RESEARCH ARTICLE

Development, implementation and results of Objective Structured Clinical Exam in Psychiatric Association of Turkey Board Exam

Türkiye Psikiyatri Derneği Yeterlik Sınav'ında yapılan Nesnel Örgün Klinik Sınav'ının geliştirilmesi, uygulanması ve sonuçları

Ozlem Surel Karabilgin Ozturkcu[1], Ozlem Kuman Tuncel[2], Damla Isman Haznedaroglu[2]

[1]Assoc.Prof. Dr., Ege University, Faculty of Medicine, Department of Medical Education, İzmir, Turkey

[2]M.D., Ege University, Faculty of Medicine, Department of Psychiatry, İzmir, Turkey

SUMMARY

Object: The aim of this study, is to present the process and results of OSCE in Psychiatric Association of Turkey Board Exam-PATBE. **Methods:** Six stationed OSCE, in which Standardized Patient-SP took role on five stations, were used as an exam method. These stations were planned for assessing the skills of taking history, psychiatric examination, differential diagnosis, making treatment plans and informing the patient. On the sixth station, the examinees are asked to write a forensic psychiatric report. Phases of OSCE were: preparing the blueprint, preparing the SPs' scenario for each station, preparing the examinee's instructions, preparing the observer's instructions and the evaluation guide, SP education, training of observers, pilot implementation, implementation and evaluation of results. The examinees are expected to achieve at least 30% success in each station and 50% success in all stations. **Results:** 116 examinees participated the exam between 2006-2016 and 91.4% succeeded in the OSCE exam. In feedback forms, examinees stated that the exam is moderately difficult; yet, the content of the exam is in line with the scope of their specialty training and is suitable for evaluating an expert. **Discussion:** Positive feedbacks from the examinees indicated the efficiency of the exam. The preparation, implementation and evaluation of results of OSCE require considerable time and manpower. OSCE can be used as a valuable test method for psychiatric board certification.

Key Words: Psychiatry, board exam, OSCE, standardized patient

ÖZET

Amaç: Bu çalışmanın amacı, Türkiye Psikiyatri Derneği Yeterlik Sınavı'nda yapılan Nesnel Örgün Klinik Sınav-NÖKS sürecini ve sonuçlarını sunmaktır. **Yöntem:**Sınav yöntemi olarak, beş istasyonda Standardize Hasta-SH'ların rol oynadığı altı istasyonlu NÖKS kullanılmaktadır. Bu istasyonlar hastadan bilgi alma, psikiyatrik muayene, ayırıcı tanı, tedavi planlama ve hastayı bilgilendirme becerilerini değerlendirmek için planlanmaktadır. Altıncı istasyonda adaylardan adli psikiyatrik rapor yazması istenmektedir. NÖKS'ün aşamaları; sınav matrisinin, her bir istasyon için SH senaryosu, aday yönergesi, gözlemci yönergesi ve değerlendirme rehberinin hazırlanması; SH eğitimi; gözlemcilerin eğitimi; pilot uygulama; uygulama ve sonuçların değerlendirilmesidir. Adaylardan her bir istasyonda en az % 30, bütün istasyonların ortalaması olarak % 50 başarı beklenmektedir. **Bulgular:** Sınava 2006-2016 yılları arasında toplam 116 kişi katıldı ve %91,4'ü NÖKS'da başarılı oldu. Geri bildirim formlarında, adaylar sınavın orta düzeyde zor olduğunu, sınav içeriğinin uzmanlık eğitiminin kapsamı ile uyumlu olduğunu ve bir uzmanı değerlendirmek için uygun olduğunu belirtmişlerdir. **Sonuç:** Adayların olumlu geri bildirimleri sınavın kabul edilebilirliğini göstermektedir. NÖKS'nda hazırlık, uygulama ve sonuçların değerlendirilmesi oldukça zaman ve insan gücü gerektirir. NÖKS, psikiyatri kurulu sertifikasyonu için değerli bir sınav yöntemi olarak kullanılabilir.

Anahtar Sözcükler: Psikiyatri, yeterlik sınavı, NÖKS, standart hasta

(Turkish J Clinical Psychiatry 2018;21:210-221)

DOI: 10.5505/kpd.2018.89421

The arrival date of article: 22.06.2018, Acceptance date publication: 06.07.2018

INTRODUCTION

According to the American Medical Specialties Board, board certification is an indicator of continuous improvement of the physician's medical knowledge, decision-making and professionalism in the clinical and communicational skills to provide qualified health care services (1). These knowledge and skills are assessed by a so called "high-stakes exam"; board certification exams aimed for certification, degree etc. purposes (2,3,4).

