledge (Anderson et al., 2024), CBAs offer a more interactive approach to assessment (Jones & Oh, 2024), laboratory practical measure application of theory into practice (Kimpo & Puder, 2023), oral exams test depth of knowledge and articulation (Theobold, 2021), peer and self-assessments encourage reflective practice and critical evaluation skills (Alqassab et al., 2023), CBAs develop problem-solving in context (Jones & Oh, 2024), and portfolios showcase ongoing development and integration of skills (Sulistyo et al., 2020). OSPEs are distinctive as they place students in a simulated clinical environment to assess practical and clinical competencies in a structured, timed, and standardized manner. They uniquely allow for a holistic evaluation of a student's practical abilities and decision-making in a controlled setting (Yaqinuddin et al., 2013).

Why students' perception is important and what impact will it have? Numerous studies have demonstrated identifying loopholes and improving it will benefit two parties i.e. the learner providers and the students. To learner providers, students' perceptions will reflect the quality of the assessment, guiding them to refine their assessments to better align with the intended course learning outcomes and program's educational outcomes (He et al., 2024; Miles et al., 2024; Sonlleva Velasco et al., 2024). Students' perceptions are also beneficial insights into the effectiveness of teaching methods and highlight areas for improvement in instructional design (Caliph & Lee, 2024). Student perceptions correspondingly highlight the need for more guidance, such as clarifications about assessment rubrics, how to provide appropriate answers, or additional feedback sessions (Johansson et al., 2023). This allows learner providers to engage individual weaknesses and help to improve the needs of the students (Nurie Bogale & Wale, 2024).

To students, the outcomes of students' perception allow them to reflect on their motivation, engagement, and learning strategies (Beckham et al., 2024; Navarro et al., 2024; Skura & Wheeler, 2024; Wang et al., 2024; Wolterinck-Broekhuis et al., 2024). If students perceive an assessment as fair, relevant, and aligned with their learning goals, they are more likely to be intrinsically motivated (Day et al., 2018). Positive perceptions can also promote a growth mindset, where students see assessments as opportunities for learning rather than just a judgment of their abilities (Veugen et al., 2021). When students see the value in an assessment, they are more likely to actively participate and invest effort. Engaging assessments often include practical, real-world applications such as OSPE. Perceptions influence the learning strategies students used (Gerritsen-van Leeuwenkamp et al., 2019). For example, if assessments are seen as a genuine measure of understanding, students might adopt deeper learning strategies, such as critical thinking and concept integration, instead of surface strategies, such as rote memorization.

In the faculty of Health Sciences UiTM Puncak Alam, the introduction of OSPE has been implemented as part of curriculum assessment in anatomy subjects, which were taken in two consecutive semesters by both physiotherapy and occupational therapy undergraduate programs. This first-hand execution of OSPE in the faculty was initiated upon faculty's curriculum review in 2015 and was first executed in 2019. OSPE is a part of the summative assessment for anatomy subject, weighing 30% of the subject total score. To rectify the loopholes and for the purpose of continuous quality control pertaining to anatomy teaching-learning process and its assessment, we conducted a small study on students' perception on OSPE, that includes students' perceptions on OSPE as a learning stimulus, OSPE as an assessment tool, the administration of OSPE, the OSPE content and post OSPE feedback given by the examiner. Thus, this paper will examine students' perceptions of OSPE as a learning stimulus and a learning tool. This paper will also reflect on students' perception of the OSPE design, execution and the feedback given to them.

2. MATERIALS AND METHODS

The study involved 59 first-semester full-time undergraduate students from both physiotherapy and occupational therapy programs from the Faculty of Health Sciences UiTM Puncak Alam, upon the ethical approval from the faculty ethical committee. Two OSPEs were conducted for anatomy subject from September 2019 to December 2019. However, for the purpose of this study, only one OSPE was evaluated. At a designated point in the 14-week academic calendar, specifically in week 6, students received comprehensive briefings regarding the arrangement, structure, and content of OSPE, including details about the topics to be covered in each OSPE.

