

## The Objective Structured Clinical Exam (OSCE): A Qualitative Study exploring Physical Therapy Student's Experience

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**Abstract:** This study explored the student's experience of an OSCE (Objective Structured Clinical Exam) at King Abdulaziz University (Physical Therapy Department) with standardized patients (senior physical therapists). In Objective Structured Clinical Examination (OSCE) the students practise the clinical skill in a safe area, such as with standardized patients (SP): simulated, artificial models or manikins are utilized with an examiner present. Data was collected through semi-structured interviews with thirty Physical Therapy students (PTs). Miles and Huberman's (1994) approach was used to facilitate the analysis. This approach involves summarizing and classifying data using a thematic framework. Analysis revealed three main themes: (1) Positive and enriching experiences about the OSCE, (2) preparation for the OSCE exams (3) Feedback. Interestingly, the data reveal that OSCE mode is very useful to monitor the abilities students at college of Applied Medical Sciences (Physical Therapy Department), and stations can be designed to address different skills and knowledge. The greatest advantage of using OSCE is that it can be set up to integrate theory and practice in forms of small scenarios, simulations, case studies, standardized patient (SP) and the students can improve their own learning and reflection in a safe environment. In conclusion the OSCE evaluation of clinical skills is essential feedback and it plays an important motivating role between students and teachers to ensure the quality and appropriateness of a learning process. Furthermore, this study reported that clinical evaluation processes are more than one aspect of clinical learning and he suggested that curricula judging of a student's clinical practice as a teaching-learning strategy must be based on the concepts of meaning-making, reflection and teacher-student feedback, providing a basis for evaluation approaches. OSCEs are adaptable across professions, clinical skills and academic levels to promote development of functioning knowledge with potential for self, peer and academic feedback. Although there are a few drawbacks in using OSCE, such as time, cost, number of clinical instructors requested with a high number of students, it should not be neglected. However, OSCE can allow us to demonstrate knowledge, skills and attitude related to particular clinical skill in a safe environment.

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### 1. Introduction

There are a number of methods to evaluate the knowledge, skill and attitudes of students in Physical Therapy (PT) academic program such as written examinations, projects / papers / presentations, and clinical examinations. Despite the reported use of OSCEs in physical therapist education, few studies report the construct/ implementation of the OSCE specific to physical therapist education. Furthermore, there is no study yet that examines of the OSCE process in physical therapist education at Physical Therapy Department (KAU). The outcome of this study will encourage the Physical Therapy Department to be more concerned about OSCEs process. This will provide for students and help them to become more competent and highly skilled and will provide information data for use OSCEs exams.

The Objective Structured Clinical Evaluation (OSCE) is a clinical examination, utilizing a

standardized patient (SP) setting in order to test the student's understanding and performance of applied physiotherapy knowledge, skills and attitudes. Applications of OSCEs with its many stations with the focus on specific tasks or skills vary from the single integrated assessment station of an OSCA which provides an holistic patient assessment (Major, 2005). The problem of assessing clinical practice is long-standing and receives substantial attention in the literature research.

Several studies have explored the student's perspective to ascertain whether OSCEs motivate students to learn clinical skills (Alinier 2003; Major;2005). They all concluded that the majority of students agreed that the OSCE examination motivated them to learn the clinical skills being examined. The OSCE is also found to send a strong message to students that the acquisition of practical skills is important to becoming a competent professional.

Norman et al (2000) suggest a need for a multi-method strategy for clinical competence assessment for the health professional students. Their study collected assessment data from a sample of 257 students in four educational institutions and administered additional assessment measures. They assert that the different methods address different abilities. A clear finding from this study is that no single method is appropriate for assessing clinical competence. Similarly, Mahara (1998) claims, in a perspective on clinical evaluation in the health care education, that clinical learning is the heart of the educational experience for students. He reviewed and discussed the objectivity-subjectivity debate and the limits of evaluation practices based solely in positivism and teacher-evaluator and formative-summative distinction.

