



Educational efficacy of objective structured clinical examination on clinical training of traditional Chinese medicine – A qualitative study



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standardized patient

WHO

World Health Organization

NHI

National Health Insurance

ABSTRACT

Objective: We propose applying objective structured clinical examinations (OSCEs) and discuss the educational efficacy of such examinations regarding the clinical competence of traditional Chinese medicine (TCM) practitioners.

Design: TCM OSCEs were implemented for evaluation and instruction from 2011 to 2013. Trainees received feedback from clinician-educators and standardized patients. Trainees' survey data were extracted from post-OSCE questionnaires and interviews to analyze TCM OSCEs.

Results: Five TCM OSCEs were administered, and the educational backgrounds of the 37 participants were analyzed. According to analysis of the questionnaires, all trainees agreed OSCEs were beneficial. In interviews, trainees expressed appreciation for the direct, real-time feedback during the OSCE and felt it closely resembled actual clinical work. However, the simulation models of OSCEs must be upgraded.

Conclusions: OSCEs can be used in evaluating, teaching, and certifying TCM clinical competencies to improve the quality of TCM practices. The patient-centered training aspect of TCM OSCEs is particularly helpful for participants.

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1. Introduction

Given the current trend toward increasing the use of complementary and alternative medicine (CAM) worldwide, CAM curriculums and training programs have received increasing attention. Considering patient safety to be the core of professional practice, the World Health Organization (WHO) published a series of benchmarks for training in traditional medicine (TM) and CAM in 2010, including benchmarks for Ayurvedic medicine, naturopathy,

Nuad Thai, osteopathy, Tuina, Unani medicine, and traditional Chinese medicine (TCM) [1]. The series of documents was intended to support establishing systems for qualifying, accrediting, or licensing practitioners of TM and promote more effective communication and collaboration between conventional and CAM care providers. Among various types of TM, TCM has been used by the largest population throughout history and influenced the development of various forms of TM in countries close to China both geographically and culturally, such as Japan (Kampo, which is traditional Japanese medicine) and Korea (traditional Korean medicine). In these countries, TM has been integrated into the health care systems and used for training, examination, and licensure to support qualified practice [2–4].

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TCM, as one branch of CAM, is more substantially used in the health services of countries in East and Southeast Asia, such as Taiwan, Hong Kong, Malaysia, Singapore, and China [5,6]. In ethnic Chinese societies, TCM is viewed as TM, which is distinct from the role typically played by CAM in the West. TCM is perceived as a part of ethnic Chinese tradition and even a part of conventional medicine in some areas of East Asia. In a previous study of the Taiwan National Health Insurance (NHI) program database, more than 60% of all NHI beneficiaries had used TCM at least once per year [7]. In Taiwan, TCM has been integrated into the overall health care system and serves as one of the two mainstream forms of medicine; the other mainstream form of medicine is Western medicine. With the increasing use of TCM, the Taiwan government has established the Department of Chinese Medicine and Pharmacy under the Ministry of Health and Welfare and charged the department with improving the quality of TCM practice and promoting TCM education, such as postgraduate medical training programs and continuing medical education programs for updating TCM licenses.

To obtain the TCM license currently used in Taiwan, candidates must pass a professional and technical TCM examination administered by the Taiwan Ministry of Examination. The qualification of TCM license candidates recognized by the Ministry of Education includes a completed internship, qualifying grades, and an academic certificate [8]. Higher TCM education in Taiwan has undergone nearly 50 years of development, with the master–apprentice system of the past being replaced by formal education [9]. Taiwan's formal TCM educational system includes undergraduate and post-baccalaureate Chinese medicine schools, which have single-major and double-major programs (i.e., programs in which students are eligible to participate in both Chinese and Western medical doctor license examinations). In the last 5 years, approximately 360 graduates have completed basic TCM curriculum and clinical practical programs each year [10].

