Acta Biomedica Scientia
e - ISSN - 2348 - 2168
Print ISSN - 2348 - 215X
www.mcmed.us/journal/abs
Research Article

STRUCTURED ORAL EXAMINATION VERSUS TRADITIONAL VIVA: A COMPARATIVE STUDY AMONG FIRST-YEAR MEDICAL STUDENTS IN PHYSIOLOGY

Dr. Devi Priya T[1], Blessy V[2]

[1]Assistant Professor, Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry-605502, India.
[2]Assistant Professor, Department of Biochemistry, Prathima Relief Institute of Medical Sciences, Nagunur, Karimnagar-505417, India.

ABSTRACT

In many medical centers, people still use a conventional oral test to assess patients, but it has drawbacks since it is not standardized, objective or as reliable as other methods. Because several faculty members participate, the examination may take varying amounts of time and cover different types of material for each student. By arranging oral exams following a routine format, their effectiveness as assessment tools goes up. We designed the current study to introduce a structured oral exam (SOE) for medical students in Physiology and to examine the process using feedback from both students and faculty. The usual first-year oral exam was used to evaluate all 100 students. By using a questionnaire with Likert items, we assigned values to all answers provided by the workers. The faculty picked the main themes for the oral exam. Students were told ahead of time how the viva would take place. The faculty compiled a list of specific questions and the matching answers for the planned interview which were checked and confirmed together beforehand. The students were surveyed again after the examination to obtain their experiences. Using a t-test, we analyzed the data from the survey using pairs of data. The answers to the questionnaires indicated that students enjoyed structured oral exams more and found them better than former tests. A difference was found to exist (p=0.0001) in the way questions were asked, lessons covered and the decrease in student anxiety between both approaches. Many professors believe that using a planned system for oral examinations avoids bias, relies less on luck and results in unified, fair questions. Making the oral examination part of the exam process may help it become a superior evaluation method, especially as the blueprint continues to improve.

Keywords:- Structured Oral Examination, Medical Education Assessment, Student Feedback, Standardization Reliability.

Access this article online		
Home Page: **www.mcmed.us/journal/abs**		**Quick Response code**
Received:**25.06.2015**	**Revised**:12.07.2015	**Accepted**:15.07.2015

INTRODUCTION

For many years, oral examinations have been a way to evaluate medical students. In a traditional oral exam, the examiner asks questions and the candidate gives their answers. This way of testing allows examiners to understand students' knowledge and test their ability to explain it. Oral assessments are chosen mainly because they can be changed and used to assess advanced mental skills [1]. Their strong face validity, flexibility and ability to evaluate clinicians on skills beyond those tested in writing are the main reasons they are valued [2]. Sometimes, educators have arranged vivas or short oral exams, for students who scored just under the passing point on their written tests [3]. When students have oral exams, they look more carefully into topics, receive one-on-one feedback from the examiner and become more

Corresponding Author: **Dr. Devi Priya T** Email:

interested in education [4]. At the same time, there are several difficulties connected to traditional viva exams. The atmosphere in the room can make students feel nervous and like they're talking to an opponent. Because traditional vivas are subjective, they often create anxiety for students. Questions differ greatly between examiners and may fail to cover all topics in the syllabus. Candidates tend to spend most of their time memorizing answers rather than solving actual problems. Because questions and their difficulty vary, the assessment has lost its fairness. Something else that happens is personal bias and carryover effects, with one student's performance affecting the teacher's view of the next student. An inverse link between oral exam achievement and anxiety was found by Holloway et al. [5]. There is a chance that 6% of test takers may be affected by the scoring changes, since some evaluators are stricter than others [6]. Moreover, the marks given by different examiners show that there is not consistent reliability among them [7]. Considering how many of these issues can arise, using structured oral examinations (SOE) instead of traditional vivas may solve many of them. The task includes arranging the syllabus accordingly, choosing the competencies to measure and making a complete list of exam questions. While getting SOE up and running takes time and effort at the start, it can then turn into an efficient and effective way to evaluate a company [8]. Because examiners write down the questions, answers and scores on SOE, they are equipped to give each candidate useful information on their performance. In Physiology, studies using structured oral examinations are still just beginning, so this study was needed to explore and test SOE as an assessment method for selected first-year medical students

