Evaluation of medical intern's competence about Ambulatory Prevalent Diseases

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ABSTRACT

Objectives: *The present study aims at evaluation medical interns about ambulatory prevalent diseases at Shiraz University of Medical Sciences.*
Methods: *This is a descriptive, analytic study, which aims at assessing the clinical competence of medical interns in relation to clinical prevalent disease using the OSCE. The instrument used in this study was 20 OSCE staions designed by medical experts in this field.*
Results: *The results of this study revealed that 29 persons (86.7%) of the participants in the test were competent competently and 1 person (13.3%) was incompetent; that is, to say that one person in the whole group had not acquired sufficient clinical competence in managing ambulatory diseases. Moreover, the results of this examination correlated with the participants final grade point averages Namely, the top students in OSCE were also the top students in their medical education. Male interns performed better than females in this examination.*
Conclusion: *In spite of the fact that these students' performance in medical knowledge and clinical judgement were favourable, they functioned incompetently in clinical skills and interpersonal attributes. Thus, education in these fields requires revision and new strategies for the promotion of medical education.*
Keywords: *AMBULATORY PRACTICE, CLINICAL COMPETENCE, OSCE EXAMINATION*

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Introduction

Clinical phase is one of the most significant parts of medical education during which the student's primary professional competencies are established. Hospital bedside education does not meet the student's ambulatory clinical competence and does not lead to the above – mentioned aim. Therefore, the education given during the clinical period must be designed so that the student is able to decide about his/her patient individually, using the inadequate diagnostic facilities available. Balanced inpatient and outpatient clinical educational and ambulatory practices provides more opportunities for the students to encounter the major illnesses for which patients to them after graduation.(1,2,3). The U.S.A conference on ambulatory practice presented 2 versions of the 77 recommendations for the improvement of ambulatory practices, and determined its strong and weak points in a systematic view. In spite of the importance of clinical education, studies conducted in various parts of the world reveal that medical education programs have not been performed favourably in this regard.(4)

Kadivar and Sabri (1977) in a study on the assessment of student's clinical knowledge about some of the most prevalent diseases in Fars province, Iran revealed that they had insufficient knowledge, except in the treatment of diarrhea. Some of the prevalent diseases such as pediculosis were even forgotten.(5)

In a similar study by Amini et al. on the interns' knowledge, attitude and practice about prevalent ambulatory diseases of children in a teaching hospital at Shiraz University of medical sciences, it was shown that there was educational deficiency in this regard, which requires revision of educational programs.(6)

Clinical competency of medical graduates has been the subject of much research, most of which has emphasized deficiencies in the education program and the way it is implemented. In a study conducted by McGraw(1997) it was shown that students had not sufficiently confronted cases with fever, asthma, headache, or shortness of breath and in the area of manual tasks. More than half of

the students had not practiced intravenous injection, catheterisation or casting.(7)
Considering the enhancing importance of clinical education and outpatient practices, assessing the clinical competence of future doctors in relation to our community's prevalent diseases, seems to be necessary.
The aim of this study was to evaluate the clinical competence of interns just before their gradation.

Method

This study was performed in two stages. First, the data on the most prevalent clinical diseases in Shiraz were obtained monthly from health clinics in Shiraz for six months. Then the thirty most prevalent diseases were selected.
After designing the scientific parts of OSCE and using OSCE sources, 30 OSCE stations were designed and after reviewing them according to simplicity and practicality, 20 stations were selected for practice. Notices in the medical school and teaching hospitals announced the date and place of the examination. Thirty interested students participated in the study. The OSCE stations were designed and selected so that the questions covered both general and specific aims of the study. The instruments used for each station were as follows:
1. Modified essay questions
2. Patient management problems
3. Checklists (direct observation)

The completion of checklists were done by observers or those who played the role of clients (standard patients) or by both of them. Experts in different fields determined the reliability of the instruments used and descriptive statistical analysis was used. Based on the University's regulations, passing score is 12 out of 20 (60%). To pass this test, the students had to obtain 60% of the whole score.

Results

In this study the answer sheets of 30 participants (12 females, 18 males) in the exam were analysed. Fifty percent of the 30 participants in OSCE did not write their names on the test papers. The first and second students with the highest grades were the medical school's first and second top students. OSCE consisted of 20 stations (table 1) and 10 scores were devoted to each station(20); therefore, the total score was 200. the range of these scores was 0-10 and each score was divided into 3 categories: desirable (8-10), acceptable (7-4), and unacceptable (0-3).

TABLE 1. Total and mean scores in each OSCE station

Center	Title	Total scores	Mean scores
1	History taking	186	6.20
2	Sore throat	162	5.40
3	Red eyes	213	7.10
4	Iron deficiency anemia	188	6.27
5	Abdominal examination	202	6.73
6	Malaria smear	100	3.33
7	Thyroid scan	199	6.63
8	Diarrhea and vomiting	126	4.20
9	Smallpox	88	2.93
10	Nerve examination	158/5	5.28
11	Diabetes	219	7.30
12	Leishmaniasis	198	6.60
13	Aids	214	7.13
14	Headache	198	6.60
15	Candida	220	7.33
16	Thalassemia	188	6.27
17	Arthritis	198	6.60
18	Chronic pulmonary obstruction	221	7.37
19	ECG	209	6.97
20	Open vein	162	5.40

Out of all the participants 29 persons (86.7%) performed competently, and 1 person (13.3%) performed, unacceptably. (Figure 1). In other words, the one person had not acquired sufficient competence for managing ambulatory disease. To have clinical competence, the interns had to obtain at least 60% of the total score. Only one participant failed the test, and demonstrated that he/she had no clinical competence for treating prevalent ambulatory diseases. Considering the definition of clinical competence, it consists of the ability in problem solving and clinical knowledge, technical skills, clinical skills and interpersonal attribute. The mean highest score in each of these sections and the mean scores are displayed in Figure 2.
As to the aims of the study and its relationship with learning objectives (cognitive, psychomotor and attitude domains) the following scores were obtained:
The total score, mean, and standard deviation in each domain. (table 2).

