International Journal of Advanced Biotechnology and Research (IJBR)
ISSN 0976-2612, Online ISSN 2278–599X,
Vol-8, Issue-4, 2017, pp734-738
http://www.bipublication.com

Research Article

Evaluating success rate in clinical skills learning and its related factors among medical students of the Yasuj University of Medical Sciences during the lastthree years of medical training course in 2016-2017

Shirvan Salaminia[1], Amin Hossaini Motlagh[2], Sharif Elyaciyan[3] and Mehrabi Saadat[4*]

[1]Assistant Professor, Department of Cardiac Surgery,
Clinical Research Development UnitBeheshtiHospital,
Yasuj University of Medical Sciences, Yasuj, Iran
[2]Assistant professor, Ph.D in Env.Health Clinical Research Development UnitBeheshti Hospital,
Yasuj University of Medical Sciences, Yasuj,Iran
[3]GP, Yasuj University of Medical sciences, Yasuj, Iran
[4]Assistant Professor of Thoracic Surgery, Department of General Surgery,
Clinical Research Development UnitBeheshti Hospital,
Yasuj University of Medical Sciences, Yasuj, Iran
Corresponding:Mehrabi Saadat E-mail: dr.mehrabi544@gmail.com

ABSTRACT

Objectives: The purpose of this study was to investigatepre-interns' and interns' viewpoints on their ability to perform 20 basic clinical techniques, clinical skills, and their determinants.

Materials and Methods: This is a descriptive-analytic cross-sectional study. A total of 128 apprentices and interns in different clinical units were asked to complete three written questionnairesincluding twenty basic techniques, determinants of learning clinical skills questionnaire and their ability to complete 20 basic clinical techniques and clinical skills scores questionnaire.Ninety-one students were willing to participate in the study. Age, sex, number of major departments passed and students' grades were analyzed as relating factors. Data was analyzed using ANOVA, Kruskal Wallis and Spearman tests in STATA and SPSS.

Findings: In the basic clinical techniques of most students, the basic techniques of venous blood sampling, gastrointestinal tract, bladder catheter, muscle intramuscular injection, arterial blood flow and bandage, were an average and techniques such as intubation, chest tube insertion, vaginal examination, removal of external earforeign body,casting and reduction, tracheostomy, circumcision, and lumbar puncture. Clinical skills such as history and physical examinations were evaluated, and skills such as diagnosing and managing emergency situations and the use of diagnostic and therapeutic tools were poor. factors such as insufficient time for study, fatigue, lack of attention to training topics in accordance with the students' need and lack of Students' knowledge of academic knowledge were negatively effective.

Conclusion: The skills of interns in performing most of the techniques are inadequate and most often they do not have the necessary training to do so and their ability to do most clinical skills is also weak. Therefore, using the clinical skills training center and the methods of objective assessment of students' skills, especially before entering the hospital environment, are advised to observance patients 'rights and respond to students' needs.

Keywords: self-assessment, clinical skills, pre-intern, intern, medical students, medical education, medical training, self-evaluation.

INTRODUCTION:

Skills in performing clinical interventions that include skill in conducting clinical examinations, performing a number of primary diagnostic and therapeuticmedical procedures, are important medical requirements. Getting the right skills in performing clinical skills requires time, patience and practice in a suitable environment. Clinical skills are practiced and replicated slowly, and most of these skills losses slowly with no use over time, so that the half-life of skills in the absence of sufficient training is expressed in just a few months (1).According to Iran's medical education program, in the study of theoretical and practical principles, most of these activities should be earned in pre-internship programs, and repetition of these skills should be done in internship period in order to acquire the proficiency and ability under the supervision of the relevant professors. In quantitative studies, these courses have been used to increase some specific skills in the pre-clinical period (2).Most studies have shown that they lack sufficient skills in basic clinical practice in most medical faculties in the world. These problems are more common in universities offering medical education with the traditional model (universities of Iran) (3). Also, the status of training these skills in our country is rarely studied and existing studies suggest that training some of the skills and clinical interventions in the medical schools of the country is not of a desirable quality and quantity, and practically there was no training method and no specified teamresponsible for training management (4).

There are many problems with clinical education, including the lack of willingness of professors to do clinical work. The shortening of the admission period in hospitals, the sub specialization of hospital beds in the community, often hospitalized patients do not provide a good place to learn the clinical skills of medical students (5).

Due to the variability and locality of methods and studies, the exact methodology has not been proposed in our country so far, and there is a wide variety of tastes in this regard. Considering the importance of learning clinical techniques and the need for non-forgetfulness after graduation and also the weakness of the majority of pre-interns and interns in clinical skills, we conduct this study forevaluation of these techniques and also factors affecting them in pre-interns and interns.

