

## OSPE – AS AN ASSESSMENT TOOL! TEACHERS AND STUDENTS PERSPECTIVES

BASHIR A.<sup>1</sup> TAHIR S.,<sup>2</sup> NASIM A.<sup>3</sup> AND KHAN J.S.<sup>4</sup>

<sup>1</sup>Department of Obstetrics and Gynaecology, AIMC, <sup>2</sup>Department of Dentistry, FMH

<sup>3</sup>Department of Surgery, AIMC, <sup>4</sup>Department of Medical Education, University of Health Sciences, Lahore – Pakistan

### ABSTRACT

*Background and Objectives:* The aim of this study was to compare the perspective of students and teachers regarding the OSPE as an assessment tool in the subject of Obstetrics and Gynaecology.

*Method:* A qualitative phenomenological study was carried out at Obs and Gynae unit 2 Jinnah Hospital/AIMC Lahore. Total 12 semi structured interviews were conducted, six individual interviews with students and six with teachers to explore their perceptions and versions regarding the OSPE as an assessment tool. Data was collected till saturation point reached. Data was analysed for its inherent themes and subthemes.

*Results:* Three major themes were generated. Construction and administration of OSPE, examining body's responsibility towards OSPE and ways to improve OSPE as an assessment method.

*Conclusion:* This study concluded that OSPE is an excellent assessment tool, however the type of assessment, the way it has been introduced to students, its construction and administration all play an important part in making it valid reliable and standard assessment method.

*Key words:* Assessment, OSPE, OSCE, validity, reliability.

### INTRODUCTION

Students' assessment, either formative or summative has always been of great interest to medical teachers. The assessment was first introduced during the times of Hippocrates; they used to assess cognitive, affective and psychomotor domains of students.<sup>1</sup> Later in 1956 Bloom gave the scientific explanation of assessment. From 1965 to 1995 a tremendous work has been carried out to introduce new and innovative methods of students' assessment with major emphasis on acquisition of skills.<sup>2</sup> This revolutionized medical education to competency and skill based education. Harden introduced the OSCE in 1975<sup>3</sup>. Now it is widely used throughout the world,<sup>4,5</sup> both for formative as well as summative assessments.<sup>6,7</sup>

In Pakistan in 2008 OSCE was modified and OSPE was introduced by University of Health Sciences (UHS).<sup>8</sup> The purpose of OSPE is to make assessments valid, objective, structured and standardized. Knowledge, skills and attitude can be assessed simultaneously by OSPE.

OSPE comprises of numerous 5 minutes' duration stations usually 15 to 20 in number. OSPE stations are both static (unobserved) and interactive (observed).

### Preparation of OSPE

In UHS, OSPE is carefully designed by trained exami-

ners. UHS provides the OSPE station in a sealed envelope with a checklist for observed stations for objective rating of the candidate. For any particular day of examination the same set of OSPE is sent to all centres and the examination started at the same time to maintain standardization.

### Conduction of OSPE

These stations are set at a reasonable distance to monitor noise level and students' movement. At each station, there is a clear, transparent and brief candidate's instructions and predesigned marking sheet to avoid examiner bias, therefore making OSPE a highly reliable, valid and structured tool. OSPE as a formative assessment also provide every student feedback regarding their performance after each station.<sup>9</sup>

### MATERIAL AND METHODS

A qualitative phenomenology study was carried out in Department of Obstetrics and Gynaecology unit II, Jinnah Hospital Lahore for a duration of six months. 6 semi structured interviews were carried out with graduates of gynae unit 2 and six with faculty members, through non probability, convenience sampling. Those Fresh MBBS graduates, who were working as house officers in Obstetrics and Gynaecology unit II and has been subjected to OSPE were included in the study.



because there is no structured pool of OSPE exists". BC1

One of the teacher said students' objection on repetition of question is not correct.

"I think they have just a lame excuse nothing else. Because some stations are always repeated to certain extent. Every student has to prepare up to maximum". ML 6.

### Tool Administration

Most of the teachers and students commented:

"the way that the OSPE is run right now, is very immature and I think the questions and the skills they have been asked to demonstrate are either very basic and at time confusing...so the system of examination is not bad it's an excellent system of an examination but its engineering...and the way that it is commenced in our students I have reservation with that". BC1.

Some of the teachers said conducting OSPE on same day is ideal but difficult task:

"In the ideal world or in ideal situation the same examination should be...given to...all the students and the same examiner should examine them "right on the same day". DF2.