The OSPE was conducted in two batches, with each batch consisting of 30 stations, encompassing 25 active stations and 5 rest stations. Each station was allocated a 3-minute duration. Active stations carried a weightage of 3 marks each. Each of the active stations was designed, verified, and evaluated by the faculty's two trained academic staff as anatomists with more than 5 years of teaching experience in higher education.

A week after the completion of OSPE, the graded answer scripts were returned to the students with marks in percentage. The examiner then had an impactful feedback session the students on their OSPE performances. Students were encouraged to have a two-way discussion and highlighted any issues on the OSPE administration and execution.

Upon completion of the discussion, all participating students were provided with a structured questionnaire, as outlined by Asani et al., (2023). This questionnaire included inquiries pertaining to students' perceptions on OSPE as a learning stimulus, OSPE as an assessment tool, the administration of OSPE, the OSPE content and post OSPE feedback given by the examiner.

Students' perceptions were gauged using a 5-point Likert scale with strongly disagree as the minimum score and strongly agree as the maximum score. It is worth noting that the data collected were entirely based on voluntary responses, and students' identities were not inquired in the process.

Responses obtained from the questionnaire were analyzed descriptively.

3. RESULTS AND DISCUSSION

A questionnaire was administered to 59 students, with 26 (44%) responding. The results revealed that in general, most of the students who gave the feedback perceived OSPE as a stimulating learning experience.

Regarding OSPE as a learning stimulus (Table 1), a significant majority strongly agreed (92.3%) and agreed (7.7%) that OSPE encourages students to pay attention during class and during practical sessions. Students agreed (19.2%) and strongly agreed (80.8%) that it is important not to miss any class in order to score OSPE. For item 4, 30.8% students agreed while 69.2% strongly agreed that it is important not to

miss any practical session in order to score OSPE. The survey results indicate a strong consensus among students regarding OSPE benefits as a learning stimulus. A significant majority consented that OSPE encourages attentiveness during both classes and practical sessions, underscoring its effectiveness in fostering engagement. Furthermore, the majority agreed that attending all classes is crucial for performing well in OSPE, emphasizing the link between regular attendance and achievement. Similarly, the majority agreed that attending practical sessions is vital for OSPE success, highlighting the practical aspect's role in skill development and assessment preparation. These findings underscore the importance of active learning in both classroom and practical sessions for comprehending theoretical concepts (Jat, 2021). In exploring active learning further, two pivotal factors influence student motivation: teaching style and the learning environment (Sekhon et al., 2023). Implementing diverse teaching methodologies to cater to varied learning styles and ensuring a supportive learning atmosphere are crucial (Vishwakarma et al., 2016). This approach not only enhances knowledge acquisition but also promotes retention, thereby optimizing the educational outcomes of OSPE as a learning tool. For example, incorporating case-based discussions in classes can enhance student engagement and understanding (Jones & Oh, 2024). Such methods not only align with active learning principles but also cater to different learning styles, thereby maximizing the educational impact of OSPE (Abdolkarimi, 2021). Creating a conducive learning environment also plays a crucial role in supporting active learning. A supportive learning environment includes factors like access to resources (in this study, the anatomy models available in the anatomy lab and the condition of the anatomy lab itself), encouragement of collaboration among peers, and persistent learner provider assistance during practical session promote continuous improvement (Mitra et al., 2021). Such an environment fosters a positive attitude towards learning and motivates students to actively engage with course materials and prepare themselves for assessments such as OSPE (P & Thomas, 2022).