MATERIAL AND METHODS

The participants were all first-year medical students (n=100). Research was carried out at the Department of Physiology of a medical college and its linked hospital. At the start, every student was assessed by means of a traditional viva as part of their internal evaluation. Four people provided a viva to each student without following a fixed checklist. The students gave feedback before the intervention through a questionnaire with items measured on a Likert scale. Students were asked to give their opinions on the viva in general, their anxiety, the friendliness towards students, if questions were always the same, all topics being covered, any language challenges, carryover effects and any perceived bias. The instructors who arranged and carried out the vivas also gave us feedback. Later, the faculty picked the topic of the structured oral during the Ph.D. which was focused on the sensory division of the central nervous system. Ahead of time, students learned what they would experience during the viva. All faculty members involved in curriculum delivery worked together to develop each question. All the topic areas had hard and easy questions included, with difficulty matching what students are expected to learn. From the list of questions, about 10 to 15 were shortlisted for the topic and a final checklist template was designed to use for the viva. Students came up with the right answers to these questions together as a group. All faculty members from the department who were at least an assistant professor participated in the process. The checklist is organized based on what the curriculum says students should know versus what they might or could learn. Among the questions were those that tested memory alone and also those demanding analytical thinking. Mathematical questions were set in order from straight forward to most difficult. Faculty members were sent the checklist before the viva and guidelines explaining what to assess and the behavior required. From there, we gave the first-year students the option of combining the structured viva with more traditional questions. We conducted the structured viva as its own practice session. While carrying out the exam, faculty members all used the checklist. Students who have finished their viva were kept separated from those who have not yet started. Ninety-three students participated in the outside viva. The structured oral examination was evaluated with feedback from students and faculty using a questionnaire. Because this study was for professional training and oral examinations are part of student testing, it was cleared by the institutional ethics committee.

RESULTS

The statistical analysis of the questionnaire revealed significant differences between traditional viva and structured oral examination (SOE) methods across multiple parameters. The mean scores for overall experience, student-friendly environment, satisfaction level, uniformity of questions, anxiety levels, syllabus coverage, and carry-over effect showed marked improvement in the SOE group compared to traditional viva. For example, the overall experience mean increased from 3.25 in traditional viva to 3.90 in SOE, with a highly significant p-value of 0.0001. Similarly, uniformity of questions showed a substantial increase from 2.20 to 3.40 (p=0.0001), indicating that SOE provided a more consistent and fair questioning process. Anxiety levels, which were higher in traditional viva (mean 3.15), decreased in the SOE group (mean 2.85), suggesting reduced student stress. Conversely, parameters such as gender bias, language barrier, and time allotted did not show statistically significant differences, indicating these aspects were perceived similarly across both examination formats. Further insights were obtained from the percentage distribution of students' responses based on the Likert scale. A

notably higher proportion of students strongly agreed that the overall environment was student-friendly in SOE (40.5%) compared to traditional viva (1%). The uniformity of questions was also strongly endorsed in SOE (50%) versus traditional viva (1%). Anxiety about questions was considerably less in SOE, with only 10% strongly agreeing to feeling anxious, compared to 35% in the traditional method. Most students felt the SOE covered the essential curriculum adequately, as 45% strongly agreed, compared to 3% in traditional viva. Despite these improvements, a significant number of students perceived gender bias and language barriers similarly across both methods, highlighting areas needing further attention. Time allocation was relatively consistent across both approaches, with a majority agreeing that equal time was given. Overall, the data supports that structured oral examinations enhance fairness, reduce anxiety, and improve student satisfaction compared to traditional vivas, underscoring SOE as a more effective assessment tool.

Table 1: Statistical analysis of the questionnaire

Question No.	Traditional viva Mean	Traditional viva S.D.	SOE Mean	SOE S.D.	t value	p–value
1. (Overall experience)	3.250	0.720	3.900	0.680	4.950	0.0001, HS
2. (Student friendly environ.)	2.600	0.480	3.220	0.530	6.250	0.0001, HS
3. (Satisfaction level)	2.420	0.610	3.110	0.520	7.100	0.0001, HS
4. (Uniformity of ques.)	2.200	0.540	3.400	0.740	10.100	0.0001, HS
5. (Anxiety levels)	3.150	0.650	2.850	0.710	3.980	0.0001, HS
6. (Syllabus coverage)	2.550	0.510	3.310	0.600	8.200	0.0001, HS
7. (Carry over effect)	2.800	0.720	2.550	0.600	3.900	0.0002, HS
8. (Gender bias)	1.680	0.630	1.600	0.550	1.100	0.270, NS
9. (Language barrier)	2.150	0.820	1.900	0.700	1.450	0.150, NS
10. (Time allotted)	2.850	0.590	3.000	0.670	0.850	0.400, NS

