

Impact of Using OSLER as an Assessment Tool for Clinical Competencies of Undergraduate Medical Students

Pankaj Harish Bansode¹, Priti Prasad Shah², Kristy Alex Mathew³

¹Professor and Head of Department of General Surgery, Symbiosis Medical College for Women, Symbiosis University Hospital & Research Centre, Symbiosis International (Deemed University), Pune, Maharashtra, India

²Professor, Department of General Surgery, Symbiosis Medical College for Women, Symbiosis University Hospital & Research Centre, Symbiosis International (Deemed University), Pune, Maharashtra, India

³Junior Resident, Department of General Surgery, Symbiosis Medical College for Women, Symbiosis University Hospital & Research Centre, Symbiosis International (Deemed University), Pune, Maharashtra, India

Corresponding Author: Dr. Priti Prasad Shah

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ABSTRACT

BACKGROUND: The Objective Structured Long Examination Record (OSLER) is a structured clinical assessment tool that aims to overcome the subjectivity and variability of traditional long case evaluation by offering a more standardized and comprehensive evaluation of clinical competence. This study assesses the effectiveness of OSLER in evaluating undergraduate medical students' clinical performance and explores the perception of students and faculty regarding its utility.

METHODS: A prospective observational study was conducted over four months at a Medical College. A total of 96 students from Phase III Part II were randomly divided into two groups; one assessed using the OSLER method and the other with conventional long case method. Pre-validated checklists and feedback forms were employed to evaluate performance and satisfaction.

RESULTS: Students assessed using the OSLER method scored significantly higher compared to those assessed than those evaluated with traditional methods ($p < 0.05$). Feedback from students and faculty highlighted that the OSLER method was perceived as more objective, structured, and conducive to meaningful feedback. Notably, 68% of students reported enhanced learning experiences with OSLER while 92% of faculty found it more reliable and valid compared to traditional methods. Challenges identified included increased time requirements and faculty orientation and training.

CONCLUSION: OSLER emerges as a robust and equitable alternative to traditional long case assessments, aligning well with the goal of Competency Based Medical Education (CBME). It enhances objectivity, student learning and faculty satisfaction. When thoughtfully integrated, OSLER plays a pivotal role in producing clinically competent, reflective and patient-centred medical graduates.

Keywords: Medical Student, Medical Education, OSLER, CBME, Clinical Competency, Long Case

INTRODUCTION

The legacy of Sir William Osler, a pioneer in medical education, continues to shape our understanding of effective teaching methods. His emphasis on bedside teaching, clinical reasoning, and patient-centred care underscores the importance of practical skills assessment.

It involves real or stimulated patients and evaluate students on History taking, Physical examination, Clinical reasoning, Professionalism, Communication and formulating Differential diagnosis and management plans. It is considered as a precursor to modern OSCE but more holistic and less fragmented as it uses detailed checklist or rubrics for scoring. To address the problems in clinical competencies particularly long case in terms of objectivity, validity and reliability, a 10-item analytical record of long case was created known as OSLER. Through this the faculty can assess the students' performance by a structured guide. [1] It combines elements of clinical examination, patient interaction, and documentation. It provides a comprehensive view of students' abilities, transcending traditional written exams. Practical clinical exam is traditionally taken by evaluating 1 long case & 1 short case in Surgery. Short case & procedural skills evaluation is now more objective & structured with the use of Observed Structured Clinical Examination (OSCE) in the final exams. Long case evaluation is still done in traditional ways. There is a need to make it more objective, reliable & valid for more efficient & fair assessment. OSLER consists of 10 item analytical record. All examiners at the outset decide the Difficulty level of the case & marking on each item. Each individual item the examiner marks the student and then discuss with co-examiners to come to an agreed joint score. After completion for all items to come to a global final score. Thus, same aspects of competency are examined by all examiners

maintaining consistency & promoting standardization.

Along with Workplace based assessment & OSCE during exams it will help the examiners thoroughly assess the students before letting them in the competitive world. Literature shows that as compared to traditional long case examination, OSLER is more student and examiner friendly as it is more structured on points to be assessed & also time bound. All candidates are assessed on the same case on time bound manner & all examiners mark them on same points. Studies have also shown that OSLER had better quality of assessment compared to other conventional methods. [2,3]

The assessment of clinical competencies in undergraduate medical education plays a crucial role in shaping competent healthcare professionals. In recent years, the Objective Structured Long Examination Record (OSLER) has gained attention as a valuable assessment tool. This research aims to explore the impact of OSLER on assessing clinical competencies among undergraduate students and evaluate the satisfaction of using OSLER from student and faculty perspective.