Another study by Howley (2004) criticizes the traditional method of assessment in clinical competence, saying that the assessment tool is becoming increasingly complex. Reviewing the performance assessment with standardized patients based on various literatures, Howley proposed several areas for the future direction of performance assessment, including (a) toward evidence-based locally-developed assessments, (b) toward an understanding of educational outcomes and non-cognitive assessment factors, and (c) toward more student-driven assessments. Psychologist George Miller 1990 proposed a framework for assessing clinical competence. At the lowest level of the pyramid is knowledge (knows), followed by competence (knows how), performance (shows how), and action (does). In this framework, Miller distinguished between "action" and the lower levels. "Action" focuses on what occurs in practice rather than what happens in an artificial testing situation. Other common methods of assessment of clinical competence in health care students, such as multiple choice questions, simulation tests, and objective structured clinical examinations (OSCEs) target the lower levels of the pyramid (Norcini, 2003). In Objective Structured Clinical Examination (OSCE) the students practise the clinical skill in a safe area, such as with standardized patients (SP): simulated, artificial models or manikins are utilized with an examiner present. This is one of the advantages of OSCE: according to Alinier (2003) study, when assessing students and lecturers in use of this hybrid formative OSCE, two questionnaires have been designed. The first questionnaire was aimed at collecting information from students (n=86); the second questionnaire was distributed to lecturers (n=39) who have assessed students during OSCE. The study received positive feedback regardless of teaching method and shows that OSCE is favourably perceived because the aim of OSCE is to teach safely

to help students gain more confidence when confronted by technical instruments present in the hospital environment.

Following this line, Langford et al (2004) report that OSCE can help the students to gain some confidence; practising in a safe environment will reduce stressful feelings and fear from high numbers of errors if real patients were to be present in the exam, which may lead to a lack of competence in the required skill among the students. In a similar vein, Lee et al (2003) propose that OSCE competency assessment may reduce the incidence of errors in information reported and an OSCE is a reliable, valid, and practical method for assessing continued skill competency. Following along these lines, skills and competences need to be acquired because they are used in a formative way to enhance skill acquisition through simulation.

## 2. Material and Methods

The study was qualitative design, which interpreting thirty Physical Therapy students (PTs) first experiences of the OSCE process with standardized patients (senior physical therapists). This study took place at King Abdulaziz University, which has a large component of health care students at both undergraduate and postgraduate level. The Department of Physical Therapy is one of the four departments in the Faculty of Applied Medical Sciences. It was established in the year 1424 H / 2003 G to prepare graduates trained in Physical Therapy in order to satisfy the needs of the Kingdom of Saudi Arabia and to fulfil the great demand in the Health Care Community. The first batch of students (Male and Female) admitted to the B.Sc. Program in Physical Therapy was in the year 1425 H / 2005 G. The B.Sc. program in Physical Therapy offers courses in Physical Therapy background, equipment, modalities and therapeutic interventions as well as clinical courses that include therapeutic techniques in different pathological conditions. This is done to provide sound academic background needed for study and practice of modern Physical Therapy procedures in hospitals and health care centres. The revised curriculum was newly implemented and it was the outcome of the hard work of all the staff members and members of the curriculum committee. The new curriculum with OSCEs exams is especially dedicated to all the staff members of the Physical Therapy Department, the members of curriculum committee in the Faculty of Applied Medical Sciences and to those who have spent a considerable time in preparation of the original course description version of the Physical Therapy Program. The students enrolled in the Physical Therapy Program, School of applied Medical Science, encounter the OSCE in different areas of practice. In addition to these areas of care, PT Department OSCEs

may include various fields of care (e.g., preventative, maintenance or restorative), different patient age groups and genders, and various practice settings (e.g., acute care facility, private practice, rehabilitation centre, community care and extended care facility). A purposive sample was drawn from a cohort of thirty Physical therapy students (PTs) studying on undergraduate programme. In which an OSCE comprised part of the assessment schedule. Ethical approval to conduct the research was obtained. Thirty PT students on the module were invited to participate in this study from April, 2013. The OSCE consisted of a scenario based assessment in which a student was required to demonstrate safe assessment. During the OSCE, a student was marked against set criteria which demonstrated required skills, underpinned by knowledge and safe practice with standardized patients (senior physical therapists). Data was collected through individual semi-structured interviews. The thirty interviews took place approximately two to three weeks after the OSCE and lasted a range of twenty to thirty minutes.