### Cost

Most of the teachers and students said:

"OSPE is very expensive tool and its take lot of time and much financial burden on the college but still I don't think so, its achieving the objective it should have". EG 3.

Another teacher said that:

"Reducing the number of stations to five, will reduce the validity and reliability of assessment" DF2.

### Examining Body's Responsibility Towards OSPE

Regarding the responsibility of University towards assessments different comments were:

#### Sub theme: Assessment

"The assessment has to be teaching oriented, not that the teaching should be assessment oriented." BC1.

"If assessment method is bad then people will automatically room their teaching to fulfil the bad assessment method" BC1.

### Curriculum

Regarding curriculum faculty was of different opinion, one of the teachers said:

"Curriculum should be outcome based" BC1.

Another teacher:

"Define our objective regarding teaching" DF2.

"First teach and then devise assessment, Objective should be very clear" BC1.

### University

"The university should take the initiatives in organizing and defining objectives, as all medical colleges are run by the university. The university indirectly controls the teachers as well, so, it is the responsibility of the university to clearly define the objectives and to actually train teacher into the way things should be taught, university has not done that". BC1.

"University has become an examination oriented body and their total concentration is upon the examination, I think the examinations should be taken from the university and should be given to the national board of medical examiner like the united states and the whole country should have the same examination under one umbrella to all our graduate in any part of Pakistan and that national board is not bound by any university or by any curriculum and how university train their students for that board that is up to the university and the university should restrict itself into the defining objectives and the way they deliver those objectives to the students". BC1.

### Examiner's Attitude

Some of the teachers were of view that examiners are not serious in making good OSPE:

"I think the examiners should devise better OSPEs the examiners should talk to the students and then examiners should conduct mock review of OSPE and only then they should be put in to the actual examination environment." BC1.

Most of the teachers and students were of the opinion:

"Examiner should be unbiased" DF2.

### Training

Lack of examiners training was one of the major flaws that was pointed out by most of the teachers and few of the students as well.

"First of all examiners need to be trained, There should be training workshops" BC1.

"So for teachers training and faculty development, mandatory workshops have to be instituted by the governing bodies or the bodies which assess the students like UHS" DF2.

### Ways to Improve OSPE as an Assessment Tool. Recommendations and Suggestions

Different teachers and students comments were:

"All OSPEs should be made in a centralized registry six month before the examination, they should have two reviewer panels, one set of examiner should make the OSPE, one set of reviewers should test the OSPEs on examiners. And once those questions are cleared....only then they should be added to the pool of the OSPE" BC1.

"There should be a training program for the doctors. all doctors who are inducted to SR, AP associate

and professors should have passed through quick teacher training like a month, two to 3 month, weekly programs for teacher training” FH4.

Some of the examiner said that amount of the money paid by the university to examiner is very small, which may be a reason for lack of interest on examiner side.

“The examiners should be paid well...so that the time they spend in making these papers and these examinations is well remunerated”. BC1.

Some examiner suggested.

“There should be more interactive stations, more skills should be checked and there should be more uniformity in the OSPE”. EG3.

“So, breaking the exam into three steps rather than two steps on one step they take the practical work, On the second step they sit at a desk either watch a computer screen or printed diagram or a picture on a paper and answer the given questions”. BC1.

Regarding administrative affairs, examiners said:

“Administration should not involve faculty in carrying out unnecessary meetings, aa unnecessary responsibility deprive the teachers of their good time which can be utilized in their own personal grooming and even if that time is taken from the teacher then the teacher must be given some incentive”. DF2.

Some of the teachers suggested:

“University should take aptitude test of the student at the time of induction. Getting good marks in FSC or in Cambridge and then getting good marks in pre entering test does not mean that these students are suitable people to become doctor.” DF2.

One of the examiner favoured semester system examination:

“I think instead of examining the student at the end of the year if we are taking semester examination then I think we can test their more detailed theoretical knowledge of the subject and they will study throughout the year.” EG3.

Some of the examiner emphasized that:

“Each medical college should have a department of medical education where regular refreshing courses about the conduction of OSPE, preparation of MC-Qs and SAQs should be taken” JK5.

I will strongly recommend there should be a big pool of the OSPE at UHS JK5.