The first board certification exam was conducted by the American Board of Ophtalmatology in 1917 and was followed by other specialty board certification exams (2). Today, psychiatry board exams are made in many countries, such as the United States of America (USA), Canada, United Kingdom (UK), Australia-New Zealand, Iran (5).

Though European Psychiatric Association is planning to develop a European Psychiatry Board Exam, this plan has not been implemented due to the wide range of differences among curricula contents and residency durations across Europe (6). In Turkey, psychiatry board exams have been carried out since 2006.

Psychiatric Association of Turkey (PAT)-Board Exam Sub-Committee has been carrying out the exams with the counseling of Ege University Faculty of Medicine, Medical Education Department-EUFM-MED.

The first writer of this paper has been the advisor on all passed board exams on behalf of EUFM-MED. Other writers have been working as the board exam sub-committee member and have taken active roles on all board exam during recent years.

The exams are held in two steps. The aim of the first step is to evaluate the general knowledge about psychiatry with a written exam. Psychiatrists who have successfully completed the written exam step can go to further to the second step. In the second step, professional skills and attitudes of psychiatrists are assessed through a practice exam.

Psychiatry trainees those who passed the written exam may further go on taking practice exam after they get their specialty. In order to be able to apply for the practice exam, it must be no more than three years after being successful in the written exam.

The contents of the exams are prepared according to the basic headings of the psychiatric specialization training program determined by the PAT-Training Programs Development Sub-Committee.

The details of the written exam have been published previously (7), and the information on the practice exam is the subject of this article. The Psychiatry board practice exam is administered by the Objective Structured Clinical Exam-OSCE method. OSCE was developed by Ronald Harden in 1970 and is widely used in all stages of medical education (8). OSCE consists of several stations where the practice test is performed step by step. Examinees are required to complete the expected task (history taking, physical exam, informing the patient, etc.) within a certain period of time in each station. After completing a task in one station, the examinees are sequentially transferred to the other station.

The observers assess the performance of the examinees at each station through the checklist/eva luation guide (9,10). OSCE is composed of various SP cases in general. In addition to these stations, other stations which SP's are not used may also be included in the exam set (9,11).

SPs may be real patients, as well as healthy individuals who have been trained to demonstrate a specific disease, clinical situation with a consistent and reliable attitude in a realistic manner (12). Although it is difficult to simulate psychiatric cases for SP stations, OSCE has been used in the field of psychiatry with acceptable validity since the 1980s (9,10,13). There are applications consisting of fifteen-twenty minute scenarios (5,14). Similar to the practice of TPBE, there are two steps of the psychiatric board exams in Canada and England as written and practice (15,16). The practice section in

Canada also includes the OSCE stations, each of which lasts 20 minutes (15).

In the UK, the Clinical Assessment of Skills and Competences (CASC) is used which is based on the traditional OSCE format. In the UK, pair of four connected 10-minute stations in the morning are applied and in the noon session, eight stations of seven minutes are used (16). OSCE is used in psychiatry board exams in Australia and New Zealand, Iran and Oman (17,18). In the USA, the board exam which was consisted of oral and written parts at past; has been conducted as a written, computer based exam, since 2011 (5).

It is recommended to prepare the exam blueprint to determine the content validity of an OSCE. For the blueprints of board certification exams specialty content domains are considered more important than generic competencies (19). For example, rather than evaluating generic competency of psychiatric exam on its own, evaluating this competency in a content domain such as psychiatric exam in bipolar disorder or dementia is. To ensure the validity of an OSCE, content and teaching assessment experts are involved in the preparation of exam materials, and several assessment methods are employed, such as the use of SPs, written cases, and patient files (20). In addition, measures such as the selection and standardization of SPs, the training and standardization of observers, and adequate information to examinees are necessary precautions to make a comparison between similar measures and OSCE (20,21).

Given the high level of validity and reliability of OSCE, it is accepted as an appropriate and fair method to assess clinical proficiency in psychiatry (22,23,24). Strengths such as being able to assess skills and competencies in a wide range of competencies in a comprehensive and standardized manner, make OSCE a viable option in board exams (4). PAT preferred to use OSCE for the board practice exam.

The aim of this article, is to present the process and results of OSCE in TPBE.

METHOD

The exam process consists of three phases; planning, implementation and interpretation of results.

