

## **Tool for competency - OSCE/ OSPE: A Short review**

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**Abstract:** The short review was done to establish OSCE/OSPE as one among the most reliable evaluation tool for assessing the competency of the pupils in the medical field . Around 1642 samples from 12 literatures were included in this short review, from different parts of the country. The results after compilation of all the included literatures shows that maximum pupils scores more marks in the OSCE/OSPE. They generally agreed that OSCE/OSPE is a fair, trustworthy, effective and unbiased means of assessment in comparison to the usual assessment method. Majority of the pupils also considered it as a method which stimulate and motivate the learning approaches. Thus, it is valued as one of the best tool to evaluate the cognitive and psychomotor domain.

Key words: OSCE, OSPE, reliable, evaluation, assessment, tool, pupils.

**Introduction :** Teaching learning process in the educational health institution is incomplete without a good evaluation method. Thus, a good and unbiased method motivates the faculty of the institution. The tool that helps in direct observation of the pupil skills that are reliable and unbiased in nature is much needed. What we have all observed is that the traditional and conventional method have some flaws in terms of fairness. Harden and his associates have introduced this evaluation tool in 1975 which is known as OSCE/OSPE. <sup>1,2</sup> Miller in 1990 explained that assessment can influence the the pupils understanding and learning from what they knows to what they does. To protect the fairness of the conventional method and avoid its subjectivity, OSCE/OSPE, a most suitable and consistent method of evaluation to improve the students learning and competencies is necessary. Pupil's knowledge, skill and attitude can be evaluated equally at the same time.<sup>3</sup> This method have been introduced as one which the examiner can rely its fairness in assessing the psychomotor skills. The method has numerous cubicles or stations which is flexible in nature. Different test/objectives based on the domain can be assessed in this cubicles. The timing for each cubicles is to be balanced and keep equally. It is a flexible test format.<sup>4</sup> The standardization and the facts of OSCE being objective is considerably a worthy evaluation instrument than any usual methods.<sup>5</sup> OSCE/OSPE was first originated from medical education in 1970.<sup>6</sup> Because of its reliability and validity, presently it has been adopted and applied much in the medical and allied curricula.<sup>7,8,9,10,11</sup> Because of its multiple benefits, it is necessary to replace or involve this method with other assessment tool.<sup>12</sup>

**Review methods :** The reviewer searched literatures from various online data based written in English language and between the year 1975-2019. Around 1642 samples from 12 literatures were included in this short review, from different parts of the country. The literatures involved were both from quantitative and qualitative research design. Based on the inclusion criteria the literatures were selected and studies with less than 10 samples were excluded.

## **Brief characteristics of literatures included in the short review are:**

A descriptive study on reviewing the nursing students' views toward OSCE test among 50 samples at Isfahan University of Medical Sciences by Seyyed Abbas Hosseini et al. shows that majority have good opinion on OSCE test.<sup>13</sup>

Mohammad Reza Mansoorian et al. conducted a comparative study on the effects of Objective Structured Assessment of Technical Skills (OSATS) and Traditional Method on Learning of Students among 45 Nursing and Medical students (1<sup>st</sup> Semester) at Gonabad University of Medical Sciences. Findings revealed the mean of students' score in Objective Structured Assessment of Technical Skills was higher than in traditional method. It concluded that Objective Structured Assessment of Technical Skills can be used to evaluate students' knowledge and psychomotor domain.<sup>14</sup>

A qualitative-hermeneutic phenomenology research by Fidment Susan on OSCE - exploring the healthcare student's experience among 10 registered healthcare professionals in UK. It revealed three themes i.e; anxiety, preparation as a coping strategy and also simulation a further cause of anxiety in OSCE.<sup>15</sup>

A cross-sectional study by Wadde S. K et al. conducted on OSPE/OSCE perceptions among 11 semester students (7<sup>th</sup>) and 13 faculty of Community Medicine, MIMSR Medical College, Latur. The study concluded that all students preferred & advised to use OSCE/OSPE in future. It is the valid and reliable means of assessing the competency of students.<sup>16</sup>

Impact of OSPE on students' approach to learning among 12 MBBS students and faculty, Department of OBG, Jinnah Hospital Lahore was conducted by I Bashir A et al. Finding of the study shows the main impact on the students learning are education and psychology. These two are the main themes revealed from the study. Motivation and orientation factors also play an important role in influencing the learning approaches.<sup>17</sup>

