Original article

Comparison of training and leanings environment in educational hospitals with Ministry of Health and Medical Education standards.

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Abstract

Backgrounds: teaching and learning environments are subject of different investigations and many researchers in medical education are working on it. Therefore in this study we examined the clinical skills labs equipment with Ministry of Health and Medical Education standards in different educational hospitals of Shahid Beheshti University of Medical Sciences**.**

Material and methods: The study population involved 15 attending physicians and 40 emergency medicine residents in the three hospitals, Imam Hussein, Lughman Hakim and shohadaye Tajrish of the Department of Emergency Medicine of Shahid Beheshti University of Medical Sciences in the academic year 2015 to 2016. Self-made questionnaire was used to compare the Ministry of Health and medical education standards with the clinical skills labs in these centers.

Results: Clinical Skills Centers with the facilities of examination skills, communication skills and procedures, Evaluation the performance of students in each training session under the supervision of clinical faculty members had the highest scores.

Conclusion: we concluded that that learning environment is very important in the quality of learning and most of the participants proved it. Educational centers must provide the well-equipped environment to achieve in high quality in teaching and learning.

Keywords: *: medical, education, residents, medical students, learning*

Introduction

On one hand ,herbal plants are considered as the Postgraduate medical education residents require some professional capability before graduation (1), and equipped educational places and labs for their learning is necessary and medical universities are responsible for this. Clinical practices and environment are crucial during residency learning program and it is the strengths of medical education, (2). Some of the investigations have revealed that students' knowledge, attitudes, and practice will be influenced by workplace-based learning (3).

Studies (4, 5) indicated in medical education, hidden curriculum is a set of commonly held understandings, rituals, customs, and taken-for-granted duties in clinical courses. Culture and organizational structure will influence students and teachers (6). Some other factors like supervision on residents in clinical courses, face to face relationship with trainees and positive feedback are important in learning (7).

Students are seeking for residents as supporter and attending physicians as role models (8). In the surgery courses students and lower academic level residents consider the residents as teacher more than attending physicians. Based on reports most of the student times in surgical courses spend with residents. (9); in this regards, due to residents' relationship with medical students and their position in hospitals both patients and medical students will gain if residents become clinical teachers (10). Some Articles discussed about training in medical education for family medicine residents but not more in emergency settings.(11-26) therefore, based on the effect of clinical setting and its environment effect on residents and medical students learning's it is mandatory to evaluate these environmental factors in different academic hospitals. Hence, in the current study, we compared the clinical skills labs equipment with Ministry of Health and Medical Education standards to clarify the level of education and leanings in various hospitals associated with Shahid Beheshti University of Medical Sciences.

Methods

Research community

The study population included all faculty members (15 attending physicians and 40 emergency

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medicine residents in the three hospitals, Imam Hussein, Lughman Hakim and shohadaye Tajrish.) of the Department of Emergency Medicine of Shahid Beheshti University of Medical Sciences in the academic year 2015 to 2016.

Number of samples
all faculty members of emergency departments of Shahid Beheshti University of Medical Sciences, were enrolled in the study.

Sampling
for Sampling and census methods we used available participants. This study was a cross-sectional study with a sample taken by the Department of Emergency Medicine faculty members in the academic year of Shahid Beheshti University of Medical Sciences.
The assessment tool was a self-made questionnaire that included the Ministry of Health and medical education in which clinical education standards in the clinical skills were asked by questions.
Content validity was used to determine the validity of the analysis and the questionnaire was finalized with expert advice and medical education reform. Cronbach's alpha was used to determine the reliability of the questionnaire.
The questionnaires delivered to faculty members and after voluntary completing, were collected. The questionnaire used the options "Yes" and "No" to questions. Questions were in areas of clinical skills centers. When the answer was "Yes" rating 1 and each answer "no" was considered zero.
Total responses of faculty members were evaluated and every question in every area was calculated.
The following scoring system was used:
-Verypoor: 20-0%
-Poor: 40-21%
-Medium: 60-41%
-Good: 80-61%
- Excellent: 100-81%
At the end of the collected data was entered in SPSS software version 21 and was analyzed.

Inclusion criteria
Faculty members of emergency departments of Shahid Beheshti University of Medical Sciences hospitals.

Exclusion criteria
lack of consent to participate in the study

Design of study
The study was cross-sectional.

Tools and methods for data collection
researcher-made questionnaire were used to collect data in this study. How it was gathered, was to field. The questions in the questionnaire were based on standards which were approved by the Ministry of Health and medical education.

Data analysis
The data were extracted from the forms using the statistical software SPSS version 21. We used descriptive and inferential statistics.

Statistical methods and statistical tests used
In this study, the prevalence and ratio was used to analyze qualitative variables. To compare the level of five areas of the Outpatient Clinic also, educational rounds, morning reports, journal clubs and clinical skills centers with Ministry of Health and Medical Education standards , we used χ^2 test. P value of less than 0.05 was defined as significant.

