

# Appraisal of Objectively Structured Viva Voce as an Assessment Tool by the Medical Undergraduate Students through Feedback Questionnaire

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## ABSTRACT

**Background:** The viva voce along with its own strengths and weakness has still been used frequently as one of the compulsory tool in the summative assessment of medical undergraduates in majority of Medical Institutes in Pakistan.

**Aims:** To find out the perceptions of medical under graduate students regarding Objectively Structured Viva Voce as an assessment tool and appraise the differences in the opinion of male and female students regarding Objectively Structured Viva Voce.

**Methodology:** This cross sectional study was conducted at Shalamar Medical and Dental College Lahore, on 92 students (47 boys and 45 girls) of 1<sup>st</sup> and 2<sup>nd</sup> year MBBS in the month of July, 2018. Feedback in the form of questionnaire (based on 5 point Likert scale) was obtained from all the participants. The analysis of was done by using SPSS version 21, frequencies and percentages were collected and Chi-Square Test was applied.

**Results:** About half of the participants were satisfied with the fairness of Objectively Structured Viva voce (56%). Regarding coverage of wide range of critical area through viva questions, 45% of participants were somewhat satisfied, 26.5% were very satisfied. Majority of the participants (68%) were satisfied with the level of difficulty of the viva questions and with the time provided for answering the question. Structured Viva was a stressful experience for the majority of the participants as 44.6% were very satisfied and 28.3% were somewhat satisfied. More than half of the participants (57%) think that Objectively Structured Viva highlighted their weaknesses regarding knowledge. Significantly higher number of female students were satisfied with the capability of that Viva in coverage of wide range of topics and in highlighting strengths.

**Conclusion:** A fair majority of students showed their satisfaction regarding various aspects of Objectively Structured Viva Voce. However greater number of female students were satisfied with the competency of Structured viva voce in coverage of wide range of topics and in highlighting their strengths.

**Keywords:** Objectively Structured Viva Voce, Ranking, Medical Undergraduates, Assessment.

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## INTRODUCTION

The word *viva voce* is Latin in its origin meaning “with the alive voice” and it has been in use as oral examination tool since 1815<sup>1</sup>. Here in Pakistan viva voce is still considered an essential component in assessment process of medical undergrad students<sup>2</sup>.

The purpose of viva is to assess the comprehension of knowledge along with its theoretical application and more specifically the logical reasoning of core knowledge in the respective subject<sup>3</sup>. Alongside, it also aids in assessing the communication skills, confidence and approach of the student that cannot be assessed by written examination like MCQs (Multiple Choice Questions) or SEQs (Short Essay Questions). Moreover, only a viva voce with maximum degree of relevance, objectiveness and realistic thoughtfulness; can accomplish the above mentioned domains of assessment effectively<sup>4</sup>. As mentioned earlier that viva voce typically covers the higher cognitive levels, so it is recognized as tougher than written assessment and always comes after the theoretical academic examination<sup>2</sup>. Nevertheless as no single methodology is said to be a best fit for overall assessment in any subject due to its own

flexibility and high face validity are considered its core strengths<sup>1</sup>. While personal preferences of the examiners like the given time to answer each question, number of questions in a viva setting and the difficulty level of questions, all are liable to create subjectivity in the process of viva voce. That is the most pertinent drawback, associated with conventional viva and it can never be ignored due to many other contextual contributors like inconsistency, non-uniformity, that all can hinder its reliability. Though through Objectively Structured Viva Voce, many of the above mentioned drawbacks associated with traditional viva, can be minimized with maximum extent<sup>6</sup>.

Unstructured traditional oral examination has been criticized since long by the researchers due to its poor validity and reliability<sup>7</sup>. The goal of the present cross-sectional study is to find out the perceptions of first year and second year medical students about Objectively Structured Viva Voce, in the subject of Physiology, by asking the questions related to different aspects of Viva.

The objectives of the study were to find out the perceptions of medical under graduate students regarding Objectively Structured Viva Voce as an assessment tool and appraise the differences in the opinion of male and

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female students regarding Objectively Structured Viva Voce.

## MATERIAL AND METHODS

This study was conducted at Shalamar Medical and Dental College, Lahore in the month of July, 2018. It was a Cross-sectional Study conducted on the students of first and second year MBBS. Convenience sampling technique was used to collect data. For data collection a self-designed structured questionnaire was developed, containing all close ended questions. Each question in the survey form was ranked on a 5-point Likert scale, with responses ranging from "Very Satisfied" to "Very Dissatisfied". To establish content validity, expert validation of this questionnaire has been done by a panel of experts at The University of Lahore. Reliability of the items was established through pilot testing by the authors of the questionnaire. Eleven items were designed to get structured response for mapping the effectiveness of Objectively Structured Viva Voce. The responses were taken by generating the questionnaire in Google forms, the link was shared with the respondents. The analysis of the content in the form of comments from students was done by using SPSS version 21, frequencies and percentages were collected in tabulated form. Chi-Square Test was used as a nonparametric statistical tool on the frequency values and p-value less than 0.05 was considered significant.