Planning: OSCE planning begins with the preparation of the exam blueprint. The main topic related to the stations and the tasks related to these topics are identified and prepared. The OSCE in TPBE consists of six main parts: mood disorders, alcohol and substance use disorders, anxiety disorders/ obsessive compulsive and related disorders/trauma and stressor related disorders, forensic psychiatry, schizophrenia-psychotic disorders, psychotherapies. The titles of the exam content and the specific tasks related to these areas vary from year to year, so each exam consists of different stations. For each station an expert psychiatrist on a determined area who is experienced in OSCE; is assigned by the PAT-Board Exam Sub-Committee to prepare the SP scenario, examinee and observer instructions, evaluation guide.

Since experience of SPs use in psychiatry has limited; and the examinees are not generally acquainted with OSCE and SP practice, PAT has not established a very high cut-off level for practice exams. Examinees are expected to have at least 30% points for each station and 50% points for all stations. Six stations are planned for practice exams and part tasks such as data evaluation, patient evaluation, diagnosis, differential diagnosis, risk assessment, emergency evaluation, emergency interventions, diagnostic tool use, treatment planning and informing the patient are tested in a short time. SPs play a role in 5 of the stations. These stations were designed to evaluate the ability to obtain information from a patient, examine a patient, make a differential diagnosis, devise a treatment plan and to provide information to the patient. Examinees are expected to write a forensic psychiatric report on the sixth station. The stations are independent of each other and form a carousel.

The prepared exam materials are reviewed by the board exam sub-committee members in order to assess the objectives and the content of each station's task, relevance of the information provided to examinees about each task, the technical quality

of the checklists, and the correlation between SP scripts and actual cases. The "Examinee Instructions" and "Observer Instructions" are written texts in which the information about the task required to perform at that station is given. The instructions (for examinees and observers) give information about the case and explain the requirements for each station. These instructions also define which part of the psychiatric interview are expected to perform and, if necessary, provide information on previous sections of the interview. The "Evaluation Checklist" is an evaluation guide consisting of a 3-point Likert-type scale (0: Insufficient, 1: Partially sufficient, 2: Sufficient) which is used by the observer to assess the examinee's performance. An evaluation checklist consisting of a different number of items is prepared for each task/station.

The items are case-specific and each item is weighted according to the importance level. In the scenario prepared for SPs, the case is described in detail, with specific emphasis on what is expected from the patient and the examinee. For the forensic psychiatric station, a letter from the court, a psychiatric exam report of the case, a report summarizing the court file, instruction sheet and an evaluation checklist are prepared.

Standardized Patient Training: SPs who are employed in EUFM-MED Simulated Patient Laboratory work in the OSCE. EUFM-MED representative gives role training to SPs. For each patient role, a six hour role discussion and role play is performed through scenarios. In SP training, educational materials related to the role of the patient are presented (brochures, books, movies, etc.) as well as mutual role education. Once the role training is completed, OSCE is rehearsed. The EUFM-MED representative plays the role of the physician and stimulates the role of SP and immediately gives role feedback. The feedback session lasts four hours.

Training the Observers: Observers are selected by the PAT-Board Exam Sub-Committee among the psychiatrists who are experienced in the field related to the OSCE station and have board certificate. From 2006 to 2009, one observer for each station was present, from 2010 onwards, the stations were generally assessed by two observers. All examinees entering the exam are assessed by the same observer/observers at each station.

Before the exam, the EUFM-MED representative gives one hour of training to the observers about the observer instructions, assessment guide and scoring. This training is followed by a pilot practice involving a voluntary psychiatrist as an examinee.

Pilot Testing: Pilot testing is held every year to check each component of the exam. During the pilot testing both the observers and the PAT-Board Exam Sub-Committee members evaluate the examinee. Pilot testing is recorded and these records are given to observers and SPs for educational purposes. After the pilot testing, the duration of the exam, the utility of evaluation instructions, examinee instructions, SP scenarios, SP performance and observer checklists are reviewed and necessary arrangements are made.

Exam: Examinees can get detailed information about the practice exam beforehand via PAT web page (http://www.psikiyatri.org.tr/menu/90/yeterlik-sinavi).

The exam is carried out in EUMF-MED Simulated Patient Laboratory in Izmir. Just before the exam, the examinees are informed again with special emphasis on the issues related to the application (such as following the examinee instructions, focusing on the task of the station, not talking to the observer) and the practice exam venue is visited.

Examinees are given three minutes to read the directions when they enter the station. The observer / observers watch the conversation with the SP through the headphone from behind the window. Stations are not recorded and SPs do not evaluate the examinees. Examinees are given 8-10 minutes for each station with SPs and 20-30 minutes for the forensic psychiatric report writing station. The total duration of the exam varies according to the number of people entering the exam and the length of the duration of the station.

