

Research Article

Assessment of perception for objectively structured viva voce amongst undergraduate medical students and teaching faculties in a medical college of central India

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ABSTRACT

Background: Oral examinations are used as a mode of assessment of medical students. There are many deficiencies and biases in traditional viva voce. In view of minimizing deficiencies and biases this study was conducted with the objective of obtaining the perceptions of students and teachers about objectively structured viva voce (OSVV).

Methods: OSVV was conducted during formative assessment in Microbiology. 56 participants (50 students+6 faculties) were included. Feedback in the form of questionnaire (based on Likert scale and open ended questions) was obtained from all the participants. All faculties felt that the overall process was better than traditional viva voce.

Results: Students response to statements suggested a more positive than negative reception to this form of assessment. However there was variation in the response to different statements. 80-90% students agreed that time allotted was adequate and questions were easy to understand. 60-80% felt that this method a well-organized system that cover most of topics from the syllabus and will be helpful in enhancing performance in final examination. 68% students agreed that OSVV is an effective tool but they were not confident whether OSVV is better than traditional viva voce. 42% agreed and 38% were neutral in their opinion whether OSVV is better than traditional viva voce.

Conclusions: There is need of extensive ground work, training of teachers, orientation of students, practice to students by mock exams etc. A large sample than used here would be needed to substantiate this trend. OSVV should be tried in all other medical subjects and in large number of medical colleges.

Keywords: OSVV, Assessment, Traditional viva, Students, Perception, Questionnaire

INTRODUCTION

The learning cycle is a triad of educational objectives, instructional methodology and assessment. Amongst these assessment is a critical issue. Effective assessment tool for each domain of learning should be able to judge student's performance and progress through the course in a fair and objective manner.¹

Assessment process itself needs evaluation and refinement in the light of emerging insights. Oral

examinations are used as a mode of assessment of medical students. Viva voce has been an old traditional method of examining student's knowledge, basic concepts, comprehension level and also communication power in 'question and answer' format.² In traditional viva voce there may be variations in the time allotted to each student, number of questions asked, and difficulty level of the questions. Questions may not cover the entire syllabus. There may be some biases such as the "dove/hawk" effect characterizing some examiners as more lenient or tough than others, the "halo effect"

scoring an overall high or low mark based on carryover from a score in one section of the examination.^{3,4}

Goal of the study was to standardize the viva process by the use of checklist and pre-decided marking system. This can be achieved using objectively Structured Viva voce (OSVV). In OSVV checklist of questions to be asked are prepared in advance considering the marks allotted, must know/desirable to know/likely to know portion of syllabus, competencies to be measured. During examination the questions, answers and scores are noted by the examiners for each candidate, a feedback can be given to them later.⁵

If students are familiar with the structure and likely content of the assessment, anxiety can be greatly reduced through reducing the degree of uncertainty. OSVV is a new concept with very few studies done specially in medical students. This study is planned to find out whether OSVV can be a better tool for assessment of medical students.

Aim and objectives of the study were to introduce OSVV in formative assessment of II MBBS students and to obtain the perceptions of students and teachers about objectively structured viva voce.

METHODS

This study was conducted in Department of Microbiology, Jawaharlal Nehru Medical College, Sawangi (M) Wardha, Maharashtra, India during second PCT (formative assessment). It was Interventional study carried out from February 2015 to June 2015. They included 56 participants (50 students+6 faculties). Out of 156 2nd year MBBS students (2013 batch) 50 students were selected by systematic random sampling. All the teaching faculties of Department of Microbiology participated in the study. A written permission from the Institutional Ethic Committee was obtained before starting the study.

The participants were already sensitised (in three sessions) to the OSVV during their regular classes. The entire students were informed about the purpose of the study, OSVV procedure and how they would be judged. Departmental staff was also sensitised well in advance regarding OSVV. Informed consent of all the participants was obtained. They decided to conduct OSVV there are 15 marks allotted to viva voce in 2nd part completion test.

For OSVV standardized questions with answers were prepared by a group of faculty with inputs from all those who have participated in the teaching process. This structured viva question bank was prepared by covering all the topics of syllabus. Questions were from must know, desirable to know and nice to know areas. These questions were categorised in three levels of difficulty easy questions to probe recall, difficult questions to probe depth of knowledge and very difficult questions to probe

application of knowledge. Uniform marking criteria was developed by discussing the accepted and unaccepted answers. This entire process required several rounds of discussions among examiners. 22 question sets with expected answers were prepared. Structured mark sheet was designed. The structured question set cards and structured mark sheets were validated by faculty of school of health professional education and research.

Questionnaire to assess the perception of students and faculties was prepared. It included questions based on Likert scale and open ended questions to know the views regarding OSVV. Questionnaire was validated from faculties of school of health professional education and research.

During II PCT practical examination selected participants faced OSVV after finishing all exercises including traditional viva voce. The entire students were once again informed about the purpose of the study, OSVV procedure and how they would be judged. Lottery system was adopted for drawing the question card, which was drawn by the students themselves. Total 9 minutes were given to each student, 1 minute to read the questions and 8minutes to answer the questions.

Marks distribution was as follows- Total marks 15, 6 easy questions each 2 marks, 1 difficult question 2 marks and 1 very difficult question 1 mark. Two examiners sat together and assess the students. Both the examiners (Examiner II and Examiner III) were provided with standardised mark sheet. Question set number of each student was noted and viva recorded. Feedback in the form of questionnaire was obtained from all the participants. Data was analysed by non-parametric tests.