## RESULTS

The study was conducted on 92 medical undergraduate students out of which 38% belongs to 1<sup>st</sup> year and 62% belongs to 2<sup>nd</sup> year MBBS. Among 92 participants there were 47 boys and 45 girls. Majority of the participants consider Objectively Structured Viva Voce as fairest. About 45% of participants were somewhat satisfied and 11% were strongly satisfied with the fairness of this assessment tool. However the difference between the opinion of males and females is not significant ( $p=0.08$ ). Regarding coverage of wide range of critical area through viva questions, 45% of participants were somewhat satisfied, 26.5% were very satisfied. Majority of the boys (36.2%) were very satisfied while only 15.5% girls were very satisfied with the coverage of wide range of critical areas through Objectively Structured Viva Voce. Among boys none was very dissatisfied and 17% were somewhat dissatisfied, while among females 4.45 were very dissatisfied and 13.3% were somewhat dissatisfied. The difference between the opinion of males and females is statistically significant ( $p=0.03$ ) (Table 1). Participant's response regarding level of difficulty of viva questions revealed that majority of the participants were satisfied with the level of difficulty of the viva questions because 43% were somewhat satisfied and 25% were very satisfied. However the difference between the opinion of males and females is not significant ( $p=0.06$ ) (Table 1).

Student's feedback regarding provision of appropriate time for answering the viva question shows that majority of the participants exhibit their satisfaction, because 32.6% were somewhat satisfied and 28.3% were very satisfied. Greater number of female (44.4%) students showed their

satisfaction in this regard as compared to their male counterparts (21.3%). There was a significant difference between female and male student's perception in this regard ( $p=0.04$ ) (Table 1). A vast majority of the participants expressed satisfaction regarding logical sequencing of the viva questions as 45.7% were somewhat satisfied and 21.7% were very satisfied. A greater number Females (53.3%) showed satisfaction regarding logical sequencing of the viva questions as compared to males (38.3%). However, the difference is non-significant ( $p$ -value 0.34) (Table 1). Almost half of the participants consider viva voce an effective tool for assessment of knowledge because 33.7% are somewhat satisfied and 20.7% were very satisfied. There was no difference in the opinion of males and females in this regard. More than half of the participants think that viva voce is a valid tool to assess knowledge because 42.45% were somewhat satisfied and 21.7% were very satisfied. Moreover, there was not much difference in the opinion of male and female students regarding this aspect hence the difference in the opinion is not significant ( $p$ -value 0.34) (Table 1). Objectively Structured Viva Voce was a stressful experience for the majority of the participants as 44.6% were very satisfied and 28.3% were somewhat satisfied. More females found it stressful as compared to males but the difference is not significant ( $p$  value 0.25). A fair majority of the students were satisfied with the viva voce as 41.3% were somewhat satisfied and 22.8% were very satisfied with assessment tool. A greater number of females (57.8%) showed their satisfaction with this kind of assessment tool as compared to males (25.5%) hence the difference in the opinion is statistically significant ( $p$  value 0.003). About half of the participants thought that viva voce highlighted their strengths regarding knowledge as 34.8% were somewhat satisfied and 22.8% were very satisfied. There was a very little difference in the level of satisfaction among male and female students hence it was not significant ( $p$  value 0.49). Most of the students thought that this kind of assessment highlighted their strengths because 43.5% were somewhat satisfied and 22.8% were very satisfied. There was a significant difference ( $p$  value 0.04%) in the perception of male (29.8%) and female (57.8%) students regarding its construct.

Fig.1: Percentage of male and female among the study participants

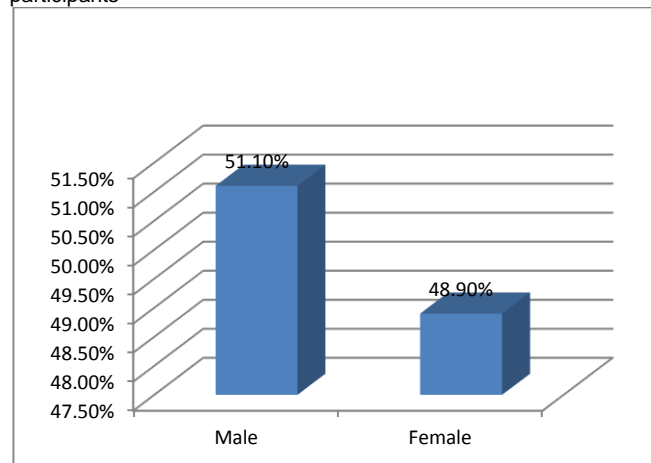


Fig. 2: Comparisons of Responses of medical undergraduates regarding effectiveness of Objectively Structured Viva Voce.