The feedbacks regarding the OSCE are taken both in written form and orally from the examinees. "Practice Exam Evaluation Form" is used for written feedback. Between 2006 and 2007, only verbal feedback was taken. The form used between 2008 and 2009 was revised in 2010 and is still in use.

In both forms, in the first part, the gender of the examinee, the institution in which he/she worked, the year in which he/she became a psychiatrist, the institution where he/she received psychiatry residency education, the subspecialty field -if any-, information about the previously participated board exams and the opinion about the current success about the exam participated were asked.

In the second part of the form, the nine-point Likert scale (NO:No Opinion, 1:Absolutely Disagree, 3:Disagree, 5:Neutral, 7:Agree, 9:Absolutely Agree) was used.

In the second part of the first version feedback form, we asked the opinion on the adequacy of the information given before the test; adequacy of the disclosure of what is expected on each station; adequacy of the time given for the stations, about station tasks-topics balance, and the adequacy of the exam for an objective and fair assessment.

Different from the first version of the feedback form, in the current form used, the examinees were asked about the time duration of the exam, the ability to distinguish between knowledge levels, and the test method's suitability to measure proficiency in the field of psychiatry, and the opinions about SPs. They are also asked to add free comments about the exam in general and about the stations. In both forms, examinees were asked about the difficulty of the exam, the infrastructure and organization, the content of the expert assessment and the relevance of the scope of specialization training.

After completion of the exam, a feedback session is attended by the SPs, examinees, observers, and organizers. The aim of this session is to obtain feedback about the exam process from of all the participants, which helps in designing subsequent exams. Immediately after the feedback session, PAT Board Exam Sub-Committee members and EUMF-MED representative evaluate station checklists and each examinee's success. Then overall success level is calculated.

Evaluation of the results: Examinees are informed about their exam results via a mailed statement. The names and CVs of newly board certified psychiatrists are announced on the PAT web site, and proficiency certificates are presented to them at the National Congress. Those who fail are not announced (25).

Statistical Method: Statistical evaluation of the data of the study was made with Statistical Package for the Social

Science Statistics (SPSS) 21 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0, Armonk, NY: IBM Corp.).

RESULTS

A total of 116 people attended the psychiatry board practice exam between 2006 and 2016. Of the examinees 50.9% (n: 59) were female, 50.5% (n: 58) were psychiatrists working in the state hospitals. It is stated that 60% (n:63) of examinees had made their psychiatry residency in a university hospital.

When it comes to subspecialties, two examinees were sub-specialized in the area of consultation-liaison psychiatry and one examinee was sub-specialized in the area of geriatrics. Four examinees had previously taken another board exam. Of them two were successful and two failed. It was determined that the years of psychiatric residency of examinees were between 1983 - 2016. In the overall practice exams; informing the patient, forensic psychiatric report and differential diagnosis skills were the most commonly assessed (Table 1).

The average exam scores and standard deviations, the lowest and highest scores received and the exam success levels are shown in Table 2. The highest average exam score was recorded on the first year. Of all examinees 91.4% (n: 106 people) were

Table 1. Distribution of the tasks expected from the examinees during OSCE.

Task	Number
Informing the patient	13
Forensic psychiatric report writing	10
Differential diagnosis	10
Risk assessment	9
Patient evaluation	7
Treatment planning	5
Data assessment	4
Using a diagnostic tool	3
Diagnosing	3
Emergency evaluation and intervention	2
Patient history	2
Assessing treatment resistance	2
Assessing the prognosis	1
Initiating a therapeutic relation	1

* In some stations more than one task is expected

successful in the practice exam (Table 2).

The subject areas asked in OSCE, expected tasks and examinees' average points per station are shown in Table 3.

The main topics (mood disorders, alcohol and substance use disorders, anxiety disorders / obsessive compulsive and related disorders / trauma and stressor related disorders, forensic psychiatry, schizophrenia-psychotic disorders) included in the exam blueprint, have been used in OSCE every year.

Although the specific question for psychotherapy area had been asked for one year, in the other years questions about cognitive behavioral therapy, motivational interview, sexual therapy have been asked under other main topic headlines. Apart from these, the most frequently asked topic is suicide.

In addition, questions about dementia, vaginismus, eating disorders, extrapyramidal system exam, metabolic syndrome and consultation liaison psychiatry were less frequently included in the exams.

