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Evaluation & Comparison of Result: Conventional Viva Vs. Structured Viva

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ABSTRACT

Introduction: - It is observed that the viva voce is the integral part of assessment of medical students. The conventional viva is found to have some bias based on examiner's objectivity and marking system. So result of the students may vary depending on any particular examiner who has taken the viva & whether the student was relaxed while giving viva. Evaluation of students is a vital component of any educational process and it is necessary to assess their performance. It also gets a feedback of teaching process so as to improve the performance of teacher and student both. It is also of paramount importance to evaluate the tool used to assess the students so that the competencies aimed to achieve in the learner, can be measured.Methodology: - The structured viva format was created and tried in place of conventional viva in first MBBS students during their internal examination. Result of both exams analyzed & compared. Result: - The result shows that objective structured practical examination increases the objectivity and reduces subjectivity in marking, compared to conventional viva. Conclusion: - The marks obtained by the students in conventional viva & structured viva showed that structured viva is uniform & reliable method. Since the results quoted are based on only a few examinations at a single medical school, generalizations are not justified.

KEYWORDS: Conventional viva, structured viva, reliability, uniformity.

Introduction:

Viva voce exam is important because of their high face validity, their flexibility & asses what cannot be done in written exams. But the reliability of the conventional viva may be affected by various factors, such as the anxiety of the candidate, inconsistency of the examiner, various situational factors. However we should try to make the situation comfortable for the student so that actual capacity of the student can be assessed .We tried to formulate such assessment method that has reasonable reliability[1].Then evaluated & compared the result of same students in both type of viva voce exam.

Oral examination perhaps is the only tool available to assess whether our students are trained adequately well for their unique responsibilities. So we need measures to improvise & standardise this form of evaluation. Evaluation of students is a vital component of any educational process and it is necessary to assess their performance. It also gets a feedback of teaching process so as to improve the performance of teacher and student both.[2]It is also of paramount importance to evaluate the tool used to assess the students so that the competencies aimed to achieve in the learner, can be measured.

The Structured Viva Examination is a new concept in assessment of students. It is a modified form objective structured clinical exam & objective structured practical exam which are widely implemented & accepted by faculties & students. Structured viva can be used for evaluation of students in any subject with more reliability. Also performance in viva has inverse relationship with anxiety as stated by Holloway et al. (1967).Candidates that are less anxious perform better in the Oral examinations. It is difficult to establish in any formal way how valid an oral examination is (Norman et al., 1985).[1]Although concept is known, very few medical colleges have incorporated structured viva as an assessment tool. We introduced, this new method of assessment &compared results obtained by students in both structured viva & conventional viva for which they appeared 1month back .The objectivity involved in conventional viva voce examination affects assessment of students by same examiner in different time & same examiner for different students and also if the same student is given marks by different teachers in same exam in 3 different viva. To overcome this bias, structured viva examination was prepared & applied in internal exam to assess its feasibility & effectiveness of assessment. It was designed to evaluate learning, memory and cognitive domains of the students. Evaluation of the methods used in assessment is equally important as assessment of knowledge of students.[3] the present study was done to determine difference in marks obtained in the 2 forms of viva by the student the study was done, in the Department of Physiology Smt NHL Municipal Medical College, Ahmedabad Gujarat.

Aims & objective:-

1. Improvise viva voce examination as effective assessment tool.
2. Define measures to remove objective bias in marking

Methodology: -

The present study was carried out amongst 150 first year MBBS students of 2012 batch of Smt. NHL Municipal Medical College. The marks allotted for the viva-voce was 20 out of total 100 marks in practical examination. This viva is having questions from their theory syllabus of the exam. This viva is taken on same day when practical exam is conducted and is after their theory (written) exam with same syllabus. Students were informed about the purpose of the study and explained how the structured viva will be different than the conventional viva. Same students appeared for conventional viva 1 month before in the department. For structured viva question bank was prepared covering all the topics in syllabus of examination and was categorized as easy, average & difficult. Question cards were prepared using this question bank .each card had 4 questions from easy category (recollection of facts), next 4 from average category (requiring explanation) & 2 questions from difficult category requiring co-relation & analysis).Easy questions were of 1 mark ,average questions were of 2 marks & difficult questions were of 3 marks each. All cards were having questions of similar type & similar difficulty level. Eight such set of questions (each having 10 questions) were prepared. Question set were used to prepare question cards giving them numbers 1 to 8. Lottery system was adopted for drawing the question card. Which was drawn by a particular student himself/ herself? One minute reading time was given to the student so as to put them at ease. They were allowed to skip the questions they find immediately. Each student was examined for 10-15 minutes on an average. All the examiners were also given the same sets with provision for recording marks. There were 6 examiners taking

viva at the same time. Each examiner assessed 6-7 students. All were having same set question cards. Marks were pre-decided according to relevance & difficulty level of the questions. Time allowed to answer the set of 10 questions was fixed i.e.15mins. All the examiners were also given the same sets with provision for recording marks.

We analyzed & compared the marks obtained by same 129 students in both exams.

Observation and Results:-
Marks obtained by all the students (N=129) in 2 exams i.e. conventional viva & structured viva were analyzed & compared.

Table 1:-
Range of marks obtained in both method of viva, mean & Standard deviation

Descriptive Statistics			
	N	Mean	SD
structured viva marks	129	11.74	4.429
conventional viva marks	129	13.74	2.991
C %	129	68.68	14.955
S %	129	58.72	22.144

Marks obtained in conventional viva ranged from 2-18(out of 20 marks allotted for this viva) with a mean of 13.74& in structured viva ranged from 0 to 20(out of 20) with a mean of 11.74. Mean of marks in conventional viva was less than structured viva. Standard deviation in conventional viva was more than structured .showing reliability of marking in structured viva.

Table 2(a):- Distribution of students according to marks obtained in the conventional viva

Conventional viva (n=129)	Frequency	Percent
1	76	58.9
2	25	19.4
3	21	16.3
4	7	5.4

Table 2 (b):-Marks obtained by the students by the structured viva method of assessment

Structured viva (n=129)	Frequency	Percent
1	52	40.3
2	19	14.7
3	23	17.8
4	35	27.1

[Code which is used in study: 1=>70%; 2=60-69.99%; 3=50-59.99%; 4=<50%: S=structured; C=conventional]

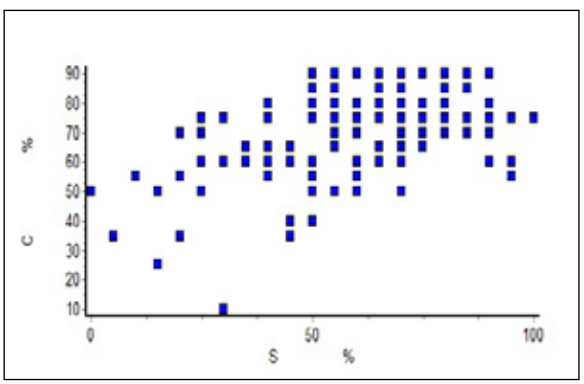
Out of 129 students 84.6% students performed better in conventional viva & only 5.4% students failed in conventional viva.(table 2a).In structured viva 72.8% students performed better & 27.1 students failed. Numbers of students in conventional viva getting distinction are more (58.9%) than in structured viva (40.3) and also number of students failed is more in structured viva .It may be due to non uniformity of marking system in conventional viva. Marking system is effected by many objective & subjective factors. In structured viva objective & subjective bias in marking is minimized.

Table 3:- Comparison of % of marks obtained by 129 students in structured viva & conventional viva

S % C % conventional viva marks structured viva marks				
S code		S %	C %	p value
1	Mean	79.90	76.25	p=0.172
	N	52	52	
	Std. Deviation	8.828	9.542	
2	Mean	62.11	72.11	p=0.004*
	N	19	19	
	Std. Deviation	2.536	11.343	
3	Mean	51.96	66.74	p=0.001*
	N	23	23	
	Std. Deviation	2.495	15.783	
4	Mean	29.86	56.86	p=0.000*
	N	35	35	
	Std. Deviation	11.850	15.343	
Total	Mean	58.72	68.68	
	N	129	129	
	Std. Deviation	22.144	14.955	

In table 3, Marks obtained by 129 students in structured viva of different categories of marking (distinction, 1st class, pass & fail) with marks in conventional viva showed that there is no significant difference in marks obtained in both viva in students with distinction & rest of the 3 categories showed significant difference in marks. It shows that structured marking system is more reliable & uniform.

Graph 1:- Correlation of structured & conventional viva marks.



Correlation coefficient .539 ($p<0.001$) is statically significant; showing structured viva has more reliable & uniform method of assessment.

Conclusion: -
The result shows that objective structured practical examination increases the objectivity and reduces subjectivity compared to conventional viva.[2] performance of same student is improved when the method was standardized. The difference in marks was found statistically significant, showing structured viva is more reliable & uniform method of assessment of students. Once we overcome these problems we can conduct ideal examination to achieve effective results. This is an evaluation system that has demonstrable reliability. Improved result of the students in structured viva shows students are more comfortable in structured viva & also due to uniformity of questions & marking objective bias of conventional viva, is removed to a large extent. Since the results quoted are based on only a few examinations at a single medical school, generalizations are not justified .Thus, we conclude that although the objective structured examination provides useful tool further studies in different institutes is required to justify. A comparative evaluation of the various methods for assessment of professional competence at undergraduate level should also be done. For generalization of results a large population of students must be considered.

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