



Original Research Article

Study of Student's Perception Regarding Increasing Objectivity during Practical Examination in Anatomy

Sandeep V Pakhale^{1*@}, Amrut A Mahajan^{1***}, Anita S Fating^{1**}, Shubhangi B Ghule^{1*},
Bharat S Borole^{2*}

* Assistant professor, ** Associate Professor, *** Professor and Head

¹Department of Anatomy, Dr. Ulhas Patil Medical College & Hospital Jalgaon-Maharashtra.

²Department of Pathology, Dr. Ulhas Patil Medical College & Hospital Jalgaon-Maharashtra.

@Correspondence Email: sandeepkhal@yahoo.co.in

Received: 29/06/2012

Revised: 11/07/2012

Accepted: 12/07/2012

ABSTRACT

The present study was undertaken to find out students perception regarding increasing objectivity in practical examination in the subject of Anatomy. This was tried by introducing OSCE in Clinical and OSPE in paraclinical subjects. To introduce this in preclinical subject like Anatomy this pilot study was undertaken. 100 medical students enrolled in the first MBBS course during the academic year 2009-2010 at Dr Ulhas Patil Medical College and Hospital, Jalgaon are exposed to both conventional and new structured practical examination. Feedback questionnaire was prepared and feedback from those students was taken. Results were tabulated and grouped and statistically analyzed.

Key words: OSCE- Objective Structured Clinical Examination, OSPE- Objective Structured Practical Examination

INTRODUCTION

Evaluation of medical students is always desirable to be uniform and reliable during practical examination. Presently in first MBBS Anatomy Practical examination, students are tested by conventional method of taking table viva under different Heads viz. Soft part, Hard part, Embryology models, Radiological Anatomy, Living

anatomy and Histology slide viva etc. It seems more subjective and at times may be biased. So also, conventional practical examination tests very few learning outcomes.

To overcome above challenges the author has tried to search for standardized, more effective, objective specific, reliable and valid practical assessment tool for first MBBS students in Anatomy. Internationally

and in India also a framework for the development of clinical competence has been described which outlines four levels at which a learner can be assessed: knows, knows how, shows how and does. [1] This had been done widely by using the objective specific clinical examination (OSCE) for clinical subjects. OSCE was first introduced in medical education by Harden in Scotland in 1975 and later on objective specific practical examination (OSPE) for Para clinical subjects. [2, 3] Preclinical subjects like Anatomy, it is not possible to assess skills except at few heads like living anatomy, clinical Anatomy etc. Very few Universities have adopted OSPE format in Anatomy subject in their summative and formative examinations. [4] University of Health Sciences Lahore is one of them but this university has not adopted fully but partially i.e. Semi Objective specific practical Examination (SOSPE). [5]

Very few medical institutions in India have tried the format of OSPE/OSCE in the anatomy subject for first MBBS. In respect to this, new modified format was tried during part completion examination and feedback was taken from students. There is a need to study this format of examination on large scale to find out its validity and reliability in other medical institutions also.

Present Practical examination pattern in Anatomy is more or less same in all universities including state level health Universities. In this pattern Examiners take table viva on different parts like soft part, hard part, embryology models, living anatomy, radiological anatomy and histology slides. So in this conventional method of examination, assessment becomes subjective, sometimes biased and students found nervous in front of examiner.

OSCE and OSPE for clinical and Para clinical subjects respectively has been shown to overcome the drawbacks and to

increase the objectivity and reliability of assessment. [6, 7] This method of assessment for preclinical subjects like anatomy is the modified form of OSCE/OSPE. The real power of OSCE lies in its ability to evaluate a wide range of knowledge and skills which improves the reliability of the examination. [8]

Therefore this study was undertaken to understand the student's perception about new structured pattern of practical examination in Anatomy. To increase the objectivity in assessment by introducing it initially in formative examination and step by step in summative examination after studying this new pattern in many other medical institutions with opinion of faculty members and students performance.

MATERIAL AND METHODS

Study was conducted in the department of Anatomy on 100 medical students enrolled in the first MBBS course during the academic year 2009-2010 at Dr Ulhas Patil Medical College and Hospital, Jalgaon. The total number of students participated in the study was 97 (as 3 were absent on the day of examinations)

Permission from Dean and Head of the Department was taken. An ethical approval was obtained from institutional ethical committee of the Dr. Ulhas Patil Medical College and Hospital Jalgaon. Structured templates were prepared for part completion examination taken on inferior extremity. Total 50 templates were prepared and they were categorized as Bones, Muscles, Vessels, Nerves, X-rays, etc. Each template contains 3 questions carrying 1 mark each related to specimen kept. These structured templates were corrected from other Faculty members to check that it should cover the domains of learning objectives as much as possible.