Ranga Rao D et al. conducted a descriptive cross-sectional study on OSCE a tool in formative assessment among 158 II MBBS students, Dr. Pinnamaneni Siddhartha Institute of Medical Sciences & Research Foundation, Chinnaoutpalli. Study findings revealed that students scored more marks in OSPE when compared to Traditional Practical Examination. The study concluded that because of its clarity, unbiasedness, achievable and consistency, maximum of the students accepted this method.<sup>18</sup>

Hosseini S. et al. conducted a comparative study on OSCE/OSPE scores of the Biochemistry Laboratory among 649 female and male nursing students at Shahid Beheshti University of Medical Sciences. Study concluded that there was a difference between the OSCE/OSPE scores in biochemistry laboratory skills among both gender of students'.<sup>19</sup>

Perception regarding OSCE among 173 MBBS 4th and 5th year was conducted by Jaiswal CP and Mehta K. Finding shows 50% samples have a positive perception towards OSCE. They have concluded that to further improve the perception, OSCE needs to be oriented and organized effectively.<sup>20</sup>

An Observational report on OSPE– Good Tool For Assessment of 142 Medical Undergraduates in Microbiology, Velammal Medical College was done by Charles J, et al. It shows that students had knowledge and good skills about the subject and perform exercises respectively. However, their competency was poor. So, they concluded that OSPE is preferred as the best method to evaluate the competency.<sup>21</sup>

An OSCE - yet to find its place in Medical curriculum in India was conducted by Bansal A & Gaur A among 90 final year MBBS students of Paediatrics Dept. Medical College Hospital. Result shows students scored more marks in OSCE rather than the written scores. Thus concluded that OSCE is one of the mostly preferred technique to check the competency level of the students. Therefore, the medical institution should try their level best to integrate this technique.<sup>22</sup>

Baral. B.K. conducted a comparative study on Objective Structured Practical Evaluation with the Traditional Practical Examination and Students' Perception among 283 MBBS Students at Kathmandu University-affiliated Medical Colleges. Study finding shows 85% believe there is no bias in grading, 76% felt that there are less fearful of examiners in OSCE when compared to usual practical examination.<sup>23</sup>

A qualitative study by Shahzad A, Saeed M.H.B & Paiker S on OSPE and OSCE was conducted among 16 final year BDS students at Dental college of Riphah International University (RIU), Islamabad shows student feels that the time distribution to each station was not equal and the evaluators were not experts. However, overall students were contented with the methods.<sup>24</sup>

**Findings and discussion:** The findings of the short review after a thorough compilation and studying of the included literatures (*seen in the above brief characteristics*) revealed that maximum pupils scored more marks in the OSCE method when compared to the marks they scored in the usual and traditional method. Majority of them also preferred that OSCE/OSPE is the most reliable and objective method for evaluating their skills in the clinical or laboratory. That is

the reason, students are satisfied and considered it as the valuable tool. Even though some literatures revealed that students perceived each stations was not given the equal timing and examiners were not trained. However, students felt

that OSCE/OSPE stimulate their learning process much better than the conventional method. That is why it is considered to be the most preferred way of assessing pupils competency. However, to incorporate it into the medical schools there should be a proper guidelines for conducting the OSCE/OSPE method. More efforts should be made in orienting the procedure and preparation of a proper environment. These, along with motivation factor will facilitate the evaluation method to increase positive perception among the pupils.

**Limitations of the short review:** Literatures written other than English languages were not included and only twelve studies from few countries were included.

**Conclusion:** Even though there are well known flaws in the traditional method of evaluating the competency of the nursing and medical students. Still multiple institutions are implementing this method because of its conveniences. Based on the above literatures, the medical institution should work hard to improve the evaluation method. The other important part is to examine the reliability and objectivity of the evaluation method before applying it in the skills assessment process. Keeping in mind the multiple benefits and minimum flaws of OSCE/OSPE, It is therefore recommended that Indian medical schools and colleges should adopt the standardized, and objective evaluation through the methodological efforts and commitments. These however will ensure us to have the most valuable method for evaluating the student's competency.

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