### 3. Analysis of the Data

All interviews were transcribed verbatim by the author to gain insight on student 'lived experiences' through their own words. Atkinson and Heritage (1984) point out that the transcription of tapes is essential for qualitative research activities. This involves close, repeated listening to recordings, which often reveals un-noted recurring features of the interview. To facilitate the analysis of my qualitative results, each sentence was located on a separate line to help with sorting and coding. Ritchie and Lewis (2003) demonstrate that data reduction is a central task in qualitative analysis in several different ways. In this study, the qualitative data obtained from interviews were analysed by using the guidelines for thematic content analysis that were proposed by Miles and Huberman (1994), who explain qualitative analysis in three concurrent flow guides:

1. Data Reduction is a form of analysis that sharpens, sorts, focuses, discards, and organizes data. In this stage the researcher needs to read the content many times to recognize the key elements to be reduced and transformed in many ways. Miles and Huberman (1994) state:
 

*"Qualitative data can be reduced and transformed in many ways: through sheer selection, through summary or paraphrase, through being subsumed in a large pattern, and so on" (p. 21).*
2. Data Display is an organized assembly of information that permits conclusions to be drawn and action to be taken and is a major avenue to validate qualitative data (Miles and Huberman, 1994). At this stage, the researcher displays data

in tables, charts or matrices to perform comparisons between themes and categories.

3. Conclusion drawing/verification: at this stage, the qualitative links between themes and categories are deciphered to explain what things mean by noting regularities, patterns, explanations, possible configurations, causal flows, and propositions.

The steps taken to analyse the qualitative data are outlined below:

Step 1: interview tapes were transcribed each sentence was placed on a numbered line to help with sorting and coding.

Step 2: the transcripts were read through several times and notes and highlights were made throughout the reading.

Step 3: the transcripts were read through again and several headings were categorized from the content. Open coding was used to derive categories from the text at this stage.

Step 4: The categories were grouped together and I read and reread the results many times to look for similar categories for the purpose of data reduction.

Step 5: A list of headings was drawn up and I ascertained the similarities between them; the final headings were grouped together to produce a set of results in the form of themes and categories.

Step 6: the transcripts were reviewed and separated into themes and all instances of each theme were collected together. The theme section represents the display stage. Some themes were combined together because they were very similar.

Step 7: the transcripts were read many times and sub-headings were ascertained to identify repeated words and ensure that all aspects of the data were covered.

Step 8: to enhance the validity of the results, two individuals checked the results and adjustments were made to the final results accordingly.

### 4. Results

The findings of this study below informed future OSCE development at Physical Therapy Department with standardized patients (senior physical therapists). The themes of student positive and enriching experiences, preparation and feedback emerged from the study. A well planned curriculum in experiential learning can help students to improve the quality of care for patient by exchanging more positive experiences through the OSCE exam.

#### A) Positive and enriching experiences

A key theme that became apparent early on in the analysis was around students positive and enriching experience. The following PT student statement highlight this theme:

*"I think that very positive gaining experience in the OSCE exam and just dealing with that experience has helped me".*

All the participants interviewed spoke of feelings of positive and enriching experiences experienced either before and/or during the OSCE. Many PT students were able to reflect on transformational knowledge, positive and enriching learning experiences and to recognize from the OSCE experiences:

*"My experiences at the OSCE have really very positive and enriching"*

Many of the students reflected on positive predispositions toward the OSCE exam. Some PT students reflected that frequent contact with really patient within the clinical area had enabled them to improve their understanding of the OSCE.

*"The OSCE experience, and developing my skills for future".*

PT students mentioned that the OSCE experience exposed them to a variety of skills, enabling them to learn from a range of experiences in a positive way and understand the clinical in the physical therapy speciality. This could be very rewarding and this wealth of experience served to enrich their PT experience and taught them how to deal with patient in the clinical arena:

*"We can learn much from the OSCE wealth of experience s"*

In the following extracts from the students' responses, examples are presented of PT students identifying the most enjoyable aspects of their clinical area with patients as compassion, empathy and consideration. Hence, close contact with false patients in the OSCE exam led some of the students to be more confident and comfortable in the clinical area.