Students were oriented and briefed through a PowerPoint presentation with this new format of examination. After completion of lecture and dissection series for inferior extremity, practical examination was taken in two Batches. On each station time given was one and half minute. After 50 stations other batch of 50 students was exposed to this examination pattern. Answers were checked with key answers and result was declared.

A feedback questionnaire was prepared which was modified after a pilot study on 10 students to see the student's perception about new pattern of examination. Questionnaire was validated by senior experts. Feedback questionnaire was containing 20 questions out of which 19

questions were prepared on Likert's scale and one question was open ended. Responses from the students in the form of feedback questionnaire were statistically analyzed.

RESULT

Out of 100 students 97 were participated for the new modified format of examination and gave their feedback. Questions are grouped into four groups as-

Group I related to structure or format of examination.

Group II related to conduct of examination.

Group III related to evaluation of examination and

Group IV related to Problems.

Group I Structure / Format of examination

Sr. No.	Statement	Response in percentage		
		Agree	Neutral	Disagree
1	Instructions were adequate to understand new format of examination.	86.60	12.37	1.03
2	Opportunity was given to seek clarification.	80.41	18.56	1.03
3	Examination was fair (uniformity of questions and time allotted).	68.04	28.87	3.09
4	Examination was covered all types of questions.	77.32	18.56	4.12
5	Examination was well structured and sequenced.	83.51	11.34	5.15

Group II Conduct of examination

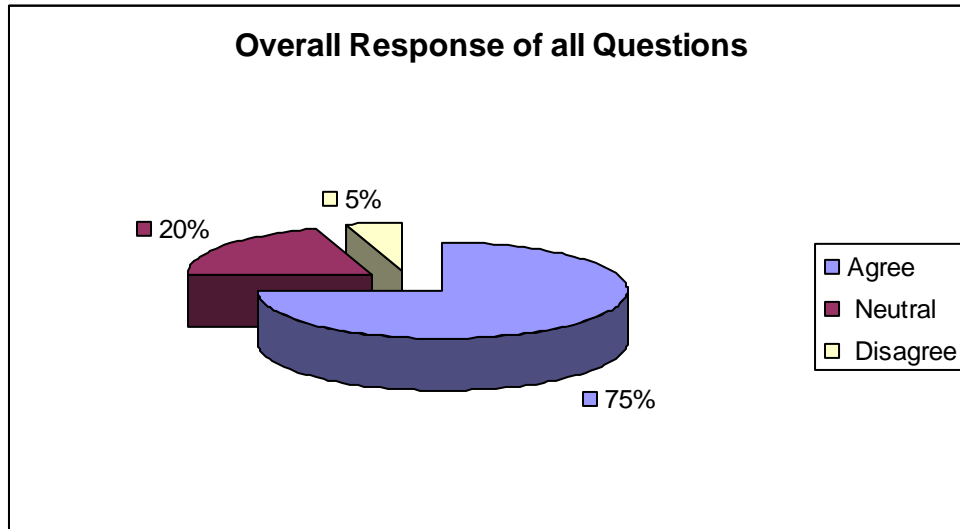
Sr. No.	Statement	Response in percentage		
		Agree	Neutral	Disagree
1	Examination was well organized.	94.85	4.12	1.03
2	Examination format was more stress free than previous format.	63.92	26.80	9.28
3	Variety of structured templates helped to maintain interest.	80.41	15.46	4.12
4	Teacher's absence at stations was fright free.	63.92	23.71	12.37

Group III Evaluation of examination

Sr. No.	Statement	Response in percentage		
		Agree	Neutral	Disagree
1	This format of examination reduces the subjectivity	59.79	34.02	6.19
2	You are satisfied that marks reflect your level of performance.	71.13	23.71	5.15
3	Result format helped you identify weak areas.	94.85	5.15	0.00
4	Result format gave you confidence.	78.35	16.49	5.15
5	Scoring was transparent and objective.	85.57	13.40	1.03
6	This format reduces chance of failing.	67.01	22.68	10.31
7	Objective structured format of practical examinations allows more opportunities than the conventional format.	71.13	23.71	5.15

Group IV Problems and solutions

Sr. No.	Statement	Response in percentage		
		Agree	Neutral	Disagree
1	Needed more time at each station.	60.82	25.77	13.40
2	Number of stations has been more.	51.55	41.24	7.22
3	This experience has motivated to learn further.	84.54	14.43	1.03



DISCUSSION

Many studies have proved the objective structured format of examination is a reliable assessment tool. [9, 10] In the present study new pattern of practical examination which was similar to that of OSCE was introduced to improve the assessment method. The feedbacks taken from student showed that students prefer this new pattern of examination over conventional method. They felt this format is very interesting, allotting equal time to all students which leads to standardized and focused evaluation.