MATERIALS AND METHODS:

This is a descriptive-analytic cross-sectional study in which assessment of the view of the students of the last 3 years of medical education regarding clinical efficiency was conducted on a cross-sectional basis. The medical students of pre-internship and internship who started education of general medicine for 2009-2011 years and now were pre-internship and internship atYasuj University of Medical Sciencesentered study in years of 2016-2017. The questionnaires included a self-assessment questionnaire of 20 clinical techniques, a self-assessment clinical competence questionnaire, and a self-assessment questionnaire for the factors related to clinical learning among all of the population that included all 3 year medical studentswilling to cooperate with the plan. It should be noted that out of 128 distributed questionnaires, 91 completed questionnaires returned, indicating that about 71% of distributed questionnaires has been returned. In the case where the student has spent more than three months on their clinical course at another university, they were excluded from the study. Also, in the case of written dissatisfaction, the student did not enter the study. Using SPSS version 24 and STATA version 14 software descriptive and analytical tests of Spearson, ANOVA and Key Walls were performed with $P < 0.05$.

RESULTS:

In this study, 3 questionnaires were distributed among 128 students, of which 91 (71%) cooperate and 37 (%29) were not willing to participate in the study. Of the 91 students 41.8% were men and 58.2% were women. Considering the year of entry

into the university and grade, 37.4% 1st grade student (stagger), 36.3% 2nd grade students (extern) and 26.4% were 3rd grade students (intern). Most were in the age of 24 and 25 years. 80.2% passed 4 major departments (internal medicine ward, general surgery ward, pediatric ward and OB&GYN ward) and 11% for students who have completed only two major departments.

DISCUSSION:

In this study, most students observed the majority of techniques on the patient, but some techniques such as vaginal examination, circumcision, removal of external ear foreign bodies (FBs), nasal tampon, tracheostomy and chest tube insertion were lower but were similar to Amini et al. (2002). Observation on patient was (80%)for nasal tamponade, (42%) vaginal exam, external ear FBremoval (50%) and eyes FB removal(46%), chest tube implantation (75%) and circumcision (29%). In one study, it was different from the current study (1). For vaginal exam techniques, the FB removal of the eye and circumcision in this study was higher than the study of Amini (1), which may be due to the improvement of the cultural status of the community during these years and the improvement of the status of ophthalmology or better education at the center or lesser number of students at this center or the increase in the number of teachers. In the study of Gandomkar et al. (2011), human resources including the number of professors and experts in each department and the mismatch between expectations for providing patient care and educational services to students are among the most important factors related to clinical education (6).

Regular daily skills such as venous blood sampling, muscle intramuscular injection, nasogastric tube insertion, bladder catheter placement, angiotomyCath and etc. which done even by nursing staff in departments and have been practiced by the majority of students at Mollag, which can be attributed to the teaching of nursing professors at the workshop Clinical skills. In the study of Gandomkaret. al, the role of physical factors and educational tools in clinical education has been mentioned (6). However, in more specialized techniques such as nasal tampon, external eye and eye FB removal, vaginal examination, casting and plastering, LP, circumcision, tracheostomy, and chest tube insertion, the majority of students had no exercise on mollag. However, in the present study, exercise on the mollag was improved for most techniques, except for the chest tube and circumcision, but it was still not optimal. Yasuj University of Medical Sciences workshop on clinical skills held by nursing professors but there are fewer workshops for training within major medical departments, which, as one of the possible reasons, requires further studies.

Most students also performed techniques such as venous blood sampling, muscle infusion, nasogastric tube placement, bladder catheter, angiocath catheter, suturing, dressing and bandage, which are performed by nursing staff on a daily basis in most of the hospitals, but the technique Such as nasal tampons, external eye and eye, vaginal examination, plastering and casting, LP, circumcision, tracheostomy, and chest tube insertion, which were specialized and commonly performed by specialized physicians, were done at lower rates under the supervision of the professors and was similar to Amini et al. (2002). Students considered negatively effective factors such as inactivity of teachers in educational programs and inadequate number of patients with high score for existing weakness, which also mentioned in the study of Gandomkar et al. (2011).

The average frequency of performing procedures independently has been reported for the majority of techniques except for muscle injections, dressings and bandages below ten times, as reported by Amini et al. (2002), which lists the results based on the percentage of students with an independent frequency of more than 2 times (1), and students mentioned factors such as the inadequacy of the number of patients or the lack of diverse patients, the insufficient time for doing works and tiredness of the student,the student factors including the lack of adaptation to the

environment, depression and impoliteness and the lack of interestand the choice of the wrong field of study as the leading negatively effective factors. The study of Gandomkaret. al (2011) mentioned the impact of inadequate time, students and faculty fatigue, high volume of duties and internal factors such as lack of interest and depression with clinical training, and mentioned as effective factors in this regard (6).

In all procedures, boys reported lower scores than girls, and there was a significant difference in nasogastric tube placement, arterial blood sampling, suturing, vaginal examination, chest tube insertion, circumcision and tracheostomy, and problems such as fatigue Student's time and fatigue, inadequate number of patients, or absence of a variety of good patients, and the lack of effective rounding of patients with faculty members, especially in medical examinations, were significantly higher than that of girls, which was similar toGandomkar et al. study (2011). From the perspective view of contributors, limited time available for training have mentioned as the important factor in student learning and was similar to another study (6).