The participants generally stated that the exam is moderately difficult, content was in line with the scope of the psychiatry residency training, and the exam infrastructure and organization were good for evaluating a psychiatrist.

Participants who took the practice exam during the period of 2008-2010 also stated that they were well informed about the exam; expectations of the

Table 2. Mean score, standard deviation, minimum and maximum scores and exam success levels of the examinees according to years.

Year	n	Mean ± SD	Min-Max.	Success level (%)
2006	6	76.5 ± 6,5	68-89	100
2007	8	62.8 ± 11,3	51-82	100
2008	14	63.6 ± 6,4	57-77	78,6
2009	7	68.7 ± 10,5	52-81	71,4
2010	18	62.1±6	51-76	83,3
2011	8	62.1± 4,2	58-70	100
2012	14	69.9±9,5	50-83	100
2013	4	71.4±6,2	62-76	100
2014	10	62.4±6,3	51-70	100
2015	16	63.9±6,5	53-76	100
2016	12	63.4±7	49-74	83,3

SD: Standard Deviation, Min: Minimum, Max: Maximum

Table 3. Subject areas, expected tasks and the mean scores of the examinees between 2006 - 2016 OSCE.

	2006 (n:6) Task Mean score	**2007 (n:8) Task Mean score**	**2008 (n: 14) Task Mean score**	**2009 (n: 7) Task Mean score**	**2010 (n: 18) Task Mean score**	**2011 (n:8) Task Mean score**	**2012 (n:14) Task Mean score**	**2013 (n:4) Task Mean score**	**2014 (n: 10) Task Mean score**	**2015 (n: 16) Task Mean score**	**2016 (n:12) Task Mean score**
Alcohol and Substance Use Disorders	Diagnosing 69.6±9.0	Data Assessment 58.6±17.5	Differential Diagnosis 61.2±10.3	Diagnosing 77.2±21.2	Data Assessment 51.5±20.3	Data Assessment 63.8±18	Patient Evaluation 68.2±11.9		Patient Evaluation 60±15.4	Patient Evaluation 60.4±10.7	Patient Evaluation 61.25±11.8
Suicide	Risk assessment 70.8±9.8	Risk assessment 54.1±10.9	Risk assessment 54.1±9.8	Emergency evaluation/ intervention 70.4±10.3		Risk assessment 68.1±9.2			Emergency evaluation/ intervention 56.2±9.6		Risk assessment 54.17±7.5
Obsessive Compulsive Disorder and Related Disorders		Treatment Planning/ Informing the Patient 56.8±16.7							Treatment Planning/ Informing the Patient 87.5±9.4		
Trauma and Stressor Related Disorders			Patient Evaluation 77.1±13.2					Informing the Patient 68.7±14.2			Patient Evaluation 74.07±10.3
Anxiety Disorders	Differential Diagnosis 73.3±16.1			Patient Evaluation /informing /Treatment planning 69.2±10.9	Differential Diagnosis 73.2±11.5					Differential Diagnosis 59.2±9.2	
Bipolar Disorders	Treatment Planning/ Informing the Patient 82.8±5.5	Informing the Patient 81.3±13.5	Informing the Patient 60±12.2		Informing the Patient 55.9±8.9	Informing the Patient 45.0±9.1	Risk assessment 55.6±15.2	Informing the Patient 68.2±17		Informing the Patient 47.3±10.1	
Depression		Differential Diagnosis 69.1±7.9			Diagnosing/ Risk Assessment 53.6±18.6				Patient Evaluation 51±11.5		

Continue…Table 3. Subject areas, expected tasks and the mean scores of the examinees between 2006 - 2016 OSCE.

Schizophrenia and Psychotic Disorders	Informing the Patient 72.3±19.3			Differential Diagnosis 56.4±20.7		Patient Evaluation 60.1±14.2	Differential Diagnosis 81.1±13.6	Patient Evaluation 76.9±12.8 Diagnosing 57.4±19.9		Differential Diagnosis 71.4±13.5	
Psychotherapy				Informing the Patient 59.2±21.4							
Forensic Psychiatry		Forensic Psychiatric Report Writing 56.3±22.2	Forensic Psychiatric Report Writing 58.9±25.2	Forensic Psychiatric Report Writing 79.5±11.9	Forensic Psychiatric Report Writing 73.8±21.2	Forensic Psychiatric Report Writing 68.4±15.8	Forensic Psychiatric Report Writing 74.3±22.2	Forensic Psychiatric Report Writing 75±9.7	Forensic Psychiatric Report Writing 65±27.2	Forensic Psychiatric Report Writing 65.4±24.2	Forensic Psychiatric Report Writing 52.65±21.1
Dementia	Using a Diagnostic Tool 91.1±3.9				Using a Diagnostic Tool 63.9±13.2					Using a Diagnostic Tool 79.8±6	
Extrapyramidal System Exam							Patient Evaluation /informing 72.1±12.4				Patient Evaluation /informing 65.97±14.9
Metabolic Syndrome			Risk assessment / Informing the Patient 70.8±22.3					Risk assessment / Informing the Patient 82.2±9.2			
Vaginismus						Informing the Patient 67.6±11.3					Informing the Patient 72.08±5.9
Eating Disorders							Differential Diagnosis 67.9±13.5				
Consultation Liaison Psychiatry									Patient Evaluation/Informing 54.5±19.1		

