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Perception of MBBS Students about Effectiveness of Modified Unobserved Anatomy OSPE Due to COVID-19 Restrictions

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ABSTRACT

Introduction: In COVID-19 pandemic, whole of the medical education faced a paradigm shift. Majority of the medical schools shifted their academics online but fair conduction of assessments was still in question. Around the world, many techniques were applied and one was followed at University Medical and Dental College, Lahore (UCMD).
Aims & Objectives: To assess the perception of students about modified version of OSPE (displayed on multimedia) so that to implement the same protocol in future by meeting the SOPs without affecting the academics.
Place and duration of study: The study was carried out at UCMD, Lahore in year 2021 and was of 6 months duration.
Material & Methods:150 students each from first and second year MBBS classes participated in this study. After following the strict SOPs of COVID-19, the students were settled in an auditorium and OSPE was displayed on multimedia screen instead of moving from one station to another as done previously. Feedback was taken from the students after the exam.
Results: Response from the students was recorded and percentages were calculated which showed that majority of the students appreciated this modified version of OSPE.
Conclusion: This study proved that modified Anatomy OSPE was an effective tool to grade the students without academic disturbance which was imminent in global pandemic and this method can be adapted henceforward.

Key words: COVID-19, Anatomy, Modified OSPE, Student's perception

INTRODUCTION

In an outcome-based learning, curriculum is first designed, keeping in view the outcomes expected from the students after which assessment is mapped out.[1] Assessments at regular intervals play a very important and effective role in understanding of the subject. For this both knowledge and skill based assessments play pivotal role.[2] An exam must always fulfil the criteria of being reliable, valid and feasible.[3] Anatomy is a vast subject with multiple subdivisions like general anatomy, gross anatomy, embryology and histology, which makes its assessment a tedious and time consuming task.Traditional method, used to grade students is table viva which does not fulfill all the targets of assessment like knowledge, skill, motivation and comprehension, thus meeting only few learning objectives. In addition to viva, objectively structured questions have been proved as effective tool for practical examinations. Objectively structured practical examination (OSPE) is a derivative of objectively structured clinical examination (OSCE). Harden introduced OSCE for final year clinical assessments in Dundee University in 1975 and since then, it has been used as a well-accepted tool for assessing the practical knowledge of students in their examination. The main advantage of OSPE is that it aids the students to refine their integrating skills to work as a successful clinician. It not only evaluates the knowledge but also gauges competency and psychomotor skills of medical undergraduates.[4] OSPE targets "shows" and "does" level of Miller's pyramid whereas other modalities of assessment aim at "knows" and "knows how" competency level.[5] It has been proven as a reliable method for both formative and summative assessments for undergraduate students.[6] Construction of OSPE questions and its execution both play an important role to make it more valid and dependable for evaluating students.[7]
In a study conducted by Rokade Mane in 2019, OSPE is a preferred tool of examination by students as compared to table viva.[8] According to students and teachers , OSPE is more acceptable because it is fair, valid and an unbiased assessment method in comparison with traditional table viva.[9] In 2016, a

study was conducted where students termed OSPE as the most systematic and an effectual tool for assessing the skill and knowledge of histology.[2] Students also showed a positive approach for OSPE in contrast to conventional practical examinations for subjects of hematology and physiology. They considered OSPE an equitable and unprejudiced way to score better as it applies both their knowledge and skill.[10, 11]

It was concluded in research formulated in Bahria University Karachi that it is important to assess students by both methods, OSPE and Viva voce. Viva voce bears equal significance because it is the only way to evaluate the communication skills, interpretation of knowledge and student's confidence level.[1]

There is very limited literature about digital or virtual OSCEs in comparison with traditional OSCEs. Courteille and colleagues in 2008 first tried virtual OSCE station in order to help healthcare students to interpret and evaluate a patient's virtual history using videos and text.[12] Recently, a study was done in 2018 to evaluate the effectiveness of virtual OSCE in assessing the students and obtained positive results. It was shown that virtual OSCE is a better and effective option for assessment in combination with online teaching.[13]

Medical colleges faced immense challenges worldwide during COVID-19 pandemic. It was necessary for all the students to continue their scheduled studies without any delay. Final year is the most demanding year in MBBS as students enter the clinical field after clearing it. During those critical days of global pandemic, the first modified OSCE for Final year medical students was introduced in UK with proper hygiene and social distancing that opened new avenues of practical examination resulting in similar practices in other countries as well.[14]

In University College of Medicine and Dentistry (UCMD), University of Lahore, Virtual OSPE for basic sciences and OSCE for clinical subjects was successfully introduced in 2020 during lockdown. After recommencement of medical institutions, onsite modified OSPE was started in UCMD. OSPE was divided into two components, observed and unobserved. Unobserved OSPE was displayed on multimedia for all the students at the same time after ensuring all SOPs of COVID-19 with proper social distancing.

The present study is designed to obtain perception of 1st year and 2nd year MBBS students about this modified version of unobserved OSPE in UCMD, University of Lahore. Results of this study will help in implementation of this version of OSPE in coming days as a time saving tool for both students and teachers. bringing in better grades. Thus, it can improve the quality of assessment and help students in gaining better grades.