To improve the quality of TCM treatment and fortify TCM students' clinical training, the Taiwan government plans to include objective structured clinical examinations (OSCEs) as part of the TCM certification examination [11]. The OSCE is an assessment tool, based on the principles of objectivity and standardization, in which candidates move through a series of time-limited stations, and their professional performance is assessed in a simulated environment according to standardized scoring rubrics used by trained assessors [12]. The first OSCE was conducted by Harden in 1972 in Dundee [13]. OSCEs have been developed and applied for over 30 years in Western medical education and are perceived as the gold standard in clinical performance assessment of Western medical education [14]. Canada, the United States, and South Korea have included OSCEs as part of Western medicine physician certification exams. In 2013, the Taiwan Ministry of Examination officially included the OSCE as a prerequisite for participating in the Western medicine physician certification exam. Currently, OSCEs have also been extensively applied in other areas of professional health education including dentistry, nursing, and pharmacy [15–17]. However, including the OSCE in TCM education is a recent development; few studies have been published regarding the using OSCEs for TCM clinical evaluation and teaching, and the majority of these studies are published only in Chinese. The purpose of this study was to share our experience of using an OSCE in TCM and to conduct a survey using questionnaires and interviews on the trainee satisfaction and feedback regarding the use of OSCEs as an evaluation and instruction tool. The results can serve as a reference for those designing future TM and CAM clinical training courses and certification methods worldwide.

2. Material and methods

2.1. Planning

2.1.1. Designing an examination blueprint

Designing a blueprint is necessary for all OSCEs. In our study, the objective and content of each examination were based on TCM training courses and skills trainees were expected to attain. The contents of the examination blueprint included two dimensions: the horizontal axis, which comprised the generic competencies to be tested (including history taking and physical examination as well as communication skills, interpretation, and procedural skills) and the vertical axis, which was the subject to be tested. The training program subjects included TCM internal medicine, TCM gynecology, TCM pediatrics, TCM dietetics, acupuncture, TCM orthopedics, and traumatology. Table 1 presents an example of our test blueprint. Blueprinting was completed by our assessment team, which consisted of senior TCM physicians with at least 5 years of clinical practice experience.

2.1.2. Determining examination length and number of stations

In our study, for each OSCE, the number of stations and length of time spent at each station was determined in the examination blueprinting. An OSCE station typically refers to a location at which candidate perform one time-limited task. When the OSCE is a high-stakes examination, the reliability and validity of the examination is influenced by the number of stations and duration of the examination. The OSCEs in this study were used as an educational tool to provide immediate feedback; thus, we designed feasible examination durations according to the number of participating trainees and planned the number of stations and length of time spent at each station according to the present examination objectives. The examination had 6–8 stations; the maximum length of time permissible at each station was 12 min, including 2 min to read the questions and 2 min for immediate feedback from clinician-educators and standardized patients (SPs).

2.2. Preparation

2.2.1. Design of the objective structured clinical examination stations

In our study, when new examination stations were developed, topics and content were based on the information trainees were taught in training courses and the clinical skills trainees were expected to have learned. Current TCM clinical training in the department of Chinese Medicine includes consultation and outpatient training. Consultation training mainly consists of the combining care of TCM and Western Medicine emergency and critical care units. Outpatient training centers on the work of future TCM physicians. For this study, we established the core course content for TCM clinical training as the station topic after referencing the Plan for Training Responsible Physicians in Chinese Medicine Institutions set forth by the Department of Chinese Medicine Pharmacy, Ministry of Health and Welfare. Additionally, the core course content was based on a review of commonly treated illnesses and symptoms in TCM internal medicine, TCM gynecology, TCM pediatrics, acupuncture and moxibustion, and TCM trauma clinics in Chinese medicine departments. After the station topic was determined, an appropriate OSCE station writing template was selected, and a clinical physician was chosen as the writer. Each station included one task to facilitate ease of grading and enable candidates to respond and be assessed within a limited amount of time. Case writing was based on test content and station characteristics; for example, when SPs were used in stations assessing

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