## DISCUSSION

Students and teachers are always one of the most important stakeholders in any educational and assessment system. Understanding and appreciation of the perceptions of students and teachers about OSCE/OSPE help in evolving and developing a system that is more reliable, fair and transparent. Fidment stated that students and teachers’ perception for exploration of any assessment method is very important if the education system is to progress and flourish.<sup>11</sup>

This qualitative study helped to explore students’ and teachers’ perceptions of their experiences with the OSPE as an assessment tool in subject of Obstetrics and Gynaecology.

In our study, most of the teachers and students supported OSPE as a good tool to improve students’ practical skills and knowledge. They believed that OSPE should be continued as an assessment tool. This is in accordance with other researches. Iqbal et al, study supported that OSCE is a practical and useful tool, it provides students opportunities to learn and help them to find their weaknesses.<sup>12</sup>

The students said that because of OSPE, they are exposed to real life clinical scenarios in a simulated environment. This helped students to explore their clinical, communication and practical skills about patients and build relationships with them. “I think it’s very wonderful approach towards examinations” Research also supported that OSPE/OSCE has a strong impact on students work and practice.<sup>13</sup> Both examiner and examinee generally well accepted the OSPE/OSCE.<sup>14</sup>

Assessment of any clinical skill especially obstetrical emergencies in a simulated environment is a complex process and produce challenges.<sup>15</sup> The OSCE is recognized as a useful assessment tool and is considered as gold standard for evaluation of clinical performance.<sup>16</sup>

In our study, almost half of the faculty members felt that overall the level of house officers coming to ward after OSPE are not much different in working efficiency from doctors who passed through conventional examination system “I don’t feel much difference between the previous house officers and the new ones”. This is also supported by literature; it is not certain whether introduction of OSCE during undergraduate years was able to produce better graduates.<sup>17</sup> However, inclusion of OSCE/OSPE in educational programs offers distinctive opportunities to assess students’ learning and skill capabilities.

50% of the faculty felt OPSE as an assessment tool definitely improved students’ competency level. However almost all the students were of the opinion that OSPE has led them to become better doctor. According to students “OSPE has improved me to become a good doctor in future life”.

Any assessment program is found to be reliable and fair if it reflects the curriculum’s objectives. Therefore, an assessment method must not be uniform across the whole programme rather it should be modified according to individual block objectives. The faculty in our study stated that proper learning objectives of curriculum are lacking, therefore teachers emphasized the significance of ‘blueprinting’ in planning and implementing fair assessments. Literature also supported that educational models that are directed by curriculum/course objectives are useful learning tools

that support students to have a comprehensive and direct experience of core educational concepts.<sup>18</sup>

In our study, almost all teachers and students appreciated that OSPE carried out in their institution is in align with OSPE carried out in UHS summative examinations. “OSPE examinations during college same as on UHS pattern”, this alignment helps students to get feel of experience and format of summative assessment before hand prior to the actual exam. These perceptions were in line with study done by Selim et al, where all students consistently appraised that they were aware of the format and level of knowledge needed for OSCE.<sup>19</sup> Yedidia et al, stated that pre-exam training and information regarding the assessment format have a positive influence on students’ performance.<sup>20</sup>

Most of the teachers and students in our study said that there are flaws in the construction of OSPE stations. Most of the stations were theoretical with few skill oriented stations with variable difficulty index. A reason might be faculty is either not trained enough, lack of motivation or not have enough time to construct effective OSPE stations. This is reflected in other studies as well. Hanan et al, in his study concluded that teachers are so busy in their clinical schedules that at times it becomes difficult to find time for teaching.<sup>21</sup> In our study some of the teachers were of view that examiners are not serious in making good OSPE, they make OSPE without properly understanding it. Aleluia et al, in his study said faculty had to struggle and to use a lot of creativeness for organization and making of the OSCE/OSPE stations with limited human and financial resources.<sup>22</sup> Therefore, this perception arouses the need to train faculty which will improve the exam “*The exam will automatically improve because if you got good knowledgeable examiner they will make good OSPE*”. This is in consistent with literature, the preparation, effective conduction and administration of OSPE needs faculty training, awareness, motivation, man power, logistics and ample amount of time.<sup>23</sup> In our study lack of examiner training was one of the major flaws that were pointed out by most of the teachers and few of the students as well. The examples of comment were “*First of all examiners need to be trained, there should be training workshops*”.