In this study, students with a greater number of major passeddepartments reported higher quality in most techniques, and in the majority of cases, except for muscle intramuscular injection, a positive correlation was observed, indicating the effect of experience and repetition, on the quality of performing basic techniques and similar to the study by Amini et al., Who referred to a longer period education courseas positive factor in clinical learning (1). It should be said that the skills of most students are more acceptable in carrying out those procedures that can be carried out by other hospital staff, especially the nursing staff, and some of them are rarely part of the daily duties of physicians in medical centers. Usually in such centers Nursing staff are responsible for performing these techniques, while the skills that most students, even up to the end of their internship are not well-trained, are part of the duties of physicians, and other authorized medical staff members are required to do so. However, in this condition the average skills acquired in these techniques will not in any way allow students and universities to ensure that in the future medical works students are able to handle the minimum level of skill and the necessary confidence they can be afford.

In this study, the clinical competence of students to perform all of the above skills was higher than half, and has been moderate. Given the advances made in the field of medicine and the increase in the level of expectations of patients from the medical staff, it may not be desirable to say that in many studies on Patients' satisfaction with the educational treatment system, the degree of satisfaction has been assessed to be on average (8, 9).

Skills such as history taking and physical examinations that students have learned from the 1st grade pre-intern course, have got higher scores and, on the other hand, skills such as the choice of appropriate diagnostic and therapeutic regimen, the ability to use human resources, diagnostic interventions and methods, management and treatment of common emergencies that require experience have got less scores.

Students have mentioned factors such as physical environment (lack of facilities, educational facilities), human factors (including lack of proper training plan, lack of interest of professors, training issues regardless of the needs) and student factors (including lack of compliance with the environment, depression and impoliteness,comprehension problems, student's lack of awareness for training needs, insufficient time for study and tiredness of the student, the inadequacy of the basic medical courses, ineffectiveness of the course semiology, especially in medical examinations, lack of interest in scientific and medical studies, and lack of motivation of teachers in teaching and training programs has been seriously effective. It seems that major parts such as internal and surgical departments have an important role in solving these problems at different stages. In the study of KoohpayehZadeh et al., The internal department has been mentioned as the main location of history

learningdepartment and surgical department as the main part in the field of learning Management of emergency cases (7) or in the study of Gandomkaret al.lack of time and fatigue of students mentioned as important factors related to clinical learning (6).

CONCLUSION:

The skills of interns in performing most of the techniques are inadequate and most often they do not have the necessary training to do so and their ability to do most clinical skills is also weak. Therefore, using the clinical skills training center and the methods of objective assessment of students' skills, especially before entering the hospital environment, are advised to observance patients 'rights and respond to students' needs.

REFERENCES:

1. Amini et al. The Effect of Clinical Practicing Instruction on interns of Tabriz University of Medical Sciences Tabriz University of Medical Sciences, Iranian Journal of Medical Education, 2014 (3)
2. ClakGB.medical graduate evaluate the effectiveness of their education.MedEduc 1994;28(5):418-31
3. Ghazanfari and colleagues. Medical graduates' views on the degree of adaptation of a clinical educational program with career needs in Kerman city. Babol University of Medical Sciences. Babol University of Medical Sciences, Babol University of Medical Sciences, 2010 (Issue 1) 2010
4. Shams B, Timur M Introducing an evaluation tool for measuring the minimum necessary emergency and outpatient medical interns; in the main clinical sections. Research in medical sciences (1992): 83-77
5. Razavi M et al. The Effect of Clinical Skills Training Center on Promoting Inhibitory Learning in Medical Critists. Iranian Journal of Medical Education (2010): 438-430
6. Gandomkar et al. Factors Affecting Medical Education in the Clinical Environment: Experiences of Clinical Faculty Members. Tehran University of Medical Sciences, Iranian Journal of Medical Education, No. 11 (2011): 290-279
7. KoohpayehZadeh, HafeziMoghaddam, Danesh H, ImanZadeh, Daryazadeh. Evaluation of Clinical Practice of Medical Interns and its Influencing Factors by Mini-CEX Testing in Rasoul-e-Akram Hospital, Tehran, 2011. Razi Journal of Medical Sciences Volume 20, Issue 116, Feb. 1392. Appointment: 26-18
8. Goodarzian, Sharif Nia, Ja'fari, Hedayat, Jamali, Badi'i, Sayemi, Ghahremanlu, Mahya, Khan Amiri, Islamic. Evaluation of satisfaction rate of hospitalized patients in teaching hospitals of Mazandaran province and its related factors in the development of health system of the year 94. Journal of Mazandaran University of Medical Sciences. 1395 15; 26 (136): 5-190.
9. Imani, Abu Al Fatih. Patients Satisfaction with Clinical Practice Implementation Methods in the Neurosurgery Department of Besat Hospital in Hamedan in 2013. Journal of Science. 1395 15; 13 (2): 62-57.