Results
special forms designed according to Ministry of Health and Medical Education standards were send to 15 attending physicians and 40 emergency medicine residents in the three hospitals, Imam Hussein ,Lughman Hakim and shohadaye Tajrish. The levels of areas of the clinical skills were compared with Ministry of Health and Medical Education standards.

Clinical Skills Training
The results of participants' views regarding the standards for educational drove based on Clinical Skills Training were summarized in Table 1. The presence of a coordinator responsible for patients for synchronization and development of volunteer patients in the Clinical Skills Lab, presence of a good atmosphere in the Clinical Skills Lab as a space for showing students the skills and training in clinical skills centers from The basic terms and parallel to other courses had the lowest rate of compliance with existing standards.
Clinical Skills Center with the facilities of examination skills, communication skills and procedures, Evaluation the performance of students in each training session under the supervision of clinical faculty members gained the most points.
Average standard of Clinical Skills Training in total and in Imam Hossein, Lughman Hakim and Tajrish was 10.6%, 31.7%, 0% and 0% respectively. In Total, the state of Clinical Skills Training in Luqhman Hakim, Imam Hussein and Tajrish Hospital were in bad condition. There was statistically significant difference between the average assessments of Clinical Skills Training among centers under investigation.($p \leq 0.001$) figure 1

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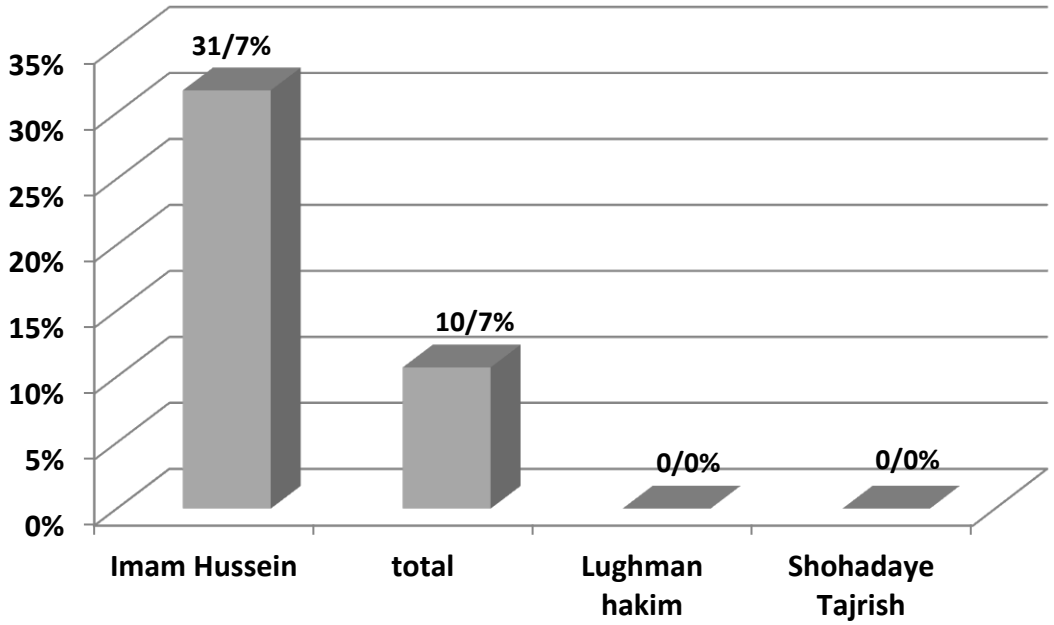
Table 1. Evaluation of emergency medicine education level of shahid Beheshti University of Medical Sciences hospitals based on Teaching clinical skills from faculty members and students

