

CRITICAL ANALYSIS OF PERFORMANCE OF MBBS STUDENTS USING OSPE & TDPE - A COMPARATIVE STUDY

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ABSTRACT

Numerous attempts are made to improve the reliability and validity of exams especially those used to assess medical skills and clinical competence. Present study was undertaken to compare the two methods of evaluation in examinations: OSPE and the TDPE (Traditional Practical Examination). Mean marks obtained by students in examinations conducted on basis of OSPE and TDPE were compared using students-t test. The p values obtained were < 0.0001 (highly significant in all the 3 PCTs conducted. Thus structured nature of the spotting was actually responsible for the better performance of the students in tests.

Key words: OSPE, TDPE

INTRODUCTION

The objective structured examination (OSE), with its clinical (OSCE) and practical, non-clinical (OSPE) components, is nowadays used all over the world due to its reliability, validity and practicability.¹⁻³ The OSE consists of a series of tasks, called stations, around which the examinees are asked to rotate. At each station the student is required to perform a clinical task or make some decision. Stations might involve examining patients, technical procedures or data interpretation. The examiners are provided with a checklist to score the performance of the candidate for the different operation that should be performed for each specific task. This approach was introduced to avoid the disadvantages of the traditional clinical examination and the inadequacies of the long-case formats that are restricted to one patient or to one examiner introducing bias.³⁻⁴

For years the traditional methods of evaluation is being practiced in the Medical Colleges.

Department of Community Medicine conducts spotting, viva voice and a short statistical exercise as a part of their practical examination. The method of examination is subjective. Some of the problems involved in conventional practical examination include patient and examiner variability significantly affecting the score. Specifically viva voice depends upon the examiners thinking, perception and mood. At times they are judgmental and biased towards some students and give them marks considering their overall previous performances.

Yet another important question Juvenal always remains, who will guard the guards? All the reforms or criteria for good evaluation cannot pay dividends until the basic modus operandi of imparting education is thoroughly questioned. Present study was undertaken to compare the two methods of evaluation in examinations: OSPE and the TDPE (Traditional Practical Examination).

METHODOLOGY

Community Medicine is subject of M.B.B.S. curriculum up to seventh semester. In the present study students of Pre Final MBBS (main batch) of Sri Aurobindo Institute of Medical Sciences were included. The study was single blinded. Topics to be asked in the tests were covered thoroughly and it was taken into consideration that none of the previously asked topics were repeated in TDPE and OSPE. Based on those topics three Part Completion tests (PCT) were conducted. There were 75 students but only 68 had given all the three PCTs hence the scores of these 68 students were included in the study. Each of the test consisted of TDPE as well as OSPE, each carrying 20 marks. The

marks obtained in each of the test were entered on the Microsoft excel sheet. The difference between two means was compared by applying unpaired t test to find out whether the difference in the marks obtained was due to the objectivity of the examination.

RESULTS

Unpaired t-test was applied to compare the results of all three tests which were categorized into TDPE and OSPE, the. The p values obtained were < 0.0001 (highly significant in all the 3 PCTs conducted. Null hypothesis was hence rejected and alternate hypothesis accepted. The results were computed with 95% confidence interval.

Table 1: Distribution of Marks Obtained in Three PCT's

Statistical Variables		PCT Marks (Out of 20)	PCT Marks (Out of 20)	PCT Marks (Out of 20)
Mean Marks	TDPE	9.13	9.08	9.14
	OSPE	13.75	13.53	13.57
S.D.	TDPE	1.50	1.37	1.48
	OSPE	2.48	2.49	1.69
S.E		0.35	0.34	0.27
C.I.		3.92 - 5.31	3.70 - 5.13	3.89 - 4.96
P value		< 0.0001	< 0.0001	< 0.0001

DISCUSSION

Rahman N et al did a similar study to evaluate the competency of Objective Structured Practical Examination (OSPE) as an assessment technique compared to Traditional Practical Examination (TDPE) in assessment of laboratory component of physiology, the results of Physiology practical examination of 400 students from 4 Medical Colleges, two Government and two non Government (Dhaka Medical College, Mymensingh Medical College, Bangladesh Medical College, Uttara Women's Medical College) under Dhaka University were studied. Students' performance in OSPE and TDPE was compared in the department of physiology, Dhaka Medical College. The mean score obtained in OSPE was 77.72±0.66 and found significantly higher than that for TDPE (64.44±0.61).

Again mean scores achieved in OSPE were compared among different Medical Colleges and significant difference was noted. In OSPE, male students achieved significantly higher score than that of female students, especially in responding question station. The outcome of the

present study thus indicates that OSPE is a better choice as an assessment technique over the Traditional method measuring wide range of practical skill. It may be concluded that it is important for competency based performance discrimination and it also helps improving students performance quality in laboratory exercise.

A single examination does not fulfill all the functions of assessment. A similar study was undertaken by Abraham et al in Melaka Manipal Medical College Manipal to determine the reliability and student satisfaction regarding the objective structured practical examination (OSPE) as a method of assessment of laboratory exercises in physiology before implementing it in the forthcoming university examination. The present study was undertaken in the Department of Physiology of Melaka Manipal Medical College, Manipal Campus, India. The Bland-Altman plot showed that approximately 63% of the students showed a performance in the scores obtained using the OSPE and TPE within the acceptable limit of 8; 32% of the students scored much above the anticipated

difference in the scores. Feedback indicated that students were in favor of the OSPE compared with the TPE. Feedback from the students provided scope for improvement before the OSPE was administered for the first time in the forthcoming university examination.

Roy V, Tekur U, Prabhu S. did a comparative study of Conventional practical examination versus objective structured practical examination in pharmacology practicals. The scoring in the OSPE was significantly better than in the conventional system. The average scores of students were significantly higher with OSPE (33.1 *vs.* 28.8) with 28% students scoring more than 75% marks whereas only 4% scored more than 75% with the conventional evaluation. Students rarely get more than 70-75% in the conventional evaluation system, as marks are given in a subjective manner based on the teachers' discretion and teachers may set their own limits for evaluation.

CONCLUSION

Practical examination is an important component of evaluation in the medical curriculum. However, evaluation of students is not easy if the criteria of objectivity, uniformity, validity, reliability and practicability have to be met. It is to be concluded after completing the observation and statistical analysis of the marks attained in the three consecutive tests that the alternate hypothesis has to be accepted since p value came out to be less than 0.05. This shows that the structured nature of the spotting was

actually responsible for the better performance of the students in tests.

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