Some of the teachers and students were of the opinion that mostly the repetition of questions makes the exam predictable for students and they prepare only those questions, killing the actual purpose of OSPE, “*There is repetition of questions*”. However, one of the teacher said “students’ objection on repetition of question is not correct. In literature, number of studies have not been able to display higher marks on reuse or repetition of skill based assessments. Stillman et al, in their study examined that mean scores of students in successive testing is not expressively compromised by

repeatedly subjecting the students to similar sort of performance – based assessment at different times.<sup>24</sup> Cohen et al, in their study found an upturn in average scores of students by reusing OSCE stations. He proposed that improvement in candidates scores may be due to increase in concentration and hard work of students towards topics that repeatedly come in assessment rather than knowledge or sharing of the answer key.<sup>25</sup> Therefore, repetition of OSCE stations to what extend compromises the examination integrity is not established in the literature. In order to find the effect of repeated use of OSPE/OSCE station on students score, further longitudinal analysis of stations score may be required. In our study, teachers and students have basically raised the concern regarding repetition of theoretical questions rather than skill assessment OSPE stations, because in these stations performance of students matters, which depends upon their expertise while in theoretical stations answer key matters. This arouses the need to change theoretical questions into practical one so that OSPE can be implemented with its full spirit.

Conduction and implementation of OSCE is a challenging task.<sup>26,27</sup> Similar perception was recorded in our study where teachers perceived the problems in the conduction of OSPE. Most of the teachers and students in this study were of view that OSPE is a useful tool but its way of conduction is not mature enough. Some of the teachers proposed, same set of questions should be administered to all students on same day. This will improve the reliability and validity of exam. Literature supported that OSCE/OSPE offer a uniform objective for evaluating students.<sup>28</sup> While some of the teachers said conducting OSPE on same day is ideal but difficult task. OSPE for undergraduates on same day is not possible because of large number of students; multiple Medical Colleges affiliated with university, limited faculty and lack of logistics. These problems can only be overcome by good pool of OSPE, proper training of faculty, tactful organization and implementation of OSPE. Khan in his study mentioned a protected bank of quality assured and robust stations contributes considerably to the better validity and reliability of the assessment scores.<sup>29</sup>

OSPE is greatly appreciated worldwide as a valuable assessment tool<sup>28</sup>. However, it is expensive and cumbersome to set, “*OSPE it’s very expensive tool*.” The cost involved in procurement of the examination place, the use of simulations/simulated patients and the time of the examiners. Estimated cost range from \$21 to \$1000 per examinee<sup>30</sup> and \$50 – \$70 per student.<sup>31</sup> In our study one of the teachers was of opinion in order to reduce the cost, reduce the number of station and improve feasibility by replacing some of the station with some other form of easy practical computer based assessment tool.

Generally, stress affects any student’s performa-

nce. The literature has repeatedly pointed that main source of stress and anxiety for students is primarily assessments and grades.<sup>32</sup> Moreover Joels et al, reported that stress in relation to teaching and learning assists students to memorize facts and to develop concepts of topics without which students may not study the subject in depth. Therefore, the goal should not be to remove educational stress rather, to improve working environment, to enhance students' motivation and appropriate guidance.<sup>33</sup> In our study, most of the teachers and students thought that novelty of examination lead to some stress and anxiety, as one of the student said "I was quite fearful when I, heard that this new system is coming". Byrne and Smyth also concluded in their study that students who already are exposed to an OSCE/OSPE are found to be less nervous, more organized and well prepared for their succeeding clinical examinations.<sup>34</sup> This study perceived comparable experiences among the undergraduates interviewed. "Actually every exam has some stress but when the, candidate has gone through one or two stations and has done well, it automatically reduces the stress level". In spite of stress, students liked the OSPE because of the variety/ authenticity of skill assessment, structured marking schemes, less examiner bias and they want it to be a part of routine day to day assessment. Rushforth also reflected the same that although students described the OSCE as stressful process, that may have a detrimental influence on their performance but still they ranked OSCE as valuable tool of assessment.<sup>35</sup>

In our study, students perceived that time management in attempting the stations were not a problem, which was contradictory to some of the studies found in literature. In a study by Manjula, 61% of students felt they ran short of time in attempting observed station especially and 47% perceived they can easily comprehend OSPE as compared to traditional methods.<sup>36</sup> This was in agreement with our study. "No difficulty in time management in OSPE examination, easier than table viva".

