

Students' And Teachers' Perception Of Structured Oral Examination

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Abstract: Background: Conventional Oral Examination entails variability in terms of sampling and scoring. Non uniform time allocation, environment and attitudes of both the examiner and the examinee are the other challenges. Hence, a study was undertaken to introduce Structured Oral Examination (SOE) in the subject of Pedodontics and Preventive Dentistry as formative assessment; and obtaining the teachers' and students' perception and acceptance of the same. Material & Methods: Following sensitization of teachers to this method, a protocol for conducting SOE was developed. A pre validated set of questions with scoring criteria was given to examiners, and they were randomly allocated 2/3 students by 'chit method'. Identical questions were posed in a fixed time frame to 27 student participants from III BDS posted in the department. Feedback was obtained from students and teachers, in the form of a questionnaire. Results: Overall, there was 100% satisfaction on part of students and teachers, with 100% agreement on elimination of bias with SOE. Conclusion: SOE was well accepted by students and teachers. Though this method requires elaborate planning and resources. SOE could be implemented and tested on a larger student/teacher population. [Lele G Natl J Integr Res Med, 2020; 11(6):17-21]

Key Words: COE, SOE, Student perception, Teacher perception

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Introduction: An assessment tool should be valid, reliable and objective¹. Viva voce, or oral examination is one of the tools used at both formative and summative levels in Dentistry^{2,3}. Oral examination, as defined by Joughin, is an "assessment in which a student's response to the assessment task is verbal, in the sense of being expressed or conveyed by speech instead of writing"^{3,4}.

The biggest advantage of oral examination as compared to other methods is that it provides a direct personal interaction with the student. It helps measure the students' capacity to formulate ideas^{5,6}, allows flexibility in asking questions as per the student's perceived level of understanding & depth of knowledge^{1,2,5} and helps in assessing professionalism and ethics (Wass et al., 2003)^{1,5}.

The conventional oral examination is used for examining students' knowledge, basic concepts, comprehension level and also communication power in "question and answer" format⁷. It also helps to test the student's attitude, professional competence and ability to perform under stress^{5,8}. However, this method entails variability in terms of sampling and scoring^{1,3,8,9,10}, which are the major drawbacks of this assessment tool. Its other limitations are: inconsistency in terms of questions asked, scoring, time allocation, along with environment and attitudes of both the

examiner and the examinee^{1,3,8,9,10,11}. Thus, a need was felt to reflect upon the concerns or challenges of conventional oral examination (COE).

Structured oral examination (SOE), a modified format of oral assessment, provides an equal opportunity as traditional viva examination to judge the knowledge and problem solving ability of every student appearing in the exams, is better accepted, and is reported to minimize bias and reduce luck factor^{4,8,11}.

Structured oral examination being a relatively recent concept, there were very few studies conducted on it, and hardly any in the subject of Pedodontics and Preventive Dentistry. So this study was undertaken with an aim of introducing Structured Oral Examination as an assessment tool for formative assessment and obtaining student and faculty perception regarding the same. Thus, the objectives of this study were: Introducing and conducting SOE, Obtaining Students' and teachers' acceptance and perceptions regarding SOE

Material & Methods: The study was conducted in the department of Pedodontics and Preventive Dentistry at Sinhgad Dental College & Hospital (Pune, India) in the months of March and April 2010. The project was a curricular requirement for the Certificate Course in Advanced Health

Sciences' Education and Technology conducted by Maharashtra University of Health Sciences (Nashik, India). The study was approved and given ethical clearance by the Institutional Review Board.

All teachers in the department agreed to participate in the study. Prior to the commencement of the study, they were sensitized to SOE (February 2010) by conducting a half day workshop. They brainstormed over identifying and deliberating on the drawbacks of the COE, and these were documented.

Next, a protocol for conduct of SOE was developed. The topics for the oral examination were decided. To achieve structure and objectivity, prioritization of the content was done, domain-specific objectives to be tested were identified and questions based on these were prepared. With inputs from all teachers, two sets of structured questions based on all the topics were finalized. The expected answers for these questions were also discussed. Each question was for two marks, and uniform scoring criteria of 2, 1 or 0 was decided based on the answers received. As all teachers from the department had participated in this exercise, with slight modifications, the final lists of questions with expected responses and scoring criteria were developed and validated.