*"Close contact with standardized patients (senior physical therapists) patient in the OSCE has changed my attitude.. I enjoyed working in this experiences".*

Another student supported this by stating:

*"It was a worthwhile experience and helped me to understand procedures for PT patients".*

*"Contact with standardized patients (senior physical therapists) in the OSCE in clinical experience was very interesting, and I learnt a lot about care and the treatment of patients in the clinical area".*

In the student's responses from the above them, it was clear that students with these positive and enriching experiences with the OSCE exam had helped some of the respondents, who saw as challenging but rewarding experience. They therefore tended to favour this type of evaluation method in the Physical Therapy Department:

*"As a student in Physical Therapy Department I enjoy the OSCE exam very much as a*

*challenge and I am able to understand the concept of this evaluation method"*

### **B) Preparation for the OSCE exam**

The findings of this study informed that essential feature of OSCEs is that they are timed. This means that, at each station, that will be given a set amount adequate time in which to demonstrate the required skill or skills. depending on nature of the task, the length of time may range from five minutes for relatively simple skill. Importantly, as part of preparation for the OSCE that will need to find out how many stations are included in the exam and the time allocated for adequate performance at each station.

*"I had passed. overall, the experience really taught me how important it was to be prepared for OSCEs"*

Furthermore, students should independently practice all clinical skills taught during the term / academic year. Access to required equipment / space beyond timetabled activity can be obtained by communicating directly with the year coordinator. A review lab will be scheduled prior to each OSCE exam in this study. The review lab provides with an opportunity to review practical skills or to obtain clarification from specific instructors. may be available as well. As part of this review, students are encouraged to practice professional communication skills as well as appropriate body mechanics for patient handling skills.

*"I have a positive and wonderful preparation experience toward the OSCE exam from my past experience".*

The Department of PT at KAU provide this year continuing preparation education opportunities to all faculty members regarding evaluation practices, which include OSCE. Examiners and Standardized patients receive additional training to ensure continual quality of the OSCE. Students also receive an orientation to the OSCE format of evaluation, and are given class time to prepare for their OSCEs.

*"The examiner have to act professionally during the OSCE and ensure they treat each student equally"* These findings demonstrated how important the practice / mock OSCE was for students, and therefore it is now a priority that all students have a practice OSCE.

*"prior preparation prevents poor performance"*

### **C) Feedback**

The findings of this study below informed that feedback from standardized patients, examiners, students and instructors is considered as the teaching and learning experience in the Physical Therapy Department through the OSCE exam.

*"I have learned a lot from my experience with feedback in the OSCE exam and I have spent*

*interesting time engaged with teacher their conversation and their questions in OSCE”.*

Participants suggested that feedback in OSCE exam can help as teaching methods, and enhance communication between students and instructors

*“We need feed back with instructors as teaching method to the development of relationships through the OSCE exam”.*

The students pointed out that the OSCE exam should provide students with real-life clinical experiences. This is essential if students are to explore their skills about patients and build relationships with them. Therefore, providing enough contact time and talking about the OSCE exam can enhance the teaching and learning experience in the Physical Therapy Department.

*"Some PT students may not have experienced close relationships with patients in the past, so the OSCE exam must be restructured to be more relationship oriented - not is currently the case, task oriented only - in order to help students to feel confident about interacting with patients in future as a feedback"*

The participants proposed that effective communication in the OSCE exam was an increasingly important area at Physical Therapy Department. The students emphasised that the quality of skills provided is in large part dependent on the quality of the relationship the student is able to establish in the Physical Therapy Department through the OSCE exam. Graduates PT of the future will care for a high proportion of in clinical settings; it is thus vitally important that curricula include structured experiences which gradually introduce students to positive interaction as feedback in the OSCE exam.

