Assessment of Common Practical Skills in Clinical Medical Students in Shiraz, Fasa and Jahrom Universities of Medical Sciences: A Cross-sectional Study

Esmail Rayat Dost¹, Bahram Panahi²

¹ Department of Emergency, Jahrom University of Medical Sciences, Jahrom, Iran.
²Department of Internal Medicine, Jahrom University of Medical Sciences, Jahrom, Iran.

*Corresponding author: Esmail Rayat Dost

Abstract

Introduction: This study has been conducted to assess common practical skills in clinical medical students in Shiraz, Fasa & Jahrom Universities of Medical Sciences. The ability for practical skills is an important goal for medical education and these skills are essential for the diagnosis and treatment of diseases. As a result, the present study has been carried out with aim of evaluating common practical skills in clinical medical students in Shiraz, Fasa & Jahrom Universities of Medical Sciences. Method: The present study is a cross-sectional study. In this study, 100 internship students were selected and data were collected by questions about 25 clinical skills. Data analysis was performed by SPSS software version 11 and statistical tests. Results: The results showed that the capabilities of medical students in practical skills are far from the ideal situation. 78% of students believed that they did not have the necessary ability to do practical skills. Most of them have not gained these skills under the supervision of qualified persons. 82 percent of students evaluate the quality of education in these procedures unfavorable. And a high percentage of them believed that they needed to retrain these skills. Conclusion: This study demonstrated that no attention has been paid to practical skills training and therefore teaching students about the clinical skills before entering the clinical departments is very important.

Keywords: Medical education, Practical skills, Evaluation of medical students.

Introduction

Value and importance of the sacred profession of medicine and the effective role of doctors in the community is evident to everyone. And among useful fields of knowledge, medicine enjoys a special place and an utmost dignity. This virtues and reputation originates from the fact that human life depends on maintaining and restoring his health [1].

Medicine is not only a science but also an art and a physician should be an artist. Medicine has long been known as the combination of science and art and deals with people's lives. In taking care of the patient, the physician needs practical skills, in addition to scientific knowledge and human understanding, which is in fact an important part of the training program. And as the doctor-patient relationship is the basis of medical knowledge. The physician’s practical skill also plays an important role in the management and treatment of patients [2].

Medicine profession requires the ability to perform the skills timely the use of subjective information more than theoretical and mental knowledge. And learning clinical skills requires repetition and a lot of practice to gain confidence in order to perform skills in necessary situations. So teaching clinical skills is of great importance in medicine and requires formal planning to empower
students during education. All doctors, particularly general practitioners, deal with a variety of diseases in their daily visits; those types of disease that a physician should be aware of all the different aspects related to the disease, and he should try to treat patients, which is certainly not easy and takes his art and wisdom. In addition to this, sometimes it is possible that a case happens which requires the physician’s immediate intervention to save the life of the patient.

This is more the case with doctors working in emergency departments and those working in rural and remote areas. This is where medical skills help him in dealing with such sensitive cases so that, in addition to the gained knowledge, he can increase his role in health promotion and disease prevention and do the necessary initiatives in the best possible way.

For example, a patient requiring immediate chest tube placement or in cases where the patient does not have emergency mode but due to lack of facilities and lack of access to expert, again he needs to use the physician’s practical knowledge. For example, when the IV is difficult and vascular cannulation is needed [3].

Besides its importance in serving and helping patients and raising his respect and dignity in the eyes of people, a physician’s knowledge and skills can be helpful to him economically [4]. On the other hand, when we look at the process of clinical training of medical students in hospitals, we realize that teaching practical skills in medical education in medical sciences faculty of our country is not considered as serious and organized.

And unfortunately, theoretical issues are more discussed and practical work and skills that a general practitioner should learn in college are forgotten. This issue is increasingly evident. As we can see general practitioners graduated years ago are more successful in carrying out practical tasks. Given that the factors affecting learning are broad and that identifying the causes of the problems and deficiencies in the education system is important, we decided to study on how to teach common practical skills in medical students of Shiraz, Fasa & Jahrom in teaching hospitals of Shiraz, Fasa and Jahrom in 2011 were studied.

**Method**

This is a cross-sectional study and was carried out through a questionnaire containing 25 questions about common clinical skills. The subjects were medical interns that had passed most of their internship period in four main sections of internal medicine, surgery, pediatrics and gynecology. Interns are students who have passed the pre-internship exam and study in the last three terms of medical field.

**Sample Size:** A total of 100 students of the School of Medical Sciences of Shiraz, Fasa and Jahrom in 2011 were studied.