MATERIAL & METHODS

Design and setting:

This prospective observational pilot study was conducted over a four-month period at Symbiosis Medical College for Women. It involved Phase III Part II MBBS students and faculty members from the Department of Surgery who participated in student assessment. The study aimed to evaluate the OSLER method as an alternative to traditional long case examination techniques.

Participants and sampling:

The participants included 3rd-year Part II medical students who were clinically posted during the study period and faculty trained in the OSLER method. Students and faculty who did not meet these criteria were excluded. A total of 96 students were enrolled, divided into

three batches of 32 each. Within each batch, students were randomized into two groups: 16 students assessed using the OSLER method and 16 using the traditional method—resulting in 48 students in each assessment group.

Tools/Instruments:

- Pre-validated OSLER checklists, assessed by four internal and one external professor from the Department of General Surgery
- Structured scoring systems developed by senior faculty, with marks awarded in increments of five based on institutional guidelines (Table 1)
- Feedback forms for students and faculty, which included both open-ended questions and Likert scales to evaluate perceptions of assessment quality and fairness

Data collection methods:

Data collected included:

Scores awarded to students via both OSLER and traditional assessment methods
 Feedback from students and faculty regarding the structure, objectivity, and fairness of the evaluation process All data were recorded systematically in an Excel sheet.

Statistical analysis:

The collected scores were analysed in Microsoft Excel for:

- Mean scores
- Score ranges
- Consistency across groups.
- Unpaired t-test was done to analyse the scores and the p value was found to be <0.05

Table 1: Objective Structured Long Examination Record (OSLER) Checklist that was used for long case evaluation

HISTORY		GE	LE		SE	APPROACH & MANAGEMENT		COUNSELLING & ADVANCEMENT	
Pace/Clarity & Communication process	Systematic Presentation & Correct facts established	General Examination	Systematic presentation, Technique & Correct Facts	Demonstration of signs	Systemic Examination	D & D/D Discussion	Systematic Logical Sequence & App Management	Counselling	Recent advancement
MARKS	5	5	5	5	5	5	5	5	5
*GE- general examination, LE- local examination, SE- systemic examination, D- diagnosis, D/D- differential diagnosis									
A					Excellent (>80)				
B					Very good (60-80)				
C					Pass/ Borderline (50-55)				
D					Below pass (45-35)				

RESULTS

Score Analysis:

The Scores obtained OSLER method were higher compared to that obtained by the traditional methods. (Figure 1) The mean being 33 with OSLER method & 24 with traditional method. The difference in scores in OSLER method (Minimum of 28 & Maximum of 40) was less compared to scores in traditional method (Minimum 18 & Maximum 35). And the P value calculated by unpaired t Test was

highly significant (<0.05) at 95% confidence (Figure 2 & 3). Additionally, a crossover was done with a batch of 12 students who were evaluated using both OSLER and the traditional method. And it was noted that all students performed better when evaluated using a structured questionnaire. (Figure 4)

Feedback Analysis

Feedback provided by the students showed that 54% of the students reported that the assessment by OSLER method was structured,

while only 36% of students seemed the traditional method was structured. And 70% of students reported that exams were fair & unbiased. Out of the participating students, 68% reported that the OSLER provided a better learning experience by highlighting the areas of weakness. Also 86% Students considered that there was equal opportunity for all, chance of scoring more, as they were now more aware of what is assessed in the case presentation. But students also reported that they needed time to adjust to this method of assessment

From the feedback provided from the faculty, 92% of them reported that the assessment by OSLER method was structured, while only

67% of faculty perceived the traditional method was structured as some of the structuring was already there in the department assessment pattern. Whereas 100% of the faculty reported that exams were fair, unbiased and objective. Based on the faculty experience, 83% of them observed that the OSLER was a better assessment method & 75% stated that it provided a learning opportunity for the students. Faculty perceived it as more reliable & valid compared to the traditional method of assessment and 92% were willing to adapt this method. Although 83% of the faculty reported that it was time consuming & 67% of them stated that training was required.