Questionnaires to assess the perceptions of students and faculty to SOE were also prepared. These included single responses Yes/No type of questions to know their views. These questionnaires were validated by the faculty of Medical Education.

27 students of III year BDS during their second clinical posting in the department were included as participants. Traditionally, assessment of students at the end of every clinical posting includes COE and so these students had prior experience of assessment by COE during their first clinical posting.

On the first day of their posting, students were informed about this new method of examination, their doubts were cleared and as all of them were willing to participate in this study, written informed consent was obtained. During the course of their two weeks clinical posting in the department, students were assessed by both

methods of viva voce examination, i.e., COE and SOE, based on the same topics. The COE was conducted at the end of first week, and SOE at the end of second.

They were given the choice to decide on which of the two scores to be included for the internal assessment. The students' performance based on scores was not an objective of this study, as it aimed at understanding the students' and teachers' perception regarding this new method of assessment. The students were given a feedback about their performance at the end of SOE by their respective examiners.

On the days specified for conducting SOE, five examiners were assigned a 'station' each, which was marked as A, B, C, D and E. The students were asked to pick from chits marked A, B, C, D and E, and thus they were randomly allocated to examiners using 'chit method'.

This way, examiners conducted viva for 2 or 3 students each. They were asked to decide on a uniform time period for assessment, and they chose time periods of 15 and 20 minutes, and kept the duration of SOE constant for each student. The pre validated set of questions with the checklist for scoring criteria was given to the examiners. The students' scores were collected at the end of the SOE from all examiners.

After the conduct of SOE, students and teachers were given their respective questionnaires for feedback, which were to be answered by checking against 'yes' or 'no' for each question.

After these were collected, the students were complimented on their willingness to 'face' another examination besides the requisite one.

The teachers were also thanked for their participation in this study.

Results The data obtained from the feedback questionnaires was tabulated for individual responses and overall perceptions of students and teachers about SOE.

The feedback questionnaire for students' perceptions of SOE, comprising of 17 items, was summarized into eight domains (Table 1), while the teachers' 13 item feedback questionnaire was summarized into seven domains (Table 2).

Table 1: Student Perception Domains

Sn	Student Perception Domains	Percentage In Agreement
I	Elimination of bias by random allocation of examiners	100
II	Adequacy of time allocation	89
III	Coverage of all topics	89
IV	Clarity in questions asked	100
V	Attitude of the examiner was encouraging	90
VI	Exam atmosphere was Conducive/comfortable	97
VII	Experiencing anxiety during the oral examination	27
VIII	Overall satisfaction with SOE	100

Table 2: Teacher Perception Domains

Sn	Teacher Perception Domains	Percentage In Agreement
I	Elimination of bias by random allocation of examiners	100
II	Adequacy of time allocation	90
III	Coverage of all topics	100
IV	Uniformity in scoring	100
V	Elimination of bias in SOE	100
VI	As an examiner, their role/behavior was encouraging	90
VII	Overall satisfaction with SOE	100

Discussion: Owing to the perceived challenges and limitations of COE, SOE was introduced and conducted for III BDS students during their clinical rotation in the department of Pediatric and Preventive Dentistry. The objectives of this study were to check acceptance and obtain the perceptions of both students and teachers regarding SOE.

COE is conducted extensively in all specialties of Dentistry and is considered important because of its high face validity, flexibility and because it helps to assess what cannot be done in written exams⁹. But COE is criticized for being too subjective and being influenced by academic and non academic factors related to teachers and students¹. Moreover, the reliability of COE may be affected by various factors, such as the anxiety of the candidate, inconsistency of the examiner, and various situational factors⁹. Hence a need was perceived to introduce SOE, and check its acceptance.

The methodology used to develop the SOE was similar to one adopted by Dangre-Mudey G et al⁷ and Shenwai and Patil⁸. Adequate training of evaluators is reported to increase effectiveness of examination^{1,6,12}. After the workshop was conducted on SOE, the teachers had developed and validated the questions and scoring criteria. Thus, uniformity and structure were introduced in the oral examination. Hence, the teachers had expressed 100 % satisfaction regarding sampling

of questions and scoring when responding to their feedback questionnaire.