Table 1. OSPE as learning stimulus

	Item	Agree N (%)	Strongly agree N (%)
1	OSPE encouraged me to pay more attention during class	2 (7.7)	24 (92.3)
2	OSPE encouraged me to pay more attention during practical session	2 (7.7)	24 (92.3)
3	It is important not to miss any class to score OSPE	5 (19.2)	21 (80.8)
4	It is important not to miss any practical session to score OSPE	8 (30.8)	18 (69.2)

When examining OSPE as an assessment tool (Table 2), the results reveal a diverse range of perceptions among students. A notable 52% strongly agreed and 32% agreed that OSPE offers superior assessment compared to traditional methods. Conversely, 4% disagreed and 12% were undecided on this matter, highlighting the mixed views among students regarding the efficacy of OSPE as an assessment tool. A significant proportion of students (46.2% agreed, 46.2% strongly agreed) acknowledged that OSPE effectively minimizes the likelihood of cheating, underscoring its role in promoting academic integrity. However, 7.7% remained undecided on this aspect. Regarding concerns about failure rates, opinions were divided: 20% strongly disagreed, 32% disagreed, 36% were undecided, 4% agreed, and 8% strongly agreed that OSPE increases the risk of failure (item 3). Similarly, perceptions on whether OSPE reduces reliance on luck varied: 11.5% strongly disagreed, 3.8% disagreed, 30.8% were undecided, 38.5% agreed, and 15.4% strongly agreed (item 4). These contrasting views illustrate the complexity of students' perceptions on OSPE's impact on assessment outcomes. This diversity in student opinions underscores the challenge of catering to individual preferences and learning styles when designing assessment methods. Students' educational backgrounds, learning abilities, and personal experiences all influence their perceptions of assessment tools (Jat, 2021). For instance, students who prefer hands-on learning may appreciate OSPE's practical approach, while others who excel in traditional written exams may harbour reservations (Bagchi et al., 2023). In best practice scenarios, to address these varied viewpoints and enhance the effectiveness of OSPE as an assessment tool, learner providers can consider integrating feedback mechanisms that allow students to voice their preferences and concerns (Sil et al., 2023). For example, conducting pre-assessment surveys to gauge student readiness and comfort with OSPE can inform instructional strategies and adjustments. Providing clear guidelines and training sessions on OSPE procedures can help mitigate anxiety and uncertainty among students (Bakkannavar & Nayak, 2021). However, due to constraints in the academic calendar, these tips were not able to be executed. OSPE encourages strengths in promoting engagement, integrity, and practical application of knowledge and adaptation to active learning. Thus, to align with diverse student needs and optimize learning outcomes, learner providers can ensure a supportive learning environment and give continuous feedback-driven improvements in the classroom and particularly during practical sessions (Kamal et al., 2021). With these approaches, OSPE may continue to evolve as a robust assessment tool that meets the needs of today's diverse students' learning styles.

Table 2. OSPE as an assessment tool

	Item	Strongly disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly agree N (%)
1	OSPE is a better method of assessment than traditional assessment		1 (4)	3 (12)	8 (32)	13 (52)
2	OSPE reduces the chance of cheating			2 (7.7)	12 (46.2)	12 (46.2)
3	OSPE increasing the chances of me to fail	5 (20)	8 (32)	9 (36)	1 (4)	2 (8)
4	OSPE reduces the elements of luck	3 (11.5)	1 (3.8)	8 (30.8)	10 (38.5)	4 (15.4)

The administration of OSPE (Table 3) yielded varied responses among students. There was a notable positive sentiment regarding the clarity of instructions before OSPE execution, with 79.2% strongly agreeing, 29.6% agreeing, and 3.8% expressing indecision. Similarly, perceptions of the appropriateness of station arrangements were largely favourable, with 61.5% strongly agreeing, 26.9% agreeing, 3.8% undecided, and 7.7% disagreeing. However, opinions diverged significantly on whether OSPE induces stress, with 11.5% disagreeing, 38.5% undecided, 38.5% agreeing, and 11.5% strongly agreeing. These diverse perceptions on OSPE organization and logistics may stem from students' unfamiliarity with this assessment format, which differs markedly from traditional methods they are accustomed to (Bakkannavar & Nayak, 2021). Notably, the lack of exposure to mock OSPE sessions prior to the scheduled assessment, as outlined in the academic calendar, is identified as a potential area for improvement. Introducing mock OSPE sessions could provide students with valuable firsthand experience, alleviate stress, enhance preparedness, and dispel any misconceptions about OSPE (Alsaif et al., 2022). For instance, a learner provider could simulate OSPE scenarios during practical sessions. By doing so, students gain familiarity with the assessment format and develop confidence in their ability to perform under timed conditions and at various stations. This proactive approach not only reduces anxiety but also equips students with the skills and mindset needed to excel during the actual OSPE (Hultgren et al., 2023). Addressing stress associated with OSPE is crucial, as heightened anxiety can impact performance and ultimately affect assessment outcomes (Alsaif et al., 2022). Learner providers can mitigate this by fostering a supportive learning environment, providing comprehensive guidance on OSPE expectations, and offering resources for stress management and academic support (Sil et al., 2023). By incorporating mock OSPE sessions into curriculum planning and supporting students through tailored preparatory measures, learner providers can enhance the overall experience and effectiveness of OSPE as an assessment tool.

