



FACULTY DEVELOPMENT PROGRAM ON OSCE AS AN ASSESSMENT TOOL FOR MEDICAL EDUCATORS

Education

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ABSTRACT

Introduction- Objective Structured Clinical Examination (OSCE) as an examination format received wide acceptance globally as an objective form of assessing clinical competencies both at the undergraduate and postgraduate levels. Competency-based medical education implementation demands OSCE as one of the assessment methods. OSCE Workshop is the need of the hour for faculty development in OSCE for smooth implementation and a better understanding of OSCE as an effective assessment tool in medical schools and postgraduate institutions. Despite this wide acceptability and usage and NMC suggested mode of examination many medical institutions have yet to embrace this reality as our faculty are not trained to conduct this modality of assessment pattern. Teachers must be familiar with assessment principles and methods of assessment that have acquired high psychometric properties. **Aim:** To assess the role of FDP in adopting OSCE as a method of evaluation of undergraduate as well as postgraduate students' clinical competence. **Methodology:** This observational study evaluates how the faculty development program helped develop capacity building in conducting OSCE at their department for undergraduate and postgraduate students. We have conducted two OSCE workshops and imparted the knowledge and skills to conduct OSCE to 72 faculty. To evaluate the impact of the workshop we have taken pretest, post-test, retro pre feedback, and feedback after 6 months and analyzed the results. **Result-** There was a significant improvement in knowledge, writing OSCE stations & implementation of OSCE after attending these workshops. **Conclusion-** This focussed FDP has helped the faculty to implement OSCE as an assessment tool in their department for undergraduate as well as postgraduate program.

KEYWORDS

INTRODUCTION

The Objective Structured Clinical Examination (OSCE) was first described by Harden in 1975 as an alternative to the existing methods of assessing clinical performance [1]. The OSCE was designed to improve the assessment process, the validity and reliability of the assessment of practical performance, which was previously assessed using the long case and short case examinations. [2] OSCE and traditional examination systems can test similar parameters e.g. history taking, physical examination as well as patient management. However, the traditional format tests a narrower scope of content whereas OSCE can test much wider content, being more flexible. OSCE has become a globally accepted method for undergraduate and postgraduate clinical education. We recognize that the introduction of the OSCE into an existing assessment program is a challenging process requiring a considerable amount of theoretical and practical knowledge for the assessor. The faculty needs to be trained in implementing the OSCE into their assessment systems. The theoretical aspects of the OSCE, its place within the range of assessment tools, and its core applications. Faculty assessors need to have training on more practical information on the process of implementing an OSCE, including guidance on developing OSCE stations, choosing scoring rubrics, training examiners and standardized patients, and managing quality assurance processes. Characteristics expected of any good assessment include objectivity, structure, validity, reliability, validity evidence, and defensibility. The Objective Structured Clinical Examination (OSCE) is one of these current methods of assessment that have gained credibility because of its improved quality over traditional clinical examination. [3,4,5] Objective Structured Clinical Examinations (OSCEs) provide external assessments of knowledge, skills, and behaviours in the context of a low-risk simulated clinical encounter and a growing literature encourages their use to assess Patient Safety competencies. There are recommendations from numerous international bodies regarding the need to restructure health professional education to ensure it equips students with the knowledge, skills and attitudes necessary to function safely. Objective Structured Clinical Examination (OSCE) has been used for decades within nursing and medical programs to assist with preparation for practice, scaffold learning, determine participants' level of clinical performance and provide feedback on areas for improvement. [4,5].

The OSCE has now been described as the 'gold standard' for the assessment of clinical competency and holds its place as a core component within undergraduate medical examinations. Due to its reliability, evidence has shown its potential to be used in both formative and summative formats. [6].

Faculty development plays a significant role in health education. It helps in improving health education by adapting newer academic methods. This action must give faculty a way to enhance their knowledge and skills in teaching, research and management domains. The faculty development should be designed to prepare institutions and faculty members for their various roles.

The teacher's roles need to be improved as great educators, leaders and role models.