MATERIAL AND METHODS

A cross-sectional descriptive study was conducted in the Department of Anatomy, University College of Medicine and Dentistry, Lahore after approval from the College Ethical Committee (ERC 25/20/12; Dated: 9/12/2020). Duration of the study was 6 months. A total of 150 students each from 1st year and 2nd Year M.B.B.S, who were exposed to the previous method of OSPE were subjects for this study. Written informed consent was taken from each participant.

The students were seated in the auditorium, keeping in view the SOPs of COVID-19. 11 OSPE stations were displayed on multimedia screen. Each station contained 6 spots, 4 minutes each(44mins/station). Every station was designed by the experts of the concerned subject. Views and perception of students were assessed after the completion of the examination by a valid standard questionnaire having close ended questions.

Statistical Analysis: Response of the students was analyzed using SPSS 22 and data was interpreted by using frequency and percentages for both first and second-year students. Chi square was applied in appreciating the differences in opinion of both classes as well as male and female population.

RESULTS

Out of 300, a total of 248 students from first and second year responded to the questionnaire. Average age of the respondents was 20.5 years (20.54 +/- 1.02). Of these respondents 125 (50.4%) were from first year MBBS (99% Confidence interval) while 123 (49.6%) were from second year MBBS (99% Confidence interval). From the total 136 (54.8%) were male and 112 (45.2%) were female. Response of the students for each question is summarized in percentages in Table-1 &2.

Sr. No.	Objectives	Yes N (%)	No N (%)
1	The Questions asked were relevant	240(96.8%)	8(3.2%)
2	Sufficient time was given to students	241(97.2%)	7(2.8%)

3	OSPE is fair compared with old method	215(86.7%)	33(13.3%)
4	OSPE is easier to pass	161(64.9%)	87(35.1%)
5	OSPE should be followed as method of assessment in future	208(83.9%)	40(16.1%)
6	Effects of OSPE: Helps to improve	208(83.9%)	40(16.1%)
7	Provides chance to score better	208(83.9%)	40(16.1%)
8	Less stressful	164(66.1%)	84(33.9%)
9	Makes student think in more than one way	202(81.5%)	46(18.5%)
10	Eliminates bias	211(85.1%)	37(14.9%)

Table-1: Response of students to each question

Respondents		**1st Yr**	**2nd Yr**	**p-Value**	**Male**	**Female**	**p-Value**
Sr. No.	**Objectives**	**Yes (%)**	**Yes (%)**		**Yes (%)**	**Yes (%)**	
1	The Questions asked were relevant	96.80	96.70	0.982	96.30	97.30	0.658
2	Sufficient time was given to students	96.80	97.60	0.718	97.10	97.30	0.901
3	OSPE is fair compared with old method	91.10	83.70	0.084	84.60	90.90	0.136
4	OSPE is easier to pass	54.50	76.40	0.00	65.40	65.50	0.998
5	OSPE should be followed as method of assessment in future	86.90	82.90	0.387	82.40	88.10	0.214
6	Effects of OSPE: Helps to improve	87.90	80.50	0.11	81.60	87.40	0.216
7	Provides chance to score better	81.30	87.80	0.158	82.40	87.30	0.288
8	Less stressful	56.80	75.60	0.002	66.20	66.10	0.986
9	Makes student think in more than one way	83.10	80.50	0.6	82.40	81.10	0.797
10	Eliminates bias	82.90	88.60	0.201	82.40	90.00	0.088

Table-2: Response of first year and second year MBBS students of UCMD about modified version of OSPE.

DISCUSSION

With the advancement in the field of medical education, innovative teaching and learning methodologies are being devised for better learning outcomes in undergraduate medical education.[15] Feedback from the students is an important basis for improvement in medical education.[8] Perception of students can reform teaching and assessments.[12] They help in revising and reshaping the curriculum too.[8] Thus, this can be applied to facilitate comprehensive learning.[12] Hence, this study is designed to know the response of students about virtual OSPE. It raised important issues regarding pros and cons of this mode of examination. All students were previously taught the allotted topics in their small group discussion classes and skill labs. Students of both years considered this mode of assessment as a better alternative as compared to the traditional OSPE. Our participants opined those relevant questions were asked in the exam and sufficient time was given to attempt it. Previously students switched from one station to another which resulted in shortage of time.[3] This version of OSPE was not affected by examiner's mood, teacher's bias and was more just. All students must be assessed consistently and uniformly. This mode of examination is believed to eradicate favouritism and subjectivity.[8]

Majority of students were of the view that this mode was easier to pass and helps them score better in examination. It makes them think in more than one way and they get a better chance to improve themselves.

Assessments are a source of anxiety and stress. Increase in stress decreases the capability of a student to perform well in examination. So, students must be comfortable when attempting the exam and under minimal distress.[8] Our candidates voted that virtual OSPE decreases the stress load on their minds. Considering it easier to pass, majority of students were of the view that they showed better performance as compared to the older method and it should be followed as a method of assessment in future too, hence making it a dependable technique with potential to discriminate between high and low achievers.

Limitations:

The study was conducted only in one institute and involved only one subject (Anatomy). It can be carried out in multiple medical institutions and disciplines including clinical assessments.

CONCLUSION

The results of our study revealed that majority of students are in favor of modified OSPE than previously used method of OSPE conduction. The current study is a very initial step in the direction of modifying the traditional methods of OSPE examination for basic medical subjects.

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