Table 3. Administration of OSPE

	Item	Strongly disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly agree N (%)
1	The instructions given before OSPE started were clear			1 (3.8)	7 (29.6)	18 (69.2)
2	The arrangement of OSPE was appropriate		2 (7.7)	1 (3.8)	7 (26.9)	16 (61.5)
3	OSPE is stressful		3 (11.5)	10 (38.5)	10 (38.5)	3 (11.5)
4	OSPE is tiring	1 (3.8)	2 (7.7)	13 (50)	9 (34.6)	1 (3.8)

In terms of OSPE content (Table 4), the majority of students expressed positive views. Specifically, 42.3% strongly agreed and 42.3% agreed on the quantity of active stations, while 3.8% disagreed and 11.5% were undecided. This finding correlates with previous observations on the stress levels reported during OSPE (Table 3), suggesting a relationship between the number of questions asked and the perceived stress among students. This insight underscores the importance of carefully balancing the number of active stations and questions (Yaqinuddin et al., 2013) to optimize student performance and alleviate anxiety. Learner providers could adjust OSPE formats by strategically incorporating more rest stations and designing appropriate number of question sets per active station. This approach not only supports students in managing the cognitive load associated with OSPE but also aligns with learning objectives and program educational outcomes (Vishwakarma et al., 2016). Regarding rest stations, students overwhelmingly agreed on their quantity and arrangement, with 42.3% agreeing and 57.7% strongly agreeing. Similarly, the allocated time per station was viewed positively, with 30.8% strongly agreeing, 53.8% agreeing, and 15.4% undecided. These findings underscore the importance of providing adequate breaks with suitable allotted time to enhance student performance and reduce stress during OSPE assessments. Students' perceptions regarding the coverage and weightage of questions in OSPE were largely positive, with 30.8% strongly agreeing, 53.8% agreeing, and 15.4% undecided. However, opinions were

more varied on the difficulty level of questions, with 84.6% agreeing on fairness and distribution, while 15.4% disagreed. This disparity may impact students' overall scores, a topic warranting further exploration in future research. In terms of question clarity and grammar, results varied: 34.6% strongly agreed, 50% agreed on clarity and comprehension, 11.5% were undecided, and 3.8% had difficulty understanding the questions. This diversity reflects students' linguistic backgrounds, English proficiency levels, and familiarity with medical terminology, posing challenges for educators and learners alike in enhancing question clarity and language proficiency (Shrestha, 2022). Addressing these challenges requires collaborative efforts to refine question clarity, enhance language skills in English and medical terminology, and ensure equitable assessment experiences for all students. Providing clear guidelines for question formulation can improve comprehension and fairness in OSPE assessments (Asani et al., 2023).