The fact is that these programs stimulate a best practice besides professional and personal development. They increase the bonding between people and institutions stronger. They also reduce resistance and could help to increase teacher self- esteem. The faculties participate in the curriculum changes and in the improvement of the assessment methodologies. A faculty development program must use a comprehensive approach and needs to develop individuals who will be able to provide leadership and play an important role in cultivating a strong teaching and learning environment; the program must create an encouraging climate that recognizes the faculty's role in the educational process. [7]

As per the National Medical Commission Competency-based medical education (CBME) also demands Checklist based assessment. We have developed and implemented the OSCE training workshop, A faculty development workshop an effort to equip the faculty to learn and create an OSCE faculty guide for assessment of skills acquired

This study was conducted to assess the effectiveness of training workshops (FDP) on OSCE upon knowledge and skill to conduct OSCE exams among faculty members involved in teaching learning and assessing UG and PG students and enhancing capacity building for the institution.

METHODS AND MATERIALS

This study was carried out to assess the effectiveness of the faculty development workshop on OSCE on knowledge and skill to conduct this exam among faculty members, who attended the workshop on OSCE. The objectives of our workshop were to provide a comprehensive understanding of OSCE fundamentals, to equip faculty to create authentic OSCE stations, to train faculty in fair assessment and effective feedback delivery, and to enable faculty to ensure and enhance the quality of OSCE assessment. The learning outcome of these workshops was to be able to create OSCE stations tailored to your department and to create and develop an OSCE question bank for the institute.

The Workshop included a general session on the overview of OSCE followed by brainstorming by faculty members regarding the implementation of OSCE as a part of summative evaluation. Then Template for making the OSCE station was shared with participants in terms of the objectives of the station, student instruction, faculty instruction, checklist, standardized patient instructions, and the setup requirement. The participants, divided into five groups, participated in an interactive hands-on experience. It was followed by conducting OSCE in different specialties and rotating the participant faculty through the OSCE stations. Followed by reflection and making their subject OSCE stations. Then the Post-test was performed after completion of the workshop using the same tools as a RetroPre test about the knowledge, skill, and importance of OSCE for faculty members before and after the workshop. Importance and skills were assessed on a scale of 1 to 5 with 1 denoting not important or skilled and 5 denoting very important and skilled. We also conducted focused group feedback and reflections were taken regarding the implementation of OSCE and challenges in implementation and also how the OSCE workshop helped them to perform the OSCE exams in their department after 6 months.

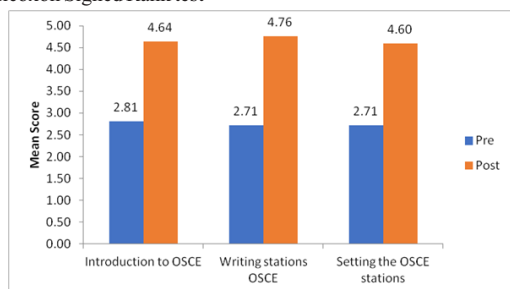
Data was entered in Excel and analyzed using Jamovi 2.3.28. Qualitative data was summarised as percentages and quantitative data as Mean(Standard deviation) / Median(Inter Quartile Range). Normality was assessed using the Shapiro-Wilk test and since the data was not normally distributed Wilcoxon Signed rank test was used to evaluate statistical significance

RESULTS

Table 1 – Importance: Pre and Post

	Introduction to OSCE		Writing stations OSCE		Setting the OSCE stations	
	Pre	Post	Pre	Post	Pre	Post
Mean(SD)	2.81(0.99)	4.64(0.66)	2.71(1.07)	4.76(0.48)	2.71(1.11)	4.60(0.86)
Median(IQR)	3(2-3)	5(4-5)	3(2-3)	5(5-5)	3(2-3)	5(5-5)
p*	<0.001		<0.001		<0.001	

*Wilcoxon Signed Rank test

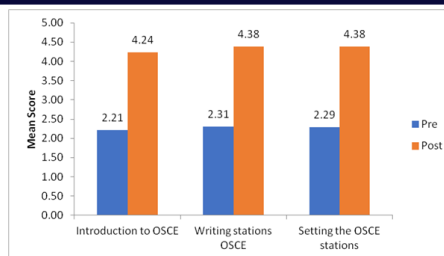


There was significant improvement in the perception of importance of various aspects such as introduction to the topic, writing OSCE stations and setting up these stations.