## **5. Discussion**

The present research has revealed that introducing students to a variety of clinical settings within the OSCE exam can have a positive effect in enriching their experiences, which can affect their subsequent career choices. The students reflected that exposure to positive experiences in the OSCE stations had enhanced their ability to provide clinical skills and to understand a wide range of functional abilities in the physical therapy speciality. Their responses indicated that such clinical opportunities with the OSCE exam could serve as positive and rewarding experiences and could encourage them to view that exam as a challenging opportunity, especially when their contact with patients within clinical training was increased. There was an emphasis on the rewarding aspect of caring for patients during clinical training, which can foster more positive, interesting and enriched experience among PT students.

The OSCE mode is very useful to monitor the abilities students at college of Applied Medical

Sciences, and stations can be designed to address different skills and knowledge. The greatest advantage of using OSCE is that it can be set up to integrate theory and practice in forms of small scenarios, simulations, case studies, standardized patient (SP) and the students can improve their own learning and reflection in a safe environment. Furthermore, when planning for the OSCE, a team of course lectures should spend time considering in detail each of the skills that will be examined. Each skill will be broken down into its component part, and marking criteria, in the form of a checklist, will be developed. However, was essentially, this is assessment list of the key components of the skill that the student should perform in order to demonstrate that he is competent, safe and through. In similar vein, Waston et al (2002) propose that the assessment of clinical competence remains almost universally accepted in the health education. Their study was designed to investigate the evidence for the use of the clinical competence assessment through a review using systematic methods of literature of different assessments of clinical competence, like use of objective structured clinical examination (OSCE) as a clinical competence tool for assessment. This points out that some students may perform less well than they would in clinical practice due to the examination nature of the OSCE. There is still considerable confusion about the definition of clinical competence and most of the methods in use to define or measure competence have not been developed systematically. There has been a change in theoretical frameworks of assessment, as a lack of consistency in the training of student assessors in the clinical areas was identified. In Calman's (2002) study, data were collected by postal questionnaire. Students' views suggested that they had little confidence in methods of clinical competence assessment and there was no formal validity and reliability of testing. Some of these issues may be resolved with the development of an instrument for competence assessment. In another study, Bukinghams (2000) asserts that effective assessment of competency of student in clinical practice is a vital issue. Furthermore, the findings of this study informed that prior preparation prevents poor performance. Preparation and implementation of the OSCE is explored in students and tutors, and the strengths and problems are examined in the study by Anderson (2002) on the implementation of an objective structured clinical examination (OSCE) in the assessment of mental health nursing students with discussion of the development of OSCE. The study concludes advocating the use of the OSCE assessment tool as a formative exercise. Preparation with the OSCE process is recognized as a key issue within the literature (Brand and Schoonheim-Klein 2009; Brooks

2007; Brosnan *et al.* 2005; Furlong *et al.* 2005). Alinier *et al.* (2006) discussed the importance of adequate preparation for students and particularly with regards to PT stations. Brookes (2007) stated that the use of a mock OSCE was usual practice throughout many universities, as it allows students to become familiar with the expectations of the assessors and to experience the process. However, Furlong *et al.* (2005, 354) reported that 90% of students felt the OSCE was a stressful event, despite the majority also agreeing that they had been adequately prepared for the assessment. Similarly, Coovadia and Moosa (1985) suggested that OSCE can measure both clinical competence and theoretical knowledge. Advanced practice is concerned about decision-making based on a theoretical background, as in objective structured clinical examination (OSCE) that will be considered as an import issue in nursing education. As Bartfay (2004) suggested, objective structured clinical examinations (OSCE) promote the mastery of clinical skills and decision-making for students in controlled and safe learning environments, which lead to advanced nursing education and practice. In conclusion OSCEs are adaptable across professions, clinical skills and academic levels to promote development of functioning knowledge with potential for self ,peer and academic feedback . Problems associated with OSCEs are that we need a lot of time and staff and it is difficult to train and keep SPs. OSCE can allow us to demonstrate knowledge, skills and attitude related to particular clinical skill in a safe environment. In the OSCE evaluation of clinical skills is essential feedback and it plays an important motivating role between students and teachers to ensure the quality and appropriateness of a learning process. Although there are a few drawbacks in using OSCE, such as time, cost, number of clinical instructors requested with a high number of students, it should not be neglected.

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