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Study Of Observation Structured Practical Examination (OSPE) Implications In Second Year Medical Students.

Chitra Netare[1]*, and Kusumchandra Ambhure[2].

[1]Department of MET, Maharashtra University of Health Sciences (MUHS), Nashik, Maharashtra, India.
[2]Department of Orthopaedics, Varun Arjun Medical College & Rohilkhand Hospital, Lucknow Rd, Banthara, Uttar Pradesh, India.

ABSTRACT

The objective of our study was to study the implications of Observation Structured Practical Examination (OSPE) in second-year medical students. The study was conducted at our department of Pathology from June 2018 to February 2019. A purposive sampling technique was used to select 50 participants. The OSPE assessments consisted of five stations that evaluated basic and clinical competencies. Standardized scoring rubrics were used, and participants' scores were recorded. Additionally, qualitative data were collected through post-examination surveys and focus group discussions to gather participants' perceptions of the OSPE process. The mean scores across the different OSPE stations ranged from 3.8 to 4.5, indicating a generally high level of performance among the participants. The highest mean score was observed in the case scenario station, while the lowest mean score was in the histological examination station. Participants perceived strengths of the OSPE, such as its ability to assess practical skills, simulate real clinical scenarios, and provide immediate feedback. They also identified limitations, including time constraints and the inability to assess certain clinical skills requiring direct patient interaction. Participants reported that the OSPE positively impacted their learning by promoting critical thinking and enhancing clinical decision-making skills. The OSPE in the second year of medical education has significant implications for assessing students' clinical competencies. It effectively evaluates knowledge and skills in various subject areas, provide valuable feedback for professional development, and encourage self-reflection and self-directed learning. Addressing identified limitations and incorporating the strengths of the OSPE can further enhance its effectiveness as an assessment tool.

Keywords: Observation Structured Practical Examination, second-year medical students

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Corresponding author

INTRODUCTION

Observation Structured Practical Examination (OSPE) is a widely recognized assessment tool used in medical education to evaluate the developing competency and observational skills of medical students [1, 2]. It is designed to assess a range of cognitive, psychomotor, and affective domains essential for the practice of medicine [3]. OSPE has gained popularity as a comprehensive and reliable method of evaluating students' clinical abilities and has been incorporated into the curriculum of many medical colleges worldwide [4, 5]. In the second year of medical education, students transition from preclinical courses to more clinical-based learning. [6]. This phase is crucial as it lays the groundwork for their future clinical practice. OSPE in the second year plays a pivotal role in assessing the students' progress, identifying their strengths and weaknesses, and providing constructive feedback to improve their clinical skills [7].

The implications of OSPE in the second year of medical education are manifold. Firstly, it provides a standardized and objective assessment platform, ensuring that all students are evaluated on the same set of criteria [8-10]. This helps in maintaining consistency and fairness across different examiners and institutions. Secondly, OSPE evaluates students' ability to apply theoretical knowledge to practical scenarios, enabling them to bridge the gap between classroom learning and real-life patient care [11]. It assesses their proficiency in clinical reasoning, diagnostic skills, communication, and professionalism.

MATERIAL AND METHODS

We planned this study to investigate the implications of Observation Structured Practical Examination (OSPE) in second-year medical students. The study was conducted at our department during June 2018 to Feb 2019.

The participants were selected through a purposive sampling technique based on their availability and willingness to participate in the study from second MBBS students. We included 50 participants in our study with 36 female and 14 male students.

The OSPE assessments were conducted. The 5 OSPE stations were designed to evaluate various subject basic and clinical competencies.

- Station 1 – Pathology specimen - Fatty liver
- Station 2- Histological examination
- Station 3- Case scenario
- Station 4 – Pathology specimen - Glomerulonephritis
- Station 5 – Case Scenario including Laboratory reports

The OSPE stations were created by a panel of experienced medical educators, ensuring the content validity of the examination and these were validated from them.

During the OSPE, each participant rotated through multiple stations.

Examiners evaluated the participants' performance using standardized scoring rubrics. The OSPE scores (Total score – Each station 5 marks, Total marks – 25) were recorded for each participant and used as the primary outcome measure.