Teaching clinical skills	Shohadaye Tajrish	Imam Hussein	Lughman hakim	total
The presence of a full-time responsibility for planning, coordination and management of daily operations at the Center for Clinical Skills	٪0	٪0	٪0	**٪0**
The presence of a full-time secretary responsible for providing office services, timing and admit students clinical skills center	٪0	٪50	٪0	**٪16.7**
The presence of a coordinator responsible for patients for synchronization and development of volunteer patients in the Clinical Skills Lab	٪0	٪0	٪0	**٪0**
Training and preparation centers for education development by clinical faculty members at the University of CSLCs	٪0	٪100	٪0	**٪33.3**
Having clinical skills center locations in the center of Community or one of the University's main teaching hospital	٪0	٪100	٪0	**3.33%**
The need for a smaller clinical skills center in addition to basic clinical skills center at the hospital	٪0	٪100	٪0	**3.33%**
a large physical space with flexible use in clinical skills	٪0	٪100	٪0	**3.33%**
Design of different parts of the same clinical skills center real clinical setting	٪0	٪0	٪0	**٪0**
a good atmosphere in clinical skills center as the View Skills	٪0	٪0	٪0	**٪0**
enough space to relax and prepare teachers	٪0	٪0	٪0	**٪0**
sufficient number of desk	٪0	٪0	٪0	**٪0**
General Computers in Clinical Skills Lab	٪0	٪0	٪0	**٪0**
enough space for storage and maintenance of equipment in the Clinical Skills Lab	٪0	٪0	٪0	**٪0**
enough space for students' use of multi-media training in clinical skills center	٪0	٪0	٪0	**٪0**
a good atmosphere as a recording studio to record educational programs or students training in clinical skills center	٪0	٪0	٪0	**٪0**
A sufficient number stethoscope in clinical skills center	٪0	٪0	٪0	**٪0**
A sufficient number pressure gate in clinical skills center	٪0	٪0	٪0	**٪0**
A sufficient number hammer reflex in the Clinical Skills Lab	٪0	٪0	٪0	**٪0**
Play movies and CD audio-visual facilities in the Clinical Skills Lab	٪0	٪100	٪0	**٪3.33**
Clinical Skills Center equipped with ICT facilities such as computers and the Internet	٪0	٪100	٪0	**٪3.33**
Equipped clinical skills center for flexible learning spaces to separate acoustic walls	٪0	٪0	٪0	**٪0**
Equipped clinical skills center for the CCTV control rooms and training spaces	٪0	٪0	٪0	**٪0**
Equipped clinical skills center for the production of multi-media digital video cameras and recording training and performance feedback for students	٪0	٪0	٪0	**٪0**
The presence of master for at least 15 minutes before the meeting in the center of familiarity with the equipment needed	٪0	٪0	٪0	**٪0**
Having clinical skills center facilities , examination skills, communication skills and procedures	٪0	٪100	٪0	**٪3.33**
Cover a wider range of advanced skills in addition to basic training by Clinical Skills Center	٪0	٪100	٪0	**٪3.33**
Training students in clinical skills centers and, along with other lessons from the first semester	٪0	٪0	٪0	**٪0**

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Access to the tools students clinical skills center by appointment and the hours required in order to promote self-directed learning	٪0	٪0	٪0	**٪0**
Presence of a written or video teaching aids to help students in clinical skills center	٪0	٪0	٪0	**٪0**
Evaluating the performance of students in each training session under the supervision of clinical faculty	٪0	٪100	٪0	**٪3.33**
average	**٪0**	**٪31.7**	**٪0**	**٪10.6**

Figure 1. Comparison of the average of evaluation scores of emergency medicine departments of shahid Beheshti University of Medical Sciences hospitals based on teaching clinical skills from faculty members and students



Discussion

In this study, we reported that Clinical Skills Centers with the facilities of examination skills, communication skills and procedures, Evaluation the performance of students in each training session under the supervision of attending physicians reached the most points. In this regards, IN a study by Nousiainen M et al (27) discussed about Practice using computer-based video instruction for teaching fundamental surgical skills to medical students. They used pre-test and post-tests for evaluation. They indicated there were no changes in pre-test results. But significant improvements were observed between the pre- and post-tests .They showed this method of learning leads to further improvements in skill development. This study revealed that equipped centers would improve he students learning's ability and teachers could consider these methods of teaching in even emergency departments.

Alireza Esteghamati and coworkers (28) questioned 15 internal and surgical residents and 15 of their attending physicians at educational hospitals of Tehran University of Medical Sciences. They indicated that Morning-reports, educational rounds and out-patient clinics are main aspects of learning environments in educational hospitals. Therefore the supervision on these areas in the educational programs is important and attending physicians must consider these points (29). Moreover, Alireza Esteghamati and coworkers (28), revealed that high number of patients and restricted time led to low level off teaching and learning in outpatient clinics. Our current research showed that one of the educational hospitals meaning Imam Hussein ranked the most points in the following items: The presence of a full-time secretary responsible for providing office services, timing and admit students clinical skills center, Training and preparation centers for education development by

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clinical faculty members at the University of CSLCs, Having clinical skills center locations in the center of Community or one of the University's main teaching hospital,The need for a smaller clinical skills center in addition to basic clinical skills center at the hospital,a large physical space with flexible use in clinical skills, Play movies and CD audio-visual facilities in the Clinical Skills Lab,Clinical Skills Center equipped with ICT facilities such as computers and the Internet, Having clinical skills center facilities , examination skills, communication skills and procedures, Cover a wider range of advanced skills in addition to basic training by Clinical Skills Center, Evaluating the performance of students in each training session under the supervision of clinical faculty.

But two other hospitals ranked the lowest in this regards. These findings provide us despite the educational program in these centers there were no equipped environment for learning and in future programmers must consider these findings in their plans.

Conclusion

The current paper provided useful evidences about the learning programs and allied problems in educational hospitals. It has been demonstrated that learning environment including both emotionally and technically well-equipped centers gained more points in the survey and most of the participants proved it. Changing these environments is mandatory of improvement in residents and medical student leanings and such educational centers must consider these factors.

Conflict of interest

None to declare

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