Table 2: % distribution of students' responses to various questions (based on Likert scale) in the questionnaire

Q. No.	ITEM	Strongly agree 4		Agree 3		Disagree 2		Strongly disagree 1	
		Trad. viva	SOE	Trad. viva	SOE	Trad. viva	SOE	Trad. viva	SOE
Q2	Overall environment was student friendly	1%	40.50%	75%	55.00%	22%	4.00%	2%	0.50%
Q4	There was uniformity of questions to all the students	1%	50.00%	38%	42.00%	55%	6.00%	6%	2.00%
Q5	Felt anxious/depressed about the questions	35%	10.00%	57%	58.00%	6%	22.00%	2%	10.00%
Q6	Viva questions covered all the must-know curriculum aspects	3%	45.00%	60%	50.00%	32%	3.00%	5%	2.00%
Q7	'Carry over effect' affected the viva performance	18%	4.00%	55%	46.00%	22%	46.00%	5%	4.00%
Q8	You felt that there was a gender bias	4%	1.00%	5%	3.00%	50%	60.00%	41%	36.00%
Q9	There was a language barrier in expressing their answers	7%	2.00%	12%	22.00%	48%	43.00%	33%	33.00%

Q10	Equal time was given to each student	10%	15.00%	65%	67.00%	20%	15.00%	5%	3.00%

Figure 1: Traditional Viva vs SOE Comparison, Mean Scores Comparison Across All Questions.

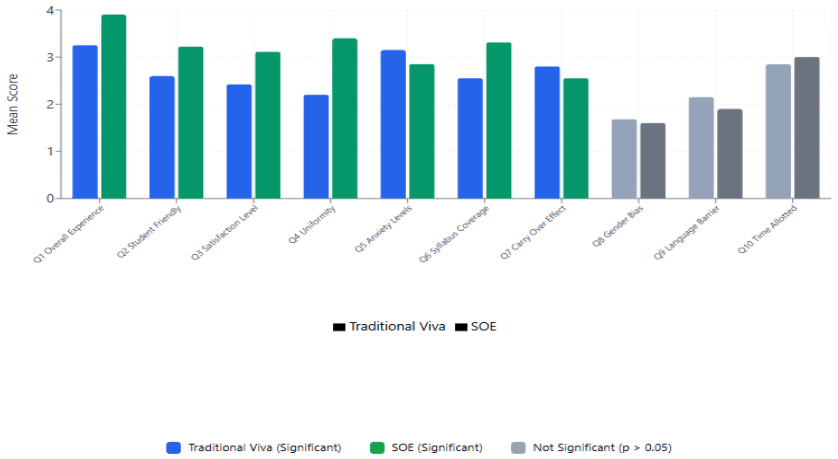
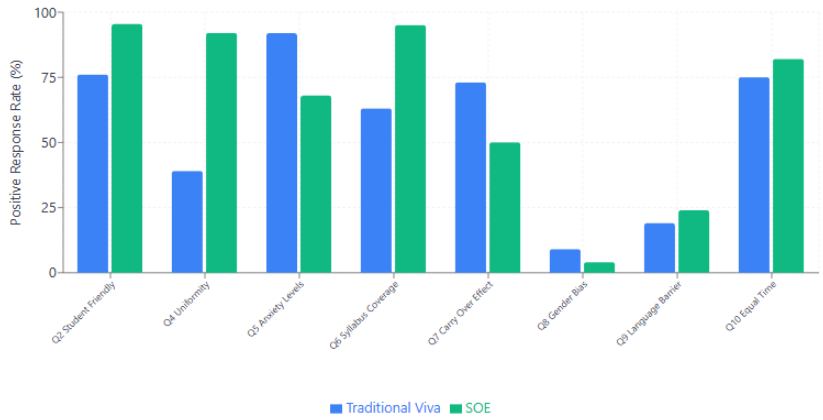


Figure 2: Student Response Distribution Comparison, Positive Response Rates: Traditional Viva vs SOE.