Table 2 – Skills : Pre And Post

	Introduction to OSCE		Writing stations OSCE		Setting the OSCE stations	
	Pre	Post	Pre	Post	Pre	Post
Mean(SD)	2.21(0.78)	4.24(1.05)	2.31(0.87)	4.38(0.88)	2.29(0.89)	4.38(0.91)
Median(IQR)	2(2-3)	5(4-5)	3(2-3)	5(4-5)	3(1.25-3)	5(4-5)
p*	<0.001		<0.001		<0.001	

*Wilcoxon Signed Rank test



There was a significant improvement in the skills related to various aspects such as introduction to the topic, writing OSCE stations, and setting up these stations.

Qualitative Analysis Of Feedback & Reflections

As per NMC guidelines, OSCE as an assessment tool is part of the CBME curriculum. The faculty who got trained felt the need to sensitize students about OSCE. They brought out many challenges in the formation of OSCE Stations like manpower and time. Though OSCE, as an assessment method will make a good clinician out of our students, understanding and learning skills for making an ideal OSCE station, require more training and hand-holding. The training imparted through training the trainer helped them learn how to set up OSCE and make a checklist for assessment. Many faculty felt they learned the new terminologies for what they were already experimenting.

They found this training is useful but many more required to develop OSCE bank. We can check communication skills and do proper time management by developing OSCE bank.

The faculty also recognized the need to keep pace with newer modalities of the teaching-learning process and undergo training for making OSCE stations. The training helped them to implement OSCE in their department. More OSCE workshops are needed to train teachers so that they become competent in OSCE.

DISCUSSION:

FDP Helps the teacher to equip their knowledge & skill in different areas of domain like research and teaching.[8]. FDP on OSCE helps in the sensitization of curricular change and its acceptance. Criticisms of the OSCE have arisen in the past. This can lead to difficulty for faculty as they aim to drive students towards concentrating on the entirety of the curriculum.[9] To ensure success in the examination, students partake in ward-focused learning activities such as clerking for a patient or performing a specialized physical examination. [6] OSCE is a reliable and valid assessment tool in medicine for evaluating medical students for their clinical practical assessment.[10] Validity is ensured by good blueprinting, using standardized checklists with itemization of each task, and using a multi-modality OSCE. Preparing a two-dimensional matrix with one axis enlisting the competencies to be tested and the other axis comprising the conditions upon which the competencies will be demonstrated is recommended. It is important to ensure that adequate skill-based stations keeping in mind the cognitive level of the examinees are included. Standardized patients, trained examiners, well-designed stations, and appropriate scoring standards are needed to ensure the reliability of OSCE. [11] FDP on OSCE is a challenging task and is a need of the hour as all faculty play important roles for the same and senior faculty should guide junior faculty for the same.[12] We describe how a workshop on faculty development or training the trainer in OSCE has shown a significant improvement in post-test scores, signifying better knowledge about OSCE and its implementation. Many studies have shown that TTT workshops are an effective training tool for continued medical education among healthcare professionals in several fields of education and disease management. [13-16] A remarkable feature of this workshop was capacity building in implementing the OSCE assessment method to assess our Undergraduate and post-graduates. This methodology allowed the participants to apply the learned material through discussion with the facilitators and granted them the opportunity to ask questions for any further clarifications. At the clinical level, expert-delivered workshops improved clinicians' ability to implement empirically supported treatment approaches when compared to self-study.[17]

There was a significant improvement in our post-test results from the pretest in all three components i.e. introduction/ knowledge, writing the station, and implementing OSCE in mean and median with a

significant p-value for all three components. Also, There was a significant improvement in the post-test ($M=16.6$, $SD=2.55$) conducted at the end of the workshop as compared to the mean of the pre-test ($M=13.75$, $SD=3.04$, $p=0.00$). [$N=8$] in a study by L Venkateshan et al. [18] These findings are consistent with a study conducted by El-Khoury et al (2012), who reported improvement in knowledge scores of OSCE in post-test ($M=8.6/12$) than in pre-test ($M=6.4/12$).[19]

CONCLUSION-

Objective Structured Clinical Examination (OSCE) is one of the newer modalities of assessment that have gained credibility because of its improved quality over traditional clinical examination. Teachers must be trained and familiar with the new assessment principles and methods of assessment that have attendant high psychometric properties. This Faculty development workshop on OSCE has helped to train the trainers in not only their knowledge about this assessment tool but also enhanced their skills to conduct the OSCE for undergraduate as well as postgraduate students. It has helped in capacity development for institutions in implementing the OSCE program.

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