- **Research Variables:** In this study, a questionnaire was developed and interns’ opinion about their ability and dominance as a doctor in independent carrying out procedures and about the quality of education that is given to them concerning these procedures was asked. In one part of the questionnaire, there was the intern’s personal information including gender, age and education place. And they were arranged in a way that their responses determined (whether) the student:
  - Considers the skill under question necessary for a doctor?
  - Has learned this skill? If yes, how?
  - Has learned in in which section?
  - If the intended procedure has been under observation?
  - What percentage is roughly the under-supervision percent?

**Data Collection:** After being developed, the questionnaire was distributed between 100 interns attending in various sectors in hospitals of Shiraz, Fasa and Jahrom and before students answered questions they were justified about the study purposes.

**Data Analysis:** Data analysis was performed using SPSS software version 11 and statistical tests.
Results

In developing the table, the procedures that students have learned in each of the four main sectors were separated. For example, the skills that students learn in surgical training are put in a table and the skills they learn in the Medical and Obstetrics come in a separate table. A number of skills that are common in the above-mentioned parts are classified as general.

Given the fact that students in the surgery department deal with practical tasks compared to other departments, it is natural that the number of procedures trained in this section are more. Distribution of students participating in the study based on their university shows that, of 100 students, Shiraz Medical School had (60), Jahrom had (n = 25) and Fasa had (n = 15) participants. In this study, 46 were female and 54 were male students and the mean age of students was 25.48 and the standard deviation was 2.38.

The Ability to Perform the Procedures of Surgical Section

The ability of interns in performing surgical procedures form their view show that the students’ ability in two procedures of suturing and dressing is at a higher percentage than in other procedures (65% and 48%) while in the cases of circumcision and casting procedures only 2% of interns were qualified. Two procedures of vascular cannulation and Askarvtvmy, respectively 3% and 5%, had the lowest percentage in the next stage. 16% of interns did not comment on the two procedures of vascular cannulation and Askarvtvmy, 17% did not comment on the cast, 15% did not comment on the chest tube insertion and 19% did not comment about cutting and removal of skin lesions.

Educational Quality of Surgical Procedures

It seems that educational quality of both procedures of stitches and dressing is better in this section than other procedures, which is somewhat consistent with the ability of the interns in performing these procedures. 19% of interns had no idea about cutting and removal of skin lesions, 16% didn’t have any comment on Askarvtvmy and vascular cannulation and casting and 14% had no idea about the chest tube.

The Ability to Perform Medical Procedures

The ability of students was at a higher percentage in three procedures of Tuesday nasogastric tube, ascites and pleural aspiration Gram stain (88% and 64% and 48%). While three procedures ECG and joint fluid drainage, with 30%, 8%, 8% respectively, had less percentage. As you can see, this situation is somewhat consistent with the educational quality of these procedures.

### Table 1: The ability to perform medical procedures from the students’ perspectives

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Percent</th>
<th>Number</th>
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<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Draining joint fluid</td>
<td>1%</td>
<td>1</td>
<td>7%</td>
<td>7</td>
<td>18%</td>
<td>18</td>
<td>12%</td>
<td>12</td>
<td>62%</td>
<td>62</td>
</tr>
<tr>
<td>ECG</td>
<td>1%</td>
<td>1</td>
<td>7%</td>
<td>7</td>
<td>13%</td>
<td>13</td>
<td>8%</td>
<td>8</td>
<td>71%</td>
<td>71</td>
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<tr>
<td>Gram stain</td>
<td>18%</td>
<td>18</td>
<td>46%</td>
<td>46</td>
<td>25%</td>
<td>25</td>
<td>7%</td>
<td>7</td>
<td>4%</td>
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<tr>
<td>Nasogastric tube</td>
<td>42%</td>
<td>42</td>
<td>46%</td>
<td>46</td>
<td>5%</td>
<td>5</td>
<td>3%</td>
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<tr>
<td>Lumbar puncture</td>
<td>3%</td>
<td>3</td>
<td>27%</td>
<td>27</td>
<td>44%</td>
<td>44</td>
<td>9%</td>
<td>9</td>
<td>17%</td>
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<tr>
<td>Ascites fluid aspiration and Pleural</td>
<td>4%</td>
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<td>44%</td>
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<td>33%</td>
<td>33</td>
<td>7%</td>
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<td>12%</td>
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</tbody>
</table>

Educational Quality of Medical Procedures

Procedures of Nasogastric tube, lumbar puncture, Gram stain, ascites and pleural
aspiration had higher percentage, with 54%, 54%, 50%, 36% respectively. While the two procedures of ECG and joint fluid drainage, with 8% and 7% respectively, had less percent. As you can see, generally speaking these procedures lacked a satisfactory quality of education.