DISCUSSION

Using the oral examination, instructors are able to test students on all five parts of Bloom's taxonomy: knowledge, comprehension, application, analysis, synthesis and evaluation. In schools, oral tests are just used along with written work, rather than in place of it [10]. Despite doubts about the reliability of viva examinations, Sharmila Torke et al. were able to demonstrate that if these exams are set up and carried out correctly, by properly picked examiners, the results are quite reliable [2]. The authors found that students' scores in both theory examinations and vivas did not usually line up. As a result, they decided to carry out vivas just for students who had narrowly failed or earned distinction grades. Students in another anatomy class found the structured viva to be better than the regular style because it removed some risks and the chance for biased judgments [11]. Although a few institutions now use structured oral exams, there is not much new research on how students feel about SOE compared to OSCE exams [12]. OSCEs use multiple stations to assess if students can combine the information, abilities and attitudes gained through training [10]. Regardless, the majority of medical schools in the area keep using vivas in their traditional way. This exam occurs right during the final examinations and contributes 20 marks to your overall score which is according to the university curriculum. Many students feel anxious because the material to study is large and the examiners look very experienced. This study was designed to use structured oral examinations (SOE) with first-year medical students in physiology and to assess their preferences for

traditional and structured vivas. We tried to arrange the viva question management so that it followed the same process and was marked alike for all participants. Both types of assessment were evaluated by feedback from students. Because physiology covers so much, organizing the examination presentation was tough but made possible by the hard work of faculty. Open-ended responses from students [Table/Fig-1 and 2] show an overall happy experience with the SOE. Students reported that such sessions lifted their spirits and reduced anxiety, so they advised that these should be done more regularly. Benefit was found in the fact that every candidate answered the same questions, eliminating randomness and personal biases from the process. Several faculty members said they hoped to offer SOE for other material in physiology and would make changes to the question format. Both students and faculty seemed to be pleased with the efforts of the school. While preparing checklists takes effort to start, after they are made, structured vivas can be held successfully and continue for the benefit of students.

CONCLUSION

In conclusion, the implementation of structured oral examinations (SOE) in physiology proved to be a more reliable, fair, and student-friendly assessment method compared to traditional viva formats. SOE helped standardize the questioning process, reduced anxiety among students, and minimized bias and the luck factor inherent in unstructured exams. Feedback from both students and faculty was overwhelmingly positive, indicating acceptance and support for wider adoption of SOE across the curriculum. Although initial preparation requires considerable effort, the benefits of improved assessment quality and enhanced student confidence make SOE a valuable tool in medical education. Future efforts should focus on refining question blueprints and expanding structured assessments to cover broader topics.

REFERENCES

1. Wakeford, R., Southgate, L., & Wass, V. (1995). Improving oral examinations: Selecting, training and monitoring examiners for the MRCGP. *BMJ*, 311, 931–935.
2. Torke, S., Abraham, R. R., Ramnarayan, K., & Asha, K. (2010). The impact of viva-voce examination on students' performance in theory component of the final summative examination in physiology. *J. Physiol. Pathophysiol.*, 1(1), 10–12.
3. Wass, V., Van Der Vleuten, C., Shatzer, J., & Jones, R. (2001). Assessment of clinical competence. *Lancet*, 357, 945–949.
4. Rangachari, P. K. (2004). The targeted oral. *Adv Physiol Educ.*, 28, 213–214.
5. Holloway, P. J., Hardwick, J. L., Morris, J., & Start, K. B. (1967). The validity of essay and viva voce examining technique. *Br Dent J.*, 123(5), 227–232.
6. Raymond, M., Webb, L. C., & Houston, W. M. (1991). Correcting performance-rating errors in oral examinations. *Eval Health Prof.*, 14(1), 100–122.
7. Thomas, C. S., Mellsop, G., Callender, J., Crawshaw, J., Ellis, P. M., Hall, A., et al. (1993). The oral examination: A study of academic and non-academic factors. *Med. Educ.*, 27, 433–439.
8. Wiggins, M. N., & Harper, R. A. (2008). Implementing a structured oral examination into a residency program: Getting started. *Ophthalmic Surg Lasers Imaging*, 39(1), 40–48.
9. Bloom, B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.
10. Rahman, G. (2001). Appropriateness of using oral examination as an assessment method in medical or dental education. *J Educ Ethics Dent.*, 1(2), 46–51.
11. Kshirsagar, S. V., & Fulari, S. P. (2011). Structured oral examination – Student's perspective. *Anatomica Karnataka*, 5(2), 28–31.
12. Anastakis, D. J., Cohen, R., & Reznick, R. K. (1991). The structured oral examination as a method for assessing surgical residents. *Am J Surg.*, 162, 67–70.

Cite this article:
Dr. Devi Priya T, Blessy V. (2015). Structured Oral Examination Versus Traditional Viva: A Comparative Study Among First-Year Medical Students in Physiology. *Acta Biomedica Scientia*, 2(4), 339-343