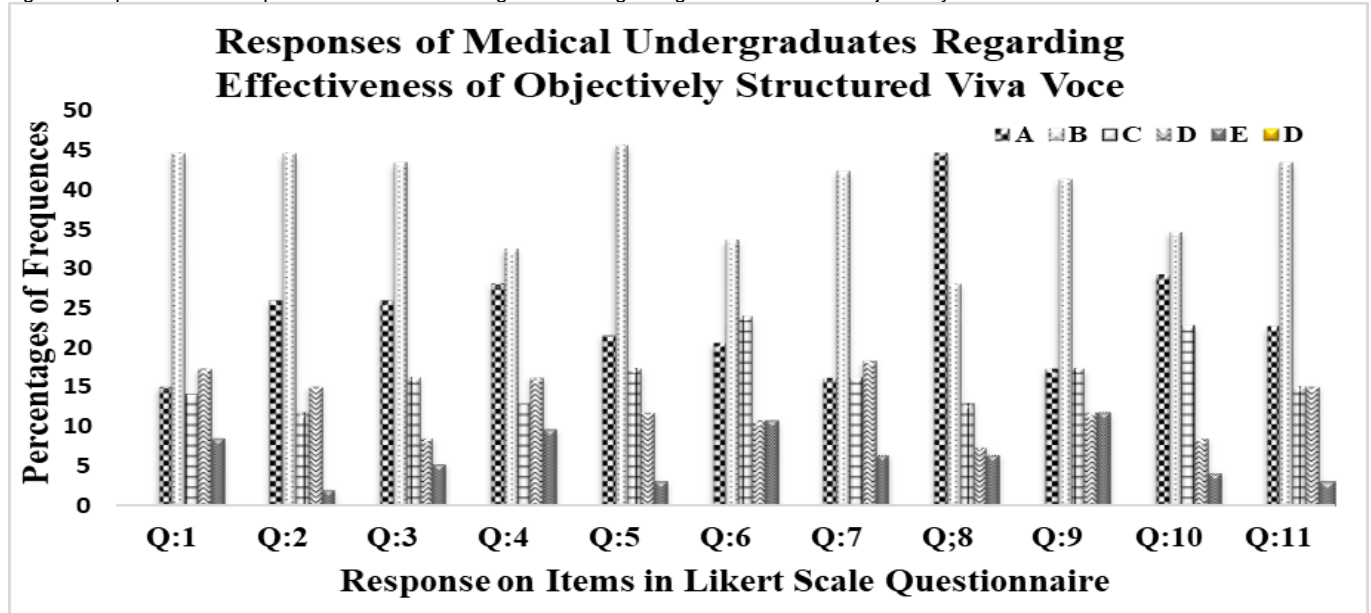


Table 1: Comparison of the opinion according to Gender regarding Objectively Structured Viva Voce.

Items	Boys (47)					Girls (45)					Chi Square Value (X <sup>2</sup> )	P-value
	A n(%)	B = n(%)	C n (%)	D n(%)	E n(%)	A n(%)	B n(%)	C	D n(%)	E n(%)		
It was the fairest	11(23.4)	16 (34.0)	6(12.8)	8(17)	6(12.8)	3(6.7)	25(55.6)	7(15.6)	8(17.8)	2(4.4)	8.13	0.08
Had covered wide range of Critical areas	17(36.2)	15(32)	7(15)	8(17)	0(0)	7(15.6)	26(57.8)	4(9)	6(13.3)	2(4.4)	10.4	0.034*
Satisfied with difficulty level of questions	15(32)	14(30)	10(21.3)	5(10.6)	3(6.4)	9(20)	26(57.8)	5(11.1)	3(6.7)	2(4.4)	8.84	0.065
Provision of appropriate time to answer each question	14(30)	10(21.3)	6(12.8)	11(23.4)	6(12.8)	12(26.7)	20(44.4)	6(13.3)	4(9)	3(6.7)	9.57	0.048*
Had logical sequencing in questioning.	12(25.5)	18(38.3)	10(21.3)	5(10.6)	2(4.3)	8(17.8)	24(53.3)	6(13.3)	6(13.3)	1 (2.2)	4.15	0.38
Was an effective tool to assess knowledge	10(21.3)	15(32)	10(21.3)	6(12.8)	6(12.8)	10(21.3)	15(32)	10(21.3)	6(12.8)	6(12.8)	1.19	0.87
7.Was a valid tool to assess knowledge	9(19.1)	17(36.2)	10(21.3)	9(19.1)	2(4.3)	6(13.3)	22(49)	5(11.1)	8(17.8)	4(9)	4.55	0.34
The process was stress-full	23(49)	9(19.1)	8(17)	3(6.4)	4(8.5)	18(40)	17(37.8)	4(8.9)	4(8.9)	2(4.4)	5.34	0.25
I was satisfied with it	13(27.7)	12(25.5)	11(23.4)	4(8.5)	7(15)	3(6.7)	26(57.8)	5(11.1)	7(15.6)	4(9)	15.5	0.0037*
Highlighted my weakness in subject	15(32)	14(30)	12(21.3)	3(6.4)	3(6.4)	12(26.7)	18(40)	9(20)	5(11.1)	1(2.2)	3.35	0.49
Highlighted my strength in subjects	13(27.7)	14(29.8)	10(21.3)	8(17)	2(4.3)	8(17.8)	26(57.8)	4(9)	6(13.3)	1(2.2)	9.67	0.046*