Discussion

Considering the characteristics of good medical practice, and the emphasis of stakeholders and authorities in the Ministry of Health of Iran, 1% of

FIGURE 1. OSCE scores based on acceptable, unacceptable & desirable responses

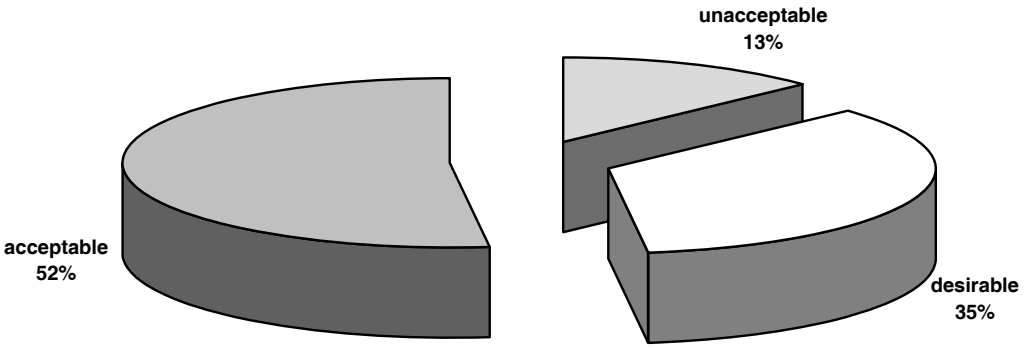

FIGURE 2. Comparison of scores in proportion to maximum score in every aspect of clinical competence

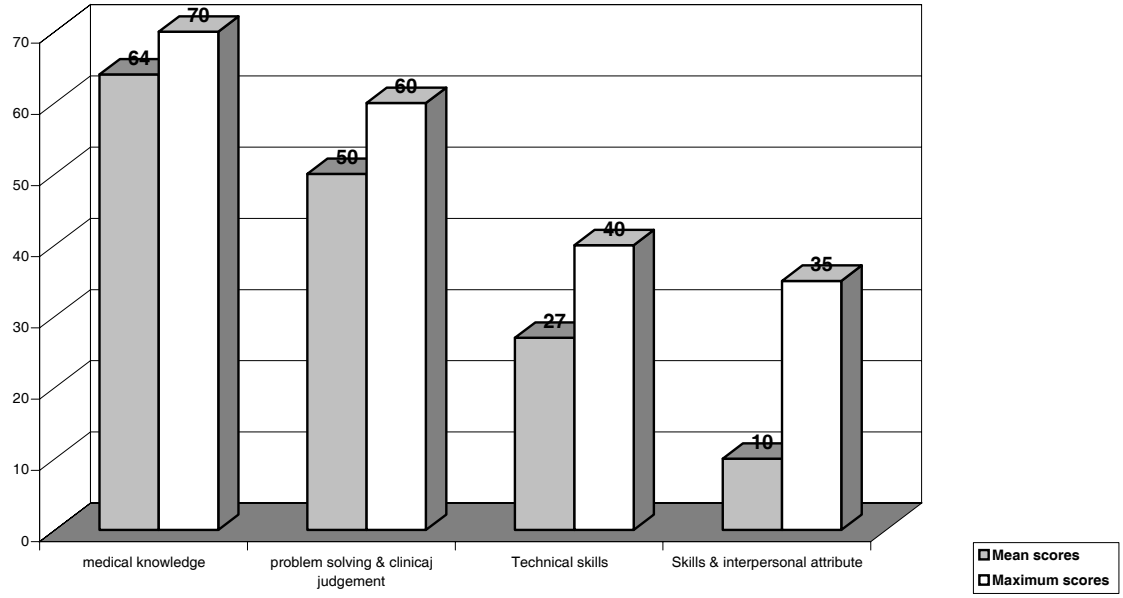

TABLE 2. Mean Score in knowledge, skills and attitudes

Objective	Max score	Mean score	Standard deviation
Cognitive	80	66.3	9.44
Psychomotor	75	46.4	12.42
Attitude	45	15.23	8.36

Patients in our community refer to teaching hospitals and the education of medical students is carried out using these patients. However, more than 90% of health care is provided in outpatient clinics and general hospitals (8) and for the remainder health care is not available. So, what can be done to achieve a good practice with physicians who are not competent enough to treat patients? Although the results of this study reveal that 86.7% of the responses are acceptable and favourable and only 13.3% unacceptable, (with one failed students) the researches believe that

time limitation (5 minutes) in each station, lack of experience in OSCE and the stress caused by the observers might have affected the students' performance and reduced the scores.

Our study showed that students are not well trained in psychomotor and attitude domains which needs revision.

In contrast to the results of several studies that showed females had performed better (11,12) male students performed better than females in our study with respect to the varius parts of clinical competence, they performed more unfavourably in the creation of interpersonal attributes and clinical skills than in other parts. Therefore, it can be concluded that medical educational programs do not completely help the students develop a desirable clinical competence in some areas. The results of this study reiterate the fact students are not prepared for patient management and are unable to conduct good communication(11,12) Harden et al. indentified staff development as an essential prerequisite for the successful introduction of curricular reforms. In this regard(13) the educational approaches should be based on present conditions and new methodologies must be designed so that they meet the learners needs. And at the end, the students can be evaluated by reliable test of OSCE.

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