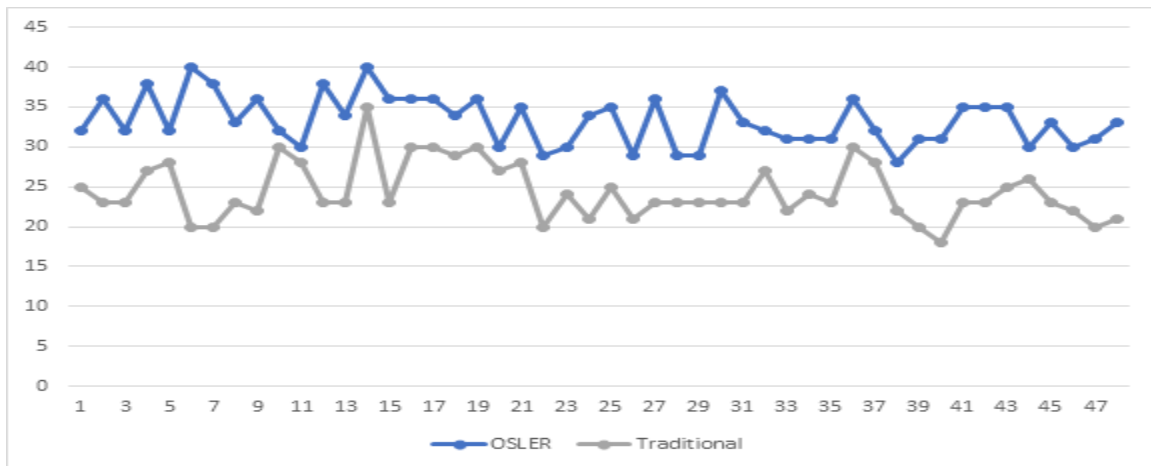


Figure 1: Scores of students who were randomly divided into two batches for evaluation of long case by OSLER and Traditional method

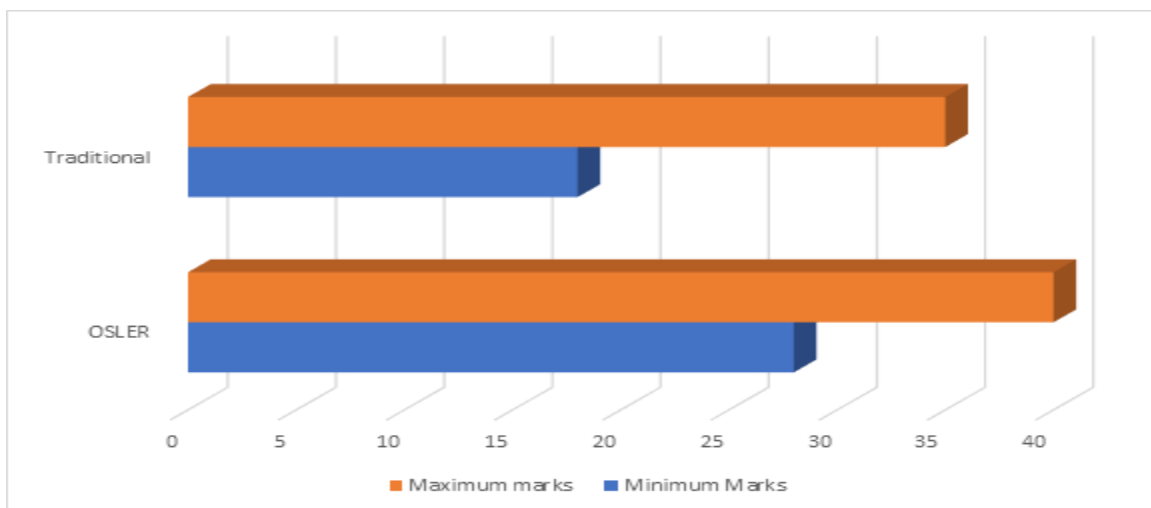


Figure 2: Minimum and Maximum marks obtained using OSLER and Traditional methods respectively