Critical value=9.5

A=Very Satisfied, B= Somewhat Satisfied, C= Neutral, D= Somewhat Dissatisfied, E= Very Dissatisfied

## DISCUSSION

The term 'Assessment' regarding students has been defined as a process, aimed to make students keen learners. A combination of different modalities and methods has been employed to enhance the precision, accuracy and transparency of the whole assessment process, as each single method of assessment has its own merits and demerits<sup>4</sup>. Different approaches to assess a student in the field of medical sciences, include long essay questions, short essay questions, conventional oral examination, objectively structured clinical assessment, and objectively structured oral assessment<sup>8</sup>.

Oral assessment has been defined by Joughin as "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"<sup>1</sup>. Traditional viva voce has been in use since long as one of the prime component in the cumulative summative assessment of medical undergrads in most of the countries including India and Pakistan, because of its potential strengths like high degree of compliance, estimation of higher cognitive knowledge of students, evaluation of behavioral and interpersonal skills of students, as all of these traits could not be judged otherwise<sup>9</sup>.

Although it has also been postulated by many researchers around the world that in usual oral assessment, the examiners might act as confounders because of various subjective elements that could not be ruled out like their moods, expectations, deterrence, concepts regarding the subject, favorite contents, time availability and even the dynamics of the concerned workplace<sup>2</sup>.

Another study from United States also reported that unstructured oral examination in medical schools has now been marked as obsolete one because of its low reliability and validity. Rather they kept it only for the best and the marginal students<sup>10</sup>. According to a prior study 79% medical students and 70% engineering students have been ranked the conventional viva voce as a strongly biased way of assessment due to favoritism regarding certain students, changing level of hard questions from one student to the other, scheme of questioning and last, but not the least, the "hello effect"<sup>2</sup>. It has also been published previously that a 'Pass' in traditional viva voce has been considered as a subtle indicator of the 'Whole Pass' in the assessment i.e. 89.7% and not very precise i.e., 54.5%<sup>7</sup>. The same study also revealed with the help of correlation analysis between grades of viva and theory that viva voce mostly examined theory based knowledge of the student, which has already been assessed in written theory examination<sup>7</sup>.

Literature has declared most of the imperfections related to subjectivity of traditional viva voce that could be eliminated by replacing it with structured oral assessment that can only be happened with the involvement of an organized faculty<sup>6,12</sup>. As time is regarded as a prime constraint in preparation of standardized viva questions for each examiner along with the allocation of marks to each question, this tedious job can only be assured with the dedicated effort of all the faculty members<sup>11</sup>. Undoubtedly a relative scarcity has been found in literature in context of the views of medical undergrad students regarding traditional viva voce, but now a day's greater attention has been given in accordance with responses of students in regard to Objectively Structured Viva Voce<sup>13</sup> and Our discoveries related to the response of students have almost been found consistent with preceded studies, as majority of the students believed that Structured Viva owned a moderate satisfactory level in terms of efficacy of assessment and not ranked a strong satisfactory level on Likert scale.

It has now been an established statement with a general consensus that assessment must be aligned with the documented objectives of curriculum, listed by Pakistan Medical and Dental Council in order to give a dual benefit to the medical students; on one hand it could create more focus on curriculum with its real spirit and on the other hand it could also filter the negative elements of anxiety, stress and injustice. Nevertheless, due to limited capacity of Medical Education Sector in Pakistan, numerous Undergrad Medical Institutes cannot incorporate a structured standardized viva voce in their pre-existed modes of assessment<sup>14</sup>.

## CONCLUSION

Despite its few drawbacks, Objectively Structured Viva voce is considered an appropriate tool for assessment by the students. A fair majority of students showed their satisfaction regarding various aspects of Objectively Structured Viva. However, greater number of female students were satisfied with the capacity of viva voce in coverage of wide range of topics and in highlighting their strengths.

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