examiners were clearly explained; the distribution of the exam questions was balanced among topics; the OSCE is an objective and fair exam; and the time given for each station is not too long. Examinees who attended the 2010-2016 exams pointed out that the test duration was not long; the ability to distinguish between knowing and not knowing was moderate-good, and that OSCE was a suitable method for psychiatry and SPs were quite realistic (Table 4).

Based on the post-exam feedback sessions the examinees considered the exam to be satisfactory, in terms of infrastructure and organization, station content, distribution of domains across stations, and SP role-playing ability. Examinees and observers agreed that OSCE was a superior method of assessing practical skills and favored the method over oral exam. They also thought that OSCE facilitates objective and fair assessment, and is appropriate to use as psychiatry specialty exams. On the other hand, some of the examinees thought that the time allotted for reading instructions and performing the assigned tasks was insufficient.

DISCUSSION

OSCE in Psychiatric Association of Turkey Board Exam is being done in Turkey since 2006. There have been developments in the preparation, implementation and evaluation of the exam within time passed. As use of OSCE in undergraduate and postgraduate medical education in Turkey is limited, the board certification examinees were unfamiliar with the OSCE procedure. PAT has published a sample set of exam materials, including instructions, checklists and interview videos on its web site.

Adherence to the exam matrix when creating the exam set, use of case-specific assessment instructions, SPs use and choosing OSCE experienced observers contribute to the exam validity.

The positive feedback provided by examinees and observers on the OSCE board certification process are indicative of the exam's acceptability.

The positive feedback of the examinees and the fact that the exam materials are prepared by subject experts show that the level of face validity is sufficient. At the same time; each OSCE station is assessing different tasks about various areas of psychiatry, that's why we can say that content validity is also sufficient (20).

One of the developments made over the years is to try to include two observers at every station. Observers are very carefully trained about the use of assessment guides. OSCE necessitates considerable time and manpower during preparation. Observers who all are teaching staff working at various training centers are not paid for the exam as they contribute to the board certification exam as a part of their routine work. Unfortunately, two observers could not be provided for each station in some exams. For this reason, the reliability of the exam can not be calculated as the inter-rater reliability had not been assessed in some years.

Attention should be paid to the fact that the evaluation checklists contain special items for each case when preparing the OSCE materials (21).

We focused on part tasks rather than entire psychiatric interview process in order to assess as many competency domains and clinical task skills as possible. The wide range in mean station scores indicates that the checklists had adequate sensitivity as a measurement tool. Minimum, maximum, and mean station scores for each year's exam indicate that the station tasks varied in difficulty. As such, examinee strengths and weaknesses were identified via performing various tasks related to different domains.

The consistence of the ratings of PAT-Board Exam Sub-Committee members and observers are ensured during a pilot session in which they complete the checklists independently. The reliability of an OSCE can be negatively affected by some basic errors. Checklist items, cases, SP raters, and environmental factors are all potential sources of measurement error in SP performance tests (21). Standardization and training of SPs and observers, pilot testing, use of case reports in addition to SPs, providing adequate information about OSCE to

Table 4. Examinees' Opinions about the Psychiatric Association of Turkey Board Exam according to the Feedback Forms.