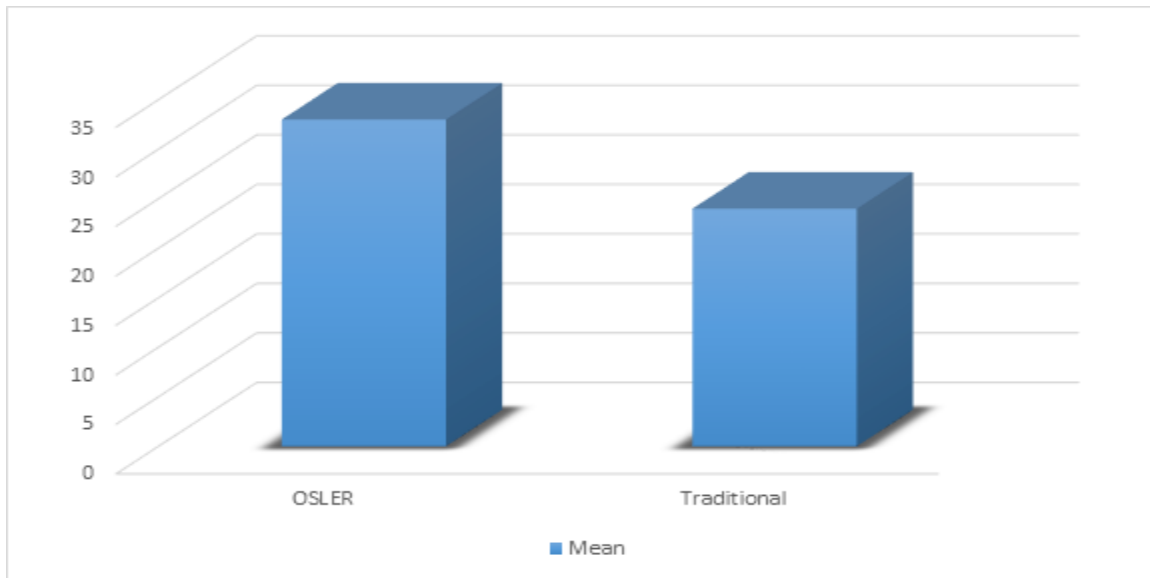


Figure 3: Mean scores obtained when assessing students by OSLER and Traditional methods

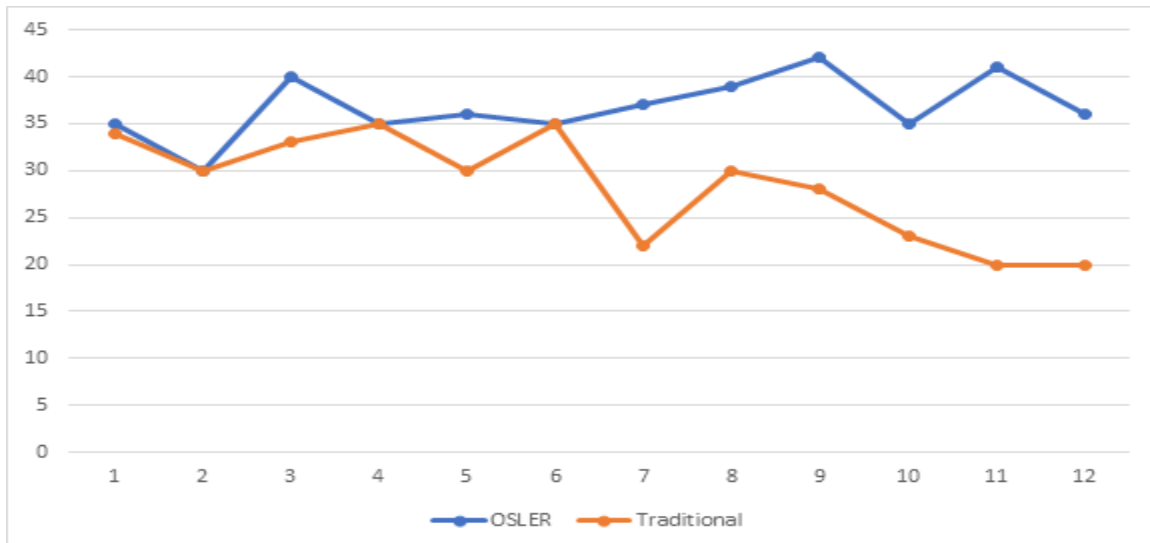


Figure 4: Comparison of marks obtained by 12 students when evaluated by both OSLER and Traditional method