Most students agreed that structure and pattern of examination was proper with adequate instructions and clarifications. It covered all types of questions. Almost all students agree that examination was well organized but they are little confused about stress free and fright free environment of examination in spite of teacher’s absence.

Due to this format, students found their weak areas, allow more opportunities and satisfied that marks reflect their level of performance. But few of them look neutral about the new format of examination reduces subjectivity. Also sizeable number of students (25.77% and 41.24 %) found insufficient time and too many number of stations.

Few disadvantages of this format are teacher’s absence may increase the chance of misconduct and sometimes in this format students may lose whole marks at a station if they don’t understand question.

In all, they were agreed (75%) that this experience has motivated them to learn and accept as method of assessment in practical Anatomy.

CONCLUSION

Present study revealed that the new structured format was well accepted by the students as compared with the traditional

practical examination. Structured format for practical examination appears to be important for performance discrimination on the basis of individual competency. Students like a new innovative idea which supports their learning and study which directly or indirectly project on their performance. The study provided scope for refining the method before it was implemented. Few students were against this format as there is no actual eye to eye contact and sometimes examiner's clue may help them which they missed in this new format.

REFERENCES

1. Miller, G. 1990. The assessment of clinical skills/competence/performance. *Academic Medicine*. 65 (Suppl.9), S63-S67.
2. Harden, R.M and Gleeson, F.A. Assessment of clinical competence using an objective structured clinical examination (OSCE). *Medical Education*. 1979; 64:123-5.
3. Harden R M, Stevenson M, Wilson D W, Wilson G M, Assessment of clinical competencies using objective structured clinical examination. *Br. Med. J.*1975: 5955(1);447-51.
4. Nayar, U, Malik, S.L, and Bijlani, R.L. Objective structured practical examination: a new concept in assessment of laboratory exercise in preclinical sciences. *Medical Education*. 1986; 20: 204-209.
5. Hasan S, Malik S, Hamad A, Khan H, and Bilal M. Conventional/traditional practical examination (CPE/TDPE) versus objective structured practical Evaluation (OSPE)/semi objective structured practical Evaluation (SOSPE). *Pak J Physiol* 2009;5(1): 58-64.
6. Aarti Sood Mahajan, Nilima Shankar, and O.P. Tandon. The Comparison of OSPE with Conventional Physiology Practical Assessment. *JIAMSE*. 2004; Vol. 14: 54-57.
7. Suneel Ishwa Majagi. Introduction of O. S. P. E to undergraduates in Pharmacology subject and its comparison with that of conventional practicals. *WJMPBS*. 2011, 1(1): 27-33.
8. Harden, R. 1988. What is an OSCE? *Medical Teacher*, 10:19-22.
9. Amina El-Nemer and Nahed Kandeel. Using OSCE as an Assessment Tool for Clinical Skills: Nursing Students' Feedback. *Australian Journal of Basic and Applied Sciences*. 2009; 3(3): 2465-2472.
10. S S Jaywant and A V Pai. Evaluation & Comparison of Objective Structured Clinical Examination & Conventional Clinical Examination. *The Indian Journal of Occupational Therapy*. 2009; Vol. XLI : No. 1:15-19.

Increasing Objectivity of Practical Examination in Anatomy

Feedback Questionnaire

Sr. No.	Statement	Response		
		Agree	Neutral	Disagree
1	Instructions were adequate to understand new format of examination.			
2	Opportunity was given to seek clarification.			
3	Examination was well organized.			
4	Examination was fair (uniformity of questions and time allotted).			
5	Examination was covered all types of questions.			
6	Needed more time at each station.			
7	Examination was well structured and sequenced.			
8	Examination format was more stress free than previous format.			
9	Variety of structured templates helped to maintain interest.			
10	Number of stations has been more.			
11	This format reduces chance of failing.			
12	Teacher's absence at stations was fright free.			
13	Objective structured format of practical examinations allows more opportunities than the conventional format.			
14	This format of examination reduces the subjectivity			
15	You are satisfied that marks reflect your level of performance.			
16	Result format helped you identify weak areas.			
17	Result format gave you confidence.			
18	Scoring was transparent and objective.			
19	This experience has motivated to learn further.			
20	Please give reasons if you are disagree to any of the statements above:			

Comments/ Suggestions:

Thanks for your time and feedback. Best wishes!