Based on their responses, it was observed that both students and teachers (100%) agreed that the 'chit method' for random allocation of examiners helped in elimination of any bias such as favourite teacher/student or comparison between students^{3,9}. It also ensured that a consistent number of students were examined by each teacher. There was less fatigue or mood variation on part of the teachers, since they examined 2-3 students each.

In COE, time allotted to students is inconsistent. Typically the first few students are questioned for longer periods of time, while towards the end, owing to examiner fatigue students are given hardly any time. As a result, marks are awarded based on just 2-3 questions asked, adding an element of uncertainty and chance¹. Utilizing a standard time frame for each student in this study was useful as 89% of students were satisfied with time allocation.

Since the teachers were expected to decide upon and limit the exam to predefined time, they were 'not annoyed by periods of silence' by the students during this period. The students were examined for a duration of 15 to 20 minutes each during the SOE, thus providing them equal opportunity^{9,11}. This time frame was possible because there were about 14 students in each batch, being assessed by 5 teachers. Conducting SOE for 15-20 minutes for each student may not

be feasible during the summative exam, as it is a resource intensive and time consuming exercise¹.

But it could be employed during the formative assessment. The other advantage of having a set time frame with a structured format was that 93% of the students felt that there wasn't too long a time interval between questions.

As the questions were structured and pre validated, 100% of the students responded that the questions were clear to them. In other studies on SOE, students opined that the questions asked were clear to them without any ambiguity in what was expected from them^{6,8}. Probably owing to the same reason, all the teachers, and 85% of the students felt that the examiner 'tried to find out what they knew'.

In COE, there are variations in sampling, number of questions and difficulty level of the questions asked^{1,5,8,10}. In the present study, since the questions were prevalidated and checklists for scoring were developed, all the examiners were satisfied with proper sampling of questions asked. This improved the objectivity, inter rater reliability and eliminated bias^{1,5,6,8,10}. While the teachers were 100% in agreement about the coverage of all topics, similar to the findings by Khilani et al¹, 89% of the students felt the same.

With COE, there are some biases such as the 'luck factor', or biases related to gender, personality, accent and vocabulary used⁶. Biases could also be due to knowledge, attitude (offering verbal/nonverbal clues and prompting), and mood of examiners¹. Most authors agree that structured examinations have less susceptibility to gender or cultural bias than unstructured examinations^{1,13}. The results of a study by Shaikh¹ also suggested Objective Structured Viva Examination to be more 'precise' and unbiased, without any discrimination, since pre validated questions were asked. All teachers in the present study agreed 100% that there was elimination of bias with SOE.

Lack of uniformity in scoring with COE is often due to "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, or an error of contrast^{1,2,7,8,9}. Use of descriptors, rubrics or criteria for answers can provide clear guidelines

on what is and is not an acceptable answer to the examiner's questions⁵. Marks awarded in SOE are objective, evidence-based as against overall (subjective) assessment-based award of marks in COE¹. In the present study, use of pre validated checklists for scoring criteria resulted in uniform scoring and there was 100% agreement amongst the teachers regarding this.

A limitation observed in the present study was that even though checklist for scoring criteria was provided, 2 teachers reported that they "had asked multiple questions to elicit one answer" and 3 admitted to providing "clues" in case the student couldn't answer. In spite of being sensitized to the concept of SOE, teachers might still fall prey to the habits of COE, with the 'good intent' of 'helping the student'. It is probably with more exposure and practice that such systems can be internalized and overall objectives of SOE can be achieved.

After agreeing to participate and attending the workshop on SOE, there might have been some reflection or introspection by the teachers in their role as examiners. They felt that their attitude/behavior as examiners was encouraging (90%). Likewise, the students' perception of the examiners' attitude was more than satisfactory.

All (100%) found the examiners to be courteous, who neither ridiculed them nor flatly contradicted their answers. 90% of the students felt that the attitude of the examiner was encouraging: they were patient and 'tried to find out what the student knew'.

The atmosphere during COE is often threatening and at times the dialogue takes the shape more of a confrontation than discussion^{5,8,10}, and this can at times be intimidating to the students⁸. In the present study, 97% of students felt that the exam atmosphere was conducive/comfortable.