DISCUSSION

In 1997, Fergus Gleeson introduced OSLER as a practical solution to the widely acknowledged challenge of continuous assessment, which he detailed in his groundbreaking paper, Assessment of Clinical Competence using OSLER. Since its inception, OSLER has been extensively examined through numerous studies conducted globally. [2] The traditional method of examination of long case is broad based and subjective with tendency to mark down if a certain aspect of

case was not known. Also, there is variability in marking by different examiners. In OSLER the examiners decide the difficulty level of the case as well as the scoring system for that case on the 10 Item checklist. This makes it more structured & objective, bringing consistency in marking by various faculty. As we improve the reliability of long cases through OSLER, we can effectively assess the clinical skills of the students. [4] During long cases, case specificity can cause concerns as some students can get ‘difficult’ cases compared to others. But

OSLER considers this factor as the examiner already determines its difficulty level before the presentation. [5] Having a structured objective assessment has always proven to have an effective assessment of knowledge and skills. Studies have also shown that a similar structured assessment like OSCE has also contributed to high degree of standardization and improve reliability. [6,7] Even assessment tools like Structured Long Interviews and Clinical Examination (SLICE) or Structured Clinical Case Examination (SCCE) have been believed by students in improving clinical abilities and as a better clinical assessment tool. [8]

Gaining expertise in clinical competencies during medical education is essential for a successful medical career. The implementation of OSLER has proven to be impactful on multiple levels. [9] On an individual level, it enhances teaching approaches by encouraging structured and objective assessment techniques. Exposure to innovative methods like OSLER fosters professional development, enriching academic and assessment skills. Additionally, it refines feedback capabilities, promoting detailed and actionable guidance for students, which strengthens mentoring abilities. At the departmental level, the adoption of OSLER has enhanced collaboration among faculty members, who worked closely to validate checklists and standardize evaluations. This has improved assessment standards by increasing the reliability and validity of clinical assessments. Moreover, the project offered faculty members an opportunity for professional growth by building expertise in modern assessment tools, thereby raising the overall competency of the department. On an institutional level, the influence of OSLER extends beyond individual departments, with the potential for other departments to adopt its methods, fostering a culture of objective evaluation. This has led to improved clinical competency among students, aligning their skills with both national and global medical

standards. Ultimately, the impact on healthcare outcomes is significant, as graduates are better prepared to deliver quality patient care, positively influencing community health metrics.

Through this study we were able to understand that the OLSER was a more preferred assessment compared to the traditional method as it created a more structured and standardized assessment, which helps to effectively evaluate the performance of the clinical skills of the students. And the mean scores from both the methods have shown that OSLER had a relatively greater mean. Both students as well as the faculty agreed that there is an increased opportunity for the students to learn, due to the feedback given about the strengths & weaknesses.

Limitations of the Study

This study faces several limitations including relatively short duration and small sample size. Highlighting the need for study with larger number of students at multiple time points. This study was only able to assess both OSLER and traditional scores in 12 students and a bigger study population would prove how significantly a structured questionnaire can impact the assessment of students in long cases. The allocated time of 20 minutes for each case presentation might be insufficient to comprehensively evaluate all domains, suggesting that extending this time to 30 minutes could provide a more thorough assessment. Also, the OSLER checklists for various cases requires enhanced preparation with more details and standardized content, although this process was noted to be time-consuming. These factors underscore areas that could be addressed in future studies to improve the evaluation methodology.

CONCLUSION

OSLER as an undergraduate assessment tool, offers a valuable bridge between theoretical knowledge and real-world clinical competency.

It is an effective evaluation technique, offering fair assessment by compensating for weaknesses and highlighting areas for improvement. It emphasizes direct observation, contextualized patient care and reflective feedback at the end. It encourages students to enhance their performance and serves as a valuable tool for both formative and summative assessments. Structured clinical examinations offer better control over variables and complexity, with clearly defined aims and predetermined marking strategies. They enable more authentic and comprehensive evaluation of students' readiness for clinical responsibility. Both students and examiners perceive this method favourably, making it a viable addition to assessment systems. Subjectively, logistic constraints and faculty time are challenges which can be addressed through structured rubrics and targeted faculty development. In case-based-assessment framework, the OSLER method enriches the learning experience, reliability and depth of clinical performance. With thoughtful implementation and integration into CBME (Competency Based Medical Education) framework, it can significantly contribute to the development of skilled, reflective and patient centred surgical graduates.

Declaration by Authors

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Conflict of Interest: The authors declare no conflict of interest.

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