Table 4. OSPE content

	Item	Disagree	Neutral	Agree	Strongly agree
		N (%)	N (%)	N (%)	N (%)
1	The number of questions was appropriate	1 (3.8)	3 (11.5)	11 (42.3)	11 (42.3)
2	The number of rest stations was appropriate			11 (42.3)	15 (57.7)
3	The time allocated for each station was appropriate		4 (15.4)	14 (53.8)	8 (30.8)
4	The questions covered were equally distributed		4 (15.4)	14 (53.8)	8 (30.8)
5	The question difficulty was fair	4 (15.4)		22 (84.6)	
6	The language used in OSPE is easily understood	1 (3.8)	3 (11.5)	13 (50)	9 (34.6)

The post-OSPE (Objective Structured Practical Examination) feedback analysis (Table 5) highlights a diverse range of responses from students, indicating varying degrees of satisfaction and perceived fairness in the assessment process. For item 1, "I am satisfied with the mark given," 42.3% of respondents strongly agreed, another 42.3% agreed, 11.5% were undecided, and 3.8% disagreed. This distribution suggests that while the majority of students were contented with their marks, a significant minority remained undecided or dissatisfied. Such inconsistency could be a result of various factors, including perceived discrepancies in the marking criteria or a lack of clarity regarding what constitutes a correct or precise answer (Raubenheimer et al., 2016). For item 2, "The examiner provides fair and unbiased marking," the feedback was overwhelmingly positive, with 88.5% strongly agreeing, 7.7% agreeing, and only 3.8% disagreeing. This high level of agreement indicates that most students felt the marking was conducted impartially and fairly. However, the small percentage of disagreement still points to potential areas of improvement in ensuring consistent and transparent assessment methods. In item 6, "I know how to improve myself in the next OSPE," 57.7% of students strongly agreed, 30.8% agreed, 7.7% were undecided, and 3.8% strongly disagreed. This suggests that while a majority of students feel confident about their ability to improve in future OSPEs, there remains a subset of students who are either unsure or lack confidence in their ability to enhance their performance. This uncertainty could be attributed to insufficient or unclear feedback, highlighting the need for more targeted and comprehensive feedback sessions (Sharma et al., 2022). The dissatisfaction observed among some students could stem from inconsistencies in marking subjective questions, where responses might be correct but imprecise (Raubenheimer et al., 2016). Subjective assessments can be challenging due to their reliance on the learner provider's judgment, which can introduce variability (R. M. G. Harden et al., 1975). This issue might be improved by improving question instructions and providing additional feedback to help students understand how to deliver precise answers (Jansen et al., 2024). For example, in an OSPE scenario where a student is asked to identify anatomical structures, an answer like "the arm bone" may be correct but imprecise. To reduce such imprecision, the question could be framed more specifically, and feedback might include detailed explanations of what constitutes a precise answer, such as specifying "the humerus" instead of a general term. Additionally, during feedback sessions, tutors could provide examples of both precise and imprecise answers to illustrate the difference clearly (Watling & Ginsburg, 2019). This approach not only clarifies expectations but also helps students develop a clearer understanding of how to respond accurately in future examinations. A question like "Identify the muscle responsible for arm flexion" could be clarified to "Identify the biceps brachii, the muscle primarily responsible for flexion of the elbow." Feedback on such questions could include diagrams, descriptions of muscle function, and examples of both correct and partially correct answers, helping students to understand the level of detail (Goh & Kiat Tan, 2023).

Table 5. Post OSPE feedback

	Item	Strongly disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly agree N (%)
1	I am satisfied with the marks given		1 (3.)	8 (30.)	7 (26.)	10 (38.)
2	The examiner provides fair & unbiased marking		1 (3.)		2 (7.7)	23 (88.)
3	The examiner informed me of my mistakes				3 (11.5)	23 (88.5)
4	The examiner informed me on how to answer correctly				4 (15.)	22 (84.)
5	I am aware of my weakness after the OSPE was returned				4 (16)	21 (84)
6	I know how to improve myself in the next OSPE	1 (3.8)		2 (7.7)	8 (30.)	15 (57.)