In our study, all the teachers and students were of the opinion that the university has responsibility regarding assessments, designing curriculum, teachers training and improving students teaching and learning which university must fulfil to come at par with international standards. Faculty said: "The University should take the initiatives in organizing and defining objectives, as all medical colleges are run by the university". The curriculum proposed by the university should be uniform in all institutes however they can make some changes according to their local requirements. The university should take steps to develop innovative changes in teaching and learning practices and to upgrade assessment tools to produce competent and skilful doctors.<sup>37,38</sup>

According to the demands of changing educational

culture, university should be flexible enough to accommodate and incorporate modern trends into their curriculum and student assessments. One of the faculty member perceived that university is not fulfilling its responsibility in true sense "University is devised...to conduct...knowledge and information and to actually train teacher into the way things should be taught university has not done that". This is reflected in literature as well. Educational researchers concluded, change in study culture can be best achieved by identifying practices for principal change, by aligning the objectives of the desired change with institutional strategy, commitment from higher-level management, creating and training team, planning and implementing strategies for continuous improvement<sup>39</sup>. Contradictory to this, one of the faculty member in our study commented "university has become an examination oriented body and their total concentration is upon the examination".

OSCE/OSPE is not only a valuable tool for students' assessment but it also provides the exclusive opportunities for evaluation of any educational programme in numerous ways. Student performance as a group on a specified station or set of stations may indicate strengths or flaws of the given educational program.

One of the important aspects of OSPE is that students are examined by number of examiners, this reduces the influence that a single or two examiners can have on students score like in table viva or long case.

### Recommendations and Suggestions

- Preparation and conduction of the OSCE "should be central registry well before time and should be reviewed by panel of examiners, before it submitted to students" It is also supported by literature to implement OSPE successfully, a committee comprises of coordinator and trained faculty needs to be instituted. A timeline should be defined. Contents finalization and stations should be formed well before time at least 3 – 6 months before examination. Standardized patients should be finalized at least one month, and trained 7 days before exam. Faculty should be confirmed well before day of conduction of exam.<sup>16</sup>
- Faculty members in our study stressed upon MOCK examination "first examiners should conduct mock review of OSPE and only then they should be put in to the actual examination environment". Brookes in his study stated that throughout the world many universities utilize mock OSCE as usual practice, as it permits students to develop familiarization with the process and to meet expectations of the evaluators.<sup>40</sup>
- Almost all the teachers' and students' suggested that there should be training workshops by university for the examiners. The argument that well trained and proficient faculty is vital for organizat-

ion, preparation and conduction of OSCE is also reinforced by the literature.<sup>41</sup>

- Another suggestion was “*The examiners should be paid well, so that the time they spend in making these papers and these examinations is well remunerated*”.
- Improve construction and conduction by making more interactive, skill oriented stations and by conducting OSPE at one time for all the students.
- There should be a continues OSPE bank. The question, should have same difficulty and discriminatory index.
- Another suggestion regarding the conduction process was “*instead one steps, exam can be conducted in three steps. Step one, is just five stations of OSPE, Step two, a printed pictorial or a video demonstration of some procedure with set of question and the third the clinical*” Similar findings are supported by literature also. Aleluia et al, in his study perceived that faculty could judge the clinical capabilities of students on the two clinical stations in teacher presence and other stations can be comprised of video-test having some clips showing different clinical scenarios/situations and the students needed to identify and diagnose what was going on with the patient, which examination was carried out and what was the logical reasoning behind this. Other station can assess students on communication or professional skills. This will help to reduce the cost in terms of manpower and finances.
- Examiners should not be involved in administrative affairs. This is also supported by Hanan, the faculty workload required to be redeployed in order to make them available for students, teaching and learning, and in this regard college has to play its role.<sup>21</sup>
- One of the teachers suggested “*University should take aptitude test of the student at the time of induction.*”
- One of the examiner favoured semester system examination *this will improve their learning*”.
- Another suggestion was “*Each medical college should have a department of medical education where regular refreshing courses about the conduction of OSPE, preparation of MCQs and SAQs should be taken*”.

It is **concluded** that the assessments are an integral part of students’ evaluation. The way these assessments are carried out is important because a substandard, unstructured assessment can put a question mark on the face of assessment in term of its validity, reliability, acceptability and educational impact. In this study the main concern of participant was to further improve the construction of OSPE station by making more clinical skill oriented stations and to increase

the OSPE bank to avoid repetition of questions. Moreover, it is costly and time consuming job for which faculty should be properly paid, made trained and refrained from involving into administrative work. In this study OSPE is favoured as a method that should be continued as an assessment method. Moreover, they also stressed the need for development of skill lab and faculty training programmes.

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