**Table 2: Educational quality of medical procedures from students' perspectives**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Too weak</th>
<th>%58</th>
<th>58</th>
<th>Weak</th>
<th>%15</th>
<th>15</th>
<th>Good</th>
<th>%22</th>
<th>22</th>
<th>Average</th>
<th>%33</th>
<th>33</th>
<th>Very good</th>
<th>%25</th>
<th>25</th>
<th>Excellent</th>
<th>%75</th>
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<td>Draining joint fluid</td>
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<td>ECG</td>
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<td>Gram stain</td>
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<td>Nasogastric tube</td>
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<td>Lumbar puncture</td>
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<td>Ascites fluid aspiration</td>
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</table>

**The Ability to Perform Obstetrics Procedures**

The ability of students was at a higher percentage in the case of the procedures of vaginal delivery and episiotomy Press (83%). While the two procedures of pelvic exam, Pap smear had 27% and 30% respectively.

**Educational Quality of Obstetrics Procedures**

Teaching the three procedures of pelvic exam, Pap smear and having a vaginal delivery and episiotomy Press with close percentages (25% and 31% and 25%) did not have a satisfactory quality.

**The Ability to Perform General Procedures**

In the case of urinary tract procedure, the ability of students accounted for a higher figure (64%). While the two procedures of blood sampling from the vein and artery and Suprapubic catheterization had low percentage (8% and 16%), which were not consistent with the educational quality of these procedures.

**Table 3: The ability to perform general procedures from the students’ perspective**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Too weak</th>
<th>%58</th>
<th>58</th>
<th>Weak</th>
<th>%15</th>
<th>15</th>
<th>Good</th>
<th>%22</th>
<th>22</th>
<th>Average</th>
<th>%33</th>
<th>33</th>
<th>Very good</th>
<th>%25</th>
<th>25</th>
<th>Excellent</th>
<th>%75</th>
<th>75</th>
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</thead>
<tbody>
<tr>
<td>Venous and arterial blood sampling</td>
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<td>Urinary tract</td>
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<tr>
<td>Suprapubic catheterization</td>
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</tbody>
</table>

**Educational Quality of General Procedures**

Poor educational quality in the two procedures of blood sampling from the vein and artery and Suprapubic catheterization had a high percentage, while the urinary tract procedure has a more favorable educational situation.

**The Ability to Perform Procedures of Anesthesia Section**

46% of them considered themselves capable in oral tracheal intubation, 43% capable in venipuncture from two veins by IV and 30% capable in CPR.
Educational Quality of Procedures of Anesthesia Section

In oral tracheal intubation, 68 percent of students in venipuncture from two veins by IV (38%) and CPR (25%) were satisfied with the quality of training given to them.

The Number of Performing Surgical Procedures

The greatest average was related to the procedures of dressing (5.24) and suture (5.10) with a standard deviation of 1.62 and 1.57 respectively, and the lowest average was related to circumcision (1.01) with the standard deviation of 1%

The Number of Performing Medical Procedures

The greatest average was related to the Gram stain and nasogastric tube insertion the lowest average was associated with ECG and joint fluid drainage.

The Number of Performing General Procedures

The greatest average was related to inserting urinary tube with an average of 3.83 and a standard deviation of 1.51.

The Number of Performing Procedures in Anesthesia Section

The greatest average was related to oral tracheal intubation with a standard deviation of 1.18.

The Number of Performing Procedures in Obstetrics Section

The greatest average was related to vaginal delivery and episiotomy Press with a standard deviation of 1.39. Pelvic exam and Pap smear are in the next levels, respectively.

Under-supervision Cases of Procedures in Surgery Section

Most supervised cases are related to the three procedures of carrying out stitches (64%), dressing (47%) and inguinal hernias (46%) and the least cases were associated with the procedure of circumcision. The faculty had less supervision, compared to the residents. Interns did not comment on chest tube (71%), vascular cannulation (90%), dressing (43%), Askarvtvmy (91%), stitches (32%), cutting and removal of skin lesions (72%), drainage (73%), circumcision (98%), inguinal hernias (22%) and casting (74%).

Under-supervision Cases of Medical Procedures

Lumbar puncture and aspiration, ascites and pleural show a higher percentage of cases supervised by residents compared to other procedures. In the case of joint fluid drainage (70%), ECG (92%), