RESEARCH ARTICLE

COMPARISON OF CONVENTIONAL VIVA EXAMINATION WITH OBJECTIVE STRUCTURED VIVA IN SECOND YEAR PATHOLOGY STUDENTS

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ABSTRACT

Background: The evaluation of students is an important part of any educational process and it is necessary to assess their performance. As a part of feedback for teaching process, it also helps improve the performance. We compared results of conventional viva, structured viva and theory examination.

Aims & Objective: To evaluate the relative contributions of the conventional and structured viva in student assessment.

Materials and Methods: Haematology & clinical pathology table viva were taken for the 2nd MBBS students in GAIMS, Bhuj, Gujarat, by both structured and unstructured pattern. The specific pattern of the structured and unstructured viva was formulated and results compared. The students were also asked the reviews on the viva examinations to assess the acceptability of the students.

Results: There was highly significant correlation ($p < 0.01$, $r=0.52$) between results of structured viva and multiple choice questions. Correlation between results of structured viva with remaining theory examination was weaker. Marks of unstructured viva correlated poorly with structured viva, and multiple choice questions.

Conclusion: Structured viva examination correlated better with other formats of examination than conventional viva examination.

Key Words: Unstructured Viva; Structured Viva; Conventional Viva; Comparison

Introduction

Asking students to demonstrate their understanding of the subject matter is critical to the learning process; it is essential to evaluate whether the educational goals and standards of the lessons are being met. Assessment inspires us to ask these questions: “Are we teaching what we think we are teaching?” “Are students learning what they are supposed to be learning?” Assessment affects decisions about grades, placement, advancement, instructional needs and curriculum.

Traditionally undergraduate pathology examination included question paper where essay type question and short answer questions were asked. In the last few years multiple choice questions are added to theory questions to add more objectiveness to the papers. In addition to theory paper where assessment of knowledge is made, oral examination and practical examination are utilized to assess the skill of students.[1]

The traditional oral viva examination can be called unstructured one, as there is no fixed pattern. Time duration of single viva is not fixed, neither the number of questions that can be asked to the examinees. Even the questions asked to different examinees are not the same. Therefore overall result depends largely on the examiner. Traditional viva has been compared with newer method like objective structured practical examination and objective structured clinical examination. In these studies investigators have found that the structured methods correlate better with overall student performance.[2,3]

In order to evaluate the relative contributions of the conventional and structured viva we have compared the results of structured viva and unstructured viva with each other and with the results of theory examination. To assess the acceptability students were asked for their views on the viva examinations.

Materials and Methods

We conducted haematology & clinical pathology table viva of 120 4th semester students of Gujarat Adani Institute of Medical Sciences (GAIMS), Bhuj, Gujarat, by both structured and unstructured pattern. Examination lasted four mornings.

Unstructured Viva: Students were randomly offered some haematology instrument or chart and relevant questions were asked. New questions were drawn from their answers. Viva continued for unspecified time based on students’ performance as judged by examiner. Marks were allotted out of 10 total marks.

Structured Viva: Students were asked 10 questions with one mark each. Half a minute was given to answer one questions. All the students appearing on same day faced

the same questions. Questions were planned to test knowledge, understanding and analytic abilities. Question set was changed every day.

After completion of examination students were given a form asking for their responses about examination anonymously.

Statistical Methods: The data were analyzed using online statistical calculator available on social science statistics (*http://www.socscistatistics.com/about/Default.aspx*). Pearson correlation coefficients used to find out correlation between structured and unstructured viva marks, correlation between theory marks (excluding MCQs) and structured viva marks, correlation between theory marks (excluding MCQs) and unstructured viva marks, correlation between MCQs marks and structured viva marks, correlation between MCQs marks and unstructured viva marks.

Table-1: Examples of structured viva question (from day 1 of examination)

1.	Which tube from this rack will you use for prothrombin time test? (different types of blood collection vacuettes are kept in rack)
2.	Which are the other uses of sodium citrate?
3.	When will you use this needle (showing Salah's bone marrow aspiration needle)?
4.	Which are the initial investigations to be done in patient with anaemia?
5.	If Hb = 8.5 gm%, MCV = 120 fl, MCH = 29 pg, and MCHC = 32 % in a 28 year old woman with 4 months of amenorrhoea, what may be the cause?
6.	In which type of anaemia ESR will be very high?
7.	In a 6 year old child with generalized edema, which of this should be useful? (Ph strips, Urinometer, blood collection bag and Esbach's albuminometer are kept on table)
8.	Which casts are expected in urine sediment from the patient with nephrotic syndrome?
9.	Which are the constituents of the fluid present in this bag? (showing blood collection bag)
10.	For how many days blood can be preserved in this bag?

Results

Correlation of Viva Marks: There was highly significant correlation ($p < 0.01$, $r=0.52$) between results of structured viva and multiple choice questions. Correlation between results of structured viva with remaining theory examination was weaker. Marks of unstructured viva correlated poorly with structured viva, and multiple choice questions. (Table 2)

Viva Marks: In structured viva marks obtained varied from 0 to 8, while in unstructured viva marks obtained varied from 3 to 7. So, the range of marks obtained was 9 (-1 to 8) in structured viva and 5 (2 to 7) in unstructured viva. (Table 3)

Student's Responses: Majority of students (91.6%) felt that structured viva is fairer than conventional viva. Only 61.6% students felt that structured viva is easier to score than conventional viva.

Table-2: Statistical comparisons of examination marks

	r*	p value**
Theory examination (excluding MCQs) marks with Structured viva marks	0.37	<0.01
Theory examination (excluding MCQs) marks with unstructured viva marks	0.30	<0.01
MCQs marks with Structured viva marks	0.52	<0.01
MCQs marks with unstructured viva marks	0.22	<0.01
Structured viva marks with unstructured viva marks	0.18	<0.05

* r: Pearson correlation coefficient (r); ** $\chi 2$ test

Table-3: Marks obtained through structured and unstructured viva examinations

Marks Obtained	Unstructured Viva	Structured Viva
0	00	02
1	00	01
2	00	05
3	08	15
4	15	20
5	55	33
6	34	29
7	08	11
8	00	04
9	00	00
10	00	00

Table-4: Student's responses

Responses	Agree	Disagree
Structured viva is fairer then conventional viva	110	10
Structured viva is easier to score then conventional viva	74	46

Discussion

Examining large number of students fairly in reasonable time is an important aspect of summative examination. Structured viva can be a useful tool for fair and objective evaluation of students. As can be seen from above results, structured viva correlate better with other formats of examination than unstructured viva. Also structured viva provides better range of marks and hence gives better discrimination among students.

It is possible that unstructured viva examination tests different attributes than structured viva. Conventional unstructured viva also provides opportunity for teachers to provide feedback/guidance to the students during formative examinations. However lack of objectivity and variation among examiners are difficult to eradicate.

Based on our limited experience we feel that structured viva is better tool for summative examination, while during formative examinations conventional unstructured viva may provide opportunity to guide students and prepare them for final summative exam. More such studies in other subjects of medical curriculum may help to prove or disprove these findings.

Conclusion

Structured viva examination correlated better with other formats of examination than conventional viva examination.

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