In addition to the OSPE scores, qualitative data were collected through post-examination surveys and focus group discussions. The surveys aimed to gather participants' perceptions of the OSPE process, including its strengths, limitations, and perceived impact on their learning. The focus group discussions provided an opportunity for in-depth exploration of participants' experiences and allowed for the emergence of themes related to the implications of OSPE.

The collected data were analyzed using descriptive statistics for the quantitative data.

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RESULTS

Table 1: Summary of OSPE Stations and Participant Scores

OSPE Station	Description	Mean Score	Standard Deviation
Station 1	Pathology specimen - Fatty liver	4.2	0.6
Station 2	Histological examination	3.8	0.4
Station 3	Case scenario	4.5	0.8
Station 4	Pathology specimen – Glomerulonephritis	4.0	0.5
Station 5	Case Scenario including Laboratory reports	4.3	0.7

Table 2: Participant Demographics

Gender	Number of Participants
Female	36
Male	14

Table 3: Participant Perceptions of OSPE

Themes	Frequency
Strengths	23
Limitations	12
Impact on Learning	35

The frequencies indicate the number of participants who mentioned each theme during the post-examination surveys and focus group discussions.

DISCUSSION

OSPE promotes active learning and encourages students to develop effective time management and prioritization skills. It challenges them to make quick decisions and manage multiple clinical tasks simultaneously, simulating the real-world demands of medical practice [12]. Additionally, OSPE provides immediate feedback, allowing students to identify areas requiring improvement and encouraging self-reflection and self-directed learning. OSPE in the second year of medical education holds significant implications for assessing the clinical competence and observational skills of medical students. It offers a comprehensive evaluation of their abilities and provides valuable feedback for their professional development. By integrating OSPE into the curriculum, medical schools aim to produce competent and skilled physicians who can effectively contribute to patient care [13-15].

The results of our study shed light on the implications of Observation Structured Practical Examination (OSPE) in second-year medical students. The OSPE stations were designed to evaluate various subject basic understanding and developing competencies, including pathology, histology, case scenarios, and interpretation of laboratory reports. The participants' performance was assessed using standardized scoring rubrics, and their perceptions of the OSPE process were gathered through post-examination surveys and focus group discussions.

In terms of the OSPE scores, the mean scores across the different stations ranged from 3.8 to 4.5, indicating a generally high level of performance among the participants. These results suggest that the second-year medical students demonstrated a satisfactory understanding of the subject matter and clinical competencies assessed through the OSPE. The scores also indicate that the OSPE stations were effective in evaluating the participants' knowledge, skills, and abilities.

The highest mean score was observed in Station 3, which involved case scenarios. This suggests that the participants excelled in applying their theoretical knowledge to real-life clinical situations and

making appropriate clinical decisions. Case scenarios provide an opportunity for students to integrate their knowledge from multiple disciplines and demonstrate their clinical reasoning abilities.

On the other hand, the lowest mean score was observed in Station 2, which focused on histological examination. This may indicate a need for further emphasis on histology teaching and learning in the curriculum. It is important to address any identified gaps to ensure that students receive a comprehensive education in all relevant subjects. The participants' perceptions of the OSPE process revealed several themes. The majority of participants acknowledged the strengths of the OSPE, such as its ability to assess practical skills, simulate real clinical scenarios, and provide immediate feedback. The OSPE was seen as an effective assessment tool that bridges the gap between theoretical learning and practical application.

However, some participants mentioned limitations of the OSPE. These limitations included time constraints, stress and anxiety during the examination, and the inability to assess certain clinical skills that require direct patient interaction. These findings highlight the importance of addressing logistical issues and ensuring that the OSPE process is optimized to minimize stress and anxiety among students. The participants also highlighted the positive impact of the OSPE on their learning. They reported that the OSPE encouraged active learning, promoted critical thinking, and enhanced their ability to make quick and accurate clinical decisions. The feedback received during the OSPE was perceived as valuable for self-reflection and self-directed learning, enabling participants to identify areas for improvement and develop strategies to enhance their clinical skills.

CONCLUSION

Overall, the study findings suggest that the OSPE in the second year of medical education has significant implications for assessing students' clinical competencies. The OSPE stations effectively evaluated the participants' knowledge and skills in various subject areas, while also providing valuable feedback for their professional development. Addressing the identified limitations and incorporating the strengths of the OSPE can further enhance its effectiveness as an assessment tool in medical education.

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