RESULTS

Statistical analysis of the questionnaire filled by students and faculties was done. All faculties felt that the overall process was better than traditional viva voce. They found preparation of questions and model answers labour intensive. But if repeated sessions will be conducted and groundwork in preparation of question set cards done the OSVV can be implemented successfully.

Student's response to questionnaire

Fifty students (32 females and 18 males) participated in the study. Table 1 and 2 shows students' response to the statements using Likert scale and open ended questions. The response to statements suggested a more positive than negative reception to this form of assessment. However there was variation in the response to different statements. There was an over velming recognition by 80-90% students that Time allotted was adequate and Questions were easy to understand (statement 4, 5). There was also agreement 60-80% that this method is well organized system that Cover most of topics from the syllabus and will be helpful in enhancing performance in

final examination (statement 1,2,3,6). 68% students agreed that OSVV is a effective tool but they were not confident whether OSVV is better than traditional viva

voce. 42% agreed and 38% were neutral in their opinion whether OSVV is better than traditional viva voce.

Table 1: Students’ responses to the OSVV (based on likert scale) [N=50].

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean score (1-5)
						SD
This is well organized system	2%	2%	20%	56%	20%	3.90 0.8144
Cover most of topics from the syllabus	2%	4%	20%	52%	22%	3.88 0.8723
Questions were from all difficulty levels	2%	8%	24%	56%	20%	3.74 0.9435
Time allotted was adequate	0%	0%	14%	56%	30%	4.16 0.6503
Questions were easy to understand	2%	2%	14%	52%	30%	4.06 0.843
This will be helpful in enhancing performance in final examination	4%	4%	32%	26%	34%	3.82 1.0821
OSVV is better than traditional viva voce	6%	14%	38%	20%	22%	3.38 1.1586
OSVV is an effective tool	0%	10%	22%	50%	18%	3.76 0.8704

[Mean score was calculated on the basis that 1 - Strongly disagree; 2- Disagree; 3- Neutral; 4- Agree; 5- Strongly agree].

Table 2: Faculties and students comments about OSVV in open ended questions.

Questions	Answers
Advantages of OSVV over traditional viva voce	No partiality; Enough time to recollect; No cross questioning; Transparency and fairness of exam; Encourage deep learning
disadvantages of OSVV over traditional viva voce	No scope for consideration; No Hint or clue
Do you feel that the OSVV can be introduced in formative assessment? Why?	No in 14(28%). The most common reasons given are Questions specific and lower the chances of getting marks, time bound; Yes in 33 (66%). The most common reasons given are equal assessment of all, Questions Better; understood by reading, less time consuming; Neutral in 3 (6%).
How this system can be improved?	Giving clues at time; Number of questions to be increased or giving options between the questions; Training of staff and students (a mock).

DISCUSSION

Most of the medical colleges in India still conduct the viva by traditional method. Few studies mostly in the subjects of first MBBS were done to know the perception and performance of students in SOE. ^{2,4,5,11,12} The present study was conducted to introduce OSVV in 2nd MBBS formative assessment of Microbiology and to understand their perspective on OSVV.

A number of lessons were learnt during development of protocol, performing interventions and from the results that could help in further organisation of OSVV. The

greatest amount of time and efforts applied in the whole exercise was the development of question sets and answers. But this was ground work, the benefit of which will be seen in the subsequent years. In the present study the student’s perspective regarding SOE was very encouraging with students considered SOE more reliable method of assessment and students were comfortable with it. Students felt that it covered the complete syllabus, considered that it explored the knowledge of the subject. All believed that the luck factor was minimised. Similar findings were reported in other Indian studies done in the subjects of physiology. ⁴ Anatomy and biochemistry. ^{9,12}

Final year MBBS students from Islamabad found it better in terms of relevancy of questions to course, comfortable environment of viva room, appropriate time to answer etc. They also mentioned that in traditional viva there is demotivation and bias during viva.⁸

From response to questionnaire it was evident that they were overall happy with the OSVV experience. But they were confused whether OSVV is better than traditional viva voce which they are facing since first year. This emphasises the need of extensive ground work, training of teachers, orientation of students, and practice to students by mock exams etc. This finding contradicts finding of a study in physiology where student opined that OSVV is better than traditional viva.⁴

6% students fail to opine on whether OSVV can be introduced in formative assessment and 28% students opine that it should not be introduced. The most common reasons given were questions specific and lower the chances of getting marks, time bound. This may be because of fear for change among students. We can try to obviate this by trying some modifications in the protocol and following suggestions like Number of questions to be increased or giving options between the questions, giving some clues and last but not the least sensitisation and practice to students.

In OSVV, use of lottery system, questions of equal difficulty level, standardised mark sheet and equal time to each student helps in minimising the errors in traditional viva. This shows that OSVV increases objectivity and reduces subjectivity as compared to traditional viva. OSVV should be tried in all other medical subjects and in large number of medical colleges.

CONCLUSION

There is support from MBBS students and teachers to OSVV. It provides an opportunity to measure how well students can apply knowledge rather than remember facts. It motivates many students to prepare harder than the traditional viva to which they have become accustomed. But there is large amount of preparatory work involved in setting up the protocols and question bank. This is compensated by reduction in time spent during examination. Once approved the same OSVV material can be used in subsequent years. A large sample than used here would be needed to substantiate this trend.

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