Developing effective question instructions requires significant resources, time, and effort. It also necessitates considering students' perceptions and plentiful potential responses. Learner providers should enumerate all possible correct responses, ensuring they cover a range of acceptable answers (Gomis et al., 2024). However, this approach may still lead to imprecise answers and potentially lower assessment standards if not carefully managed. A detailed rubric that outlines specific criteria for each possible answer can help standardize the marking process and reduce subjectivity (Veugen et al., 2021). Despite these challenges, students showed predominantly positive feedback on item 3 "The examiner informed me of my mistakes", item 4 "The examiner informed me on how to answer correctly" and item 5 "I am aware of my weaknesses after the OSPE was returned", with over 80% strongly agreeing and more than 10% agreeing. These results suggest that learner providers have been effective in conducting informative feedback sessions, which are crucial for student learning and improvement. By identifying mistakes, advising on correct answers, and highlighting areas of weakness, learner providers provide valuable guidance that helps students refine their knowledge and skills (Gomis et al., 2024). However, for significant improvement, students must enhance their learning approaches (Gerritsen-van Leeuwenkamp et al., 2019). This includes fostering self-motivation, engaging in continuous autonomous learning, and strategically set learning objectives. Self-motivation is essential for students to take initiative in their learning, seek out additional resources, and stay engaged with the material. Continuous autonomous learning involves regular self-assessment and reflection, allowing students to identify areas for improvement and track their progress over time (Miles et al., 2024). Strategically setting learning objectives helps students focus their efforts on specific goals, making their study sessions more efficient and effective. Particularly during practical sessions, such strategies are essential to maximize the educational opportunities provided in anatomy courses. Students could adopt active learning techniques such as group discussions, peer teaching, and hands-on practice to deepen their understanding of anatomical structures and their functions. By actively engaging with the material, students are more likely to retain information and develop a more comprehensive understanding of the subject (Kimpo & Puder, 2023).

4. CONCLUSION

The findings from this study indicate that OSPE serves as an effective learning stimulus and assessment tool, significantly enhancing student engagement and attentiveness in both theoretical and practical sessions. A substantial majority of students strongly agreed that OSPE motivates them to pay closer attention during classes and practical sessions, emphasizing the importance of regular attendance for achieving high scores. This underscores the role of OSPE in fostering active learning and the direct correlation between class participation and academic performance. The survey results reveal that students largely perceive OSPE as a fair and unbiased assessment method, with the majority expressing satisfaction with the marks received and the impartiality of the examiners. However, some students reported dissatisfaction, likely due to inconsistencies in marking subjective questions. This highlights the need for clearer question instructions and more comprehensive feedback sessions to help students understand how to provide precise answers. The positive feedback on post-OSPE assessments indicates that informative feedback sessions were being conducted successfully. These sessions are crucial for student learning and improvement, helping them refine their knowledge and skills.

Despite the overall positive reception, the analysis also identifies several loopholes in the current OSPE implementation. The variability in marking subjective questions and the stress associated with OSPE are areas that require attention. Introducing mock OSPE sessions could alleviate stress and enhance student preparedness by familiarizing them with the assessment format. Meanwhile, improvising instructions is vital in reducing imprecise OSPE responses. This study evaluates OSPE from multiple

perspectives, including its role as a learning stimulus, an assessment tool, and its administration. By highlighting the benefits and challenges of OSPE, this study contributes to the academic discourse on practical assessments in medical education, providing valuable insights for educators and administrators. Future research could explore strategies to standardize marking criteria for subjective questions and develop more effective feedback mechanisms. Additionally, investigating the impact of different teaching methodologies and learning environments on student performance in OSPE could provide further insights into optimizing this assessment tool. Implementing diverse teaching methods that cater to varied learning styles and creating a supportive learning environment will be crucial in maximizing the educational outcomes of OSPE. In conclusion, while OSPE is largely effective in promoting active learning and fair assessment, continuous improvement in its implementation and administration is essential to address the identified challenges and enhance its overall effectiveness as an assessment tool in preclinical subjects. It is vital to note that in this study, the number of students responding to the questionnaire is small, thus, all the findings in this study may not represent the students wholly and may not be a significant. The findings of this study will contribute to the existing literature on assessment practices in education and provide valuable insights into the effectiveness of OSPE as a learning stimulus and assessment tool from the perception of students.

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