81 % of the students felt the teachers were encouraging enough to receive their views and 93% opined that the examiners patiently listened to their answers without distracting them, and were not annoyed if they didn't answer.

However, even though the environment was made conducive, inherent apprehension related to examinations could not be completely ruled out. If students are familiar with the structure and likely content of the assessment, anxiety can

be greatly reduced through reducing the degree of uncertainty⁷. As reported by Hashim et al¹⁴ there was less anxiety amongst the students during SOE. Even though students were satisfied with SOE, 27% of the students experienced anxiety which could be attributed to the fact that all examinations are stressful^{5,12}.

Overall, there was 100% satisfaction on part of students and teachers with SOE. Similar results were reported in other studies where students did not perceive any threat with a new format of examination^{1,4} The results of this study show that SOE is acceptable to students and teachers.

Conclusion: SOE was well accepted by students and teachers. This method requires elaborate planning and resources. Questions with their scoring criteria could be prepared for the entire syllabus. It could be implemented and tested on a larger student/teacher population.

References:

1. Khilnani AK, Charan J, Thaddanee R, Pathak RR, Makwana S, Khilnani G. Structured oral examination in pharmacology for undergraduate medical students: Factors influencing its implementation. *Indian J Pharmacol* 2015;47:546-50.
2. SV Kshirsagar, SP Fulari. Structured Oral Examination-Student's Perspective. *Anatomica Karnataka* 2011,vol-5 (2), pg 28-31
3. Kiran Kumar Ganji. Evaluation of Reliability in Structured Viva Voce As a Formative Assessment of Dental Students. *Journal of Dental Education* May 2017; vol 81(5): 590-596.
4. Khakhkhar TM, Khuteta N, Khilnani G. A comparative evaluation of structured and unstructured forms of viva voce for internal assessment of undergraduate students in Pharmacology. *Int J Basic Clin Pharmacol* 2019;8:616-21.
5. M.H. Davis and I. Karunathilake. The place of the oral examination in today's assessment. *Medical Teacher*, Vol. 27, No. 4, 2005, pp. 294-297
6. Rahman G. Appropriateness of using oral examination as an assessment method in medical or dental education. *J Educ Ethics Dent* 2011;1:46-51.
7. Dangre-Mudey G, Damke S, Tankhiwale N, Mudey A. Assessment of perception for objectively structured viva voce amongst undergraduate medical students and teaching

faculties in a medical college of central India. *Int J Res Med Sci* 2016;4:2951-4.

8. Mrunal R Shenwai, Krishnakant B Patil. Introduction of Structured Oral Examination as A Novel Assessment tool to First Year Medical Students in Physiology. *Journal of Clinical and Diagnostic Research*. 2013 Nov, Vol-7(11): 2544-2547
9. Anita Verma, Neeraj Mahajan, Kena Jasani, Jitendra Patel. Evaluation & Comparison of Result: Conventional Viva Vs. Structured Viva. *Global Research Analysis*. May 2013, Vol-2 (5), pg 188-189.
10. Shaikh S (2015) Objective Structured Viva Examination Versus Traditional Viva Examination in Evaluation of Medical Students. *Anat Physiol* 5: 175. doi:10.4172/2161-0940.1000175
11. Shalini Salwan, Jagminder Kaur Bajaj and Poonam Salwan. Structured oral viva examination as an assessment tool in Pharmacology. *European journal of pharmaceutical And medical research* 2020;7(2): 554-559.
12. Ivan Perez H, Claudia Vergara R, Cristina Goens G, Paola Viviani G, Luz M Letelier. Students' perception comparing standardized and non standardized oral exams in internal medicine. *Revista medica de Chile* July 2015;143(7):841-846
13. Sean P Kelly et al. Learner perception of oral and written examinations in an international medical training program. *Int J Emerg Med* (2010) 3:21-26
14. Rizwan Hashim, Aisha Ayyub, Fatima-tuz-Zuhra, Sanobar Hameed, Salman Ali. "Structured viva as an assessment tool: perceptions of Undergraduate medical students". *Pak Armed Forces Med J* 2015; 65(1): 141-4

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