		2008 (n:14)	2009 (n:7)	2010 (n:18)	2011 (n:8)	2012 (n:14)	2013 (n:4)	2014 (n:9)	2015 (n:16)	2016 (n:12)
		(Min-Max) Median	(Min-Max) Median	(Min-Max) Median	(Min-Max) Median	(Min-Max) Median	(Min-Max) Median	(Min-Max) Median	(Min-Max) Median	(Min-Max) Median
2010-2016	**Exam duration was long**			(1-8) 3	(1-3) 3	(1-7) 5	(1-7) 5	(1-9) 5	(1-9) 3	(1-7) 4
	The exam has been suitably prepared to distinguish between those who know and those who do not			(1-9) 5	(5-7) 7	(1-8) 4	(3-7) 5	(5-9) 7	(4-8) 7	(5-9) 7
	OSCE was a suitable assessment method for psychiatry board			(3-9) 7	(5-8) 7	(3-9) 7	(3-8) 5	(5-8) 7	(3-8) 7	(5-9) 7
	Standardized patients were realistic			(3-9) 7	(6-9) 8	(4-9) 7	(7-9) 8	(5-8) 7	(4-9) 9	(5-9) 7

NO: No Opinion	**1:** Absolutely Disagree/Very Bad	**2**	**3:** Disagree/Bad	**4**	**5:** Neutral	**6**	7: Agree/Good	**8**	**9:** Absolutely Agree/Very Good

examinees, controlling of the exam setting, and feedback sessions with examinees and observers are all measures taken to minimize these errors. Although standardization of SP portrayal of complex cognitive, emotional, and physical behaviors and the effectiveness of their use in OSCEs remains contentious (26), Sadeghi et al. reported that both psychiatrists and observers find SP performance of psychiatric patients satisfactory (27). During the feedback sessions we organized after each OSCE, the examinees reported that the SPs were realistic. We think the success of SPs relies mainly on the methods used for their training. Taghva et al. emphasized the importance of SP training to improve the plausibility of SPs (28).

Assessment of examinee competency via OSCE provides valuable data on the strengths and weaknesses of residency training programs (20,29). For instance, the observed performance of the examinees at the forensic report writing station indicated that there is a need for continuing education programs on forensic psychiatry, and as such, the PAT is planning to offer a nation-wide 2 days course on forensic psychiatry procedures.

Considering the resources of the PAT, OSCE is affordable and sustainable, in terms of time, manpower, and infrastructure, and the exam is affordable for examinees, as they pay only a nominal fee.

One of the limitations of the present study is the lack of reliable data. Using different checklists for stations each year, limiting the number of stations to 6, and a small number of examinees precluded calculation of Cronbach's alpha and G (generalizability) coefficients. As only 1 observer was posted at each station in some years, inter-rater reliability could not be evaluated.

OSCE requires a significant investment of time and manpower for the preparation and evaluation of results. Nevertheless, with appropriate use of available resources OSCE can be used as a valuable exam method for psychiatry board certification. The aim of the present study was to present and discuss the process and results of the 2006-2016 Psychiatric Association of Turkey board certification OSCEs. The present study's results may contribute to the ongoing debate concerning the utility and appropriateness of OSCE-type exams for psychiatry board certification. In addition, there is a need to increase the number of stations, the number of examinees entering the test, and the number of observers for each station in order to statistically calculate test reliability.

Acknowledgement

Authors are thankful to all psychiatrists contributed to planning, application and evaluation in Psychiatry Board Exams between 2006 - 2016 and PAT Board Exam sub-commitee members; Aylin Uluşahin, Fisun Akdeniz, Ercan Abay, Nesrin Dilbaz, Orhan Doğan, Defne Tamar Gürol, Mine Özmen, Figen Karadağ, Sibel Mercan, Lut Tamam, Pınar Çetinay, İbrahim Eren, Timuçin Oral, Ayşe Devrim Başterzi, Aylin Ertekin Yazıcı, Ömer Saatçioğlu, Çağdaş Eker, Leyla Gülseren, Feryal Çam Çelikel, Levent Atik, Altan Eşsizoğlu, Medine Yazıcı Güleç, Neslihan Kumsar and Ercan Altınöz.

Correspondence address: Assoc. Prof. Dr. Özlem Sürel Karabilgin Öztürkçü, Ege University, Faculty of Medicine, Department of Medical Education, İzmir, Turkey osurelkarabilgin@gmail.com

REFERENCES

1. Al Sinawi H, Al Sharbati M, Obaid Y, Viernes N. Preparing and conducting objective structured clinical exam for Oman medical specialty board R1-R4 residents. Oman Med J 2012;27: 246-248.

2. American Board of Medical Specialties: The 2009 ABMS certificate statistics booklet: American Board of Medical Specialties, 2009.

3. Barrows HS. An overview of the uses of standardized patients for teaching and evaluating clinical skills. Acad Med 1993;68: 443-451.

4. Boulet JR, Smee SM, Dillon GF, Gimpel JR. The use of standardized patient assessments for certification and licensure decisions. Sim Healthcare 2009;4: 35-42.

5. Brittlebank A, Hermans M, Bhugra D Pinto da Costa M, Rojnic-Kuzman M, Fiorillo A, Kurimay T,Hanon C, Wasserman D, van der Gaag RJ. Training in psychiatry throughout Europe. Eur Arch Psychiatry Clin Neurosci 2016; 266:155-164.

6. Broquet K. Using an objective structured clinical exam in a psychiatry residency. Acad Psychiatry 2002;26:197-201.

7. Downing SM, Haladyna TM. Validity and its threats. Assessment in Health Professions Education, Downing SM, Yudkowsky R (Eds), New York, Taylor and Frances, 2009.p. 21-55.

8. Harden RM, Gleeson FA Assessment of clinical competence using an observed structured clinical exam. Med Educ 1979;13: 41-47.

9. Hodges B, Hanson M, McNaughton N, Regehr G. Creating, monitoring, and improving a psychiatry OSCE: A guide for faculty. Acad Psychiatry 2002;26:134-161.

10. Hodges B, Hanson M, McNaughton N, Regehr G. What do psychiatry residents think of an objective structured clinical exam? Acad Psychiatry 1999;23:198-204.

11. Hodges B, Hollenberg E, McNaughton N, Hanson MD, Regehr G. The Psychiatry OSCE: A 20-year retrospective. Acad Psychiatry 2014;38:26-34.

12. Hodges B, Regehr G, Hanson M, McNaughton N. Validation of an objective structured clinical exam in psychiatry. Acad Med 1998;73:910-912.

13. Hodges B. Validity and the OSCE. Med Teach 2003;25:250-254.

14. Karabilgin ÖS, Uluşahin A, Akdeniz F, Tükel R. Psychiatry Written Board Examination: Experience of Turkey 2006-2009. Archives of Neuropsychiatry 2010;47:29-35.

15. McNaughton N, Ravitz P, Wadell A, Hodges B. Psychiatric education and simulation: A review of the literature. Can J Psychiatry 2008;53: 85-93.

16. Miller GR. The assesment of clinical skills/competence/performance. Academic Medicine 1990;65:63-67.

17. Ramchandani D. End of third-year objective structured clinical exam: Boon or bane? Commentary. Acad Psychiatry 2008; 32:173-176.

18.Rhodes RS. Maintenance of certification. Am Surg 2007;73:143-147.

19. Robinson DJ. A training and exam program to prepare psychiatric residents for OSCE-style exams. Acad Psychiatry 2009;33: 331-334.

20. Sadeghi M, Taghva A, Mirsepassi G, Hassanzadeh M. How do examiners and examinees think about role-playing of standardized patients in an OSCE setting. Acad Psychiatry 2007;31: 358-362.

21. Sauer J, Hodges B, Santhouse A, Blackwood N. The OSCE has landed: one small step for British Psychiatry? Acad Psychiatry 2005;29:310-315.

22. Taghva A, Panaghi L, Rasoulian M. Evaluation of reliability and validity of the psychiatry OSCE in Iran. Acad Psychiatry 2010;34:154-157.

23. Taghva AG, Mir-Sepassi R, Zarghami M. A brief report on the implementation of an objective structured clinical exam (OSCE) in the 2006 Iranian Board of Psychiatry Exam. Iran J Psychiatry Behav Sci 2007;1:39-40.

24. Tekian A, Yudkowsky R. Oral Exams. Assessment in Health Professions Education, Downing SM, Yudkowsky R (Eds), New York, Taylor and Frances, 2009.p. 269-285.

25. Thompson CM. Will the CASC stand the test? A review and critical evaluation of the new MRCPsych clinical exam. BJ Psych Bulletin 2009;33:145-148.

26. Turner JL, Dankoski ME. Objective structured clinical exams: A critical review. Fam Med 2008;40:574-8.

27. Ulusahin A, Akdeniz F, Cetinay P and collegues. Board exams (Yeterlik Sınavları). Residency training in psychiatry-competence and accreditation in training (Psikiyatride uzmanlık eğitimi-Yeterlik ve eğitimin akreditasyonu), Tükel R, Alkin T, Ulusahin A (Eds), Ankara, Psychiatric Association of Turkey, 2009.s.183-197.

28. Yudkowsky R. Performance tests. Assessment in health professions education, Downing SM, Yudkowsky R (Eds), New York, Taylor and Frances, 2009.p.217-243.

29. Yudkowsky R. Should we use standardized patients instead of real patients for high-stakes exams in psychiatry? Acad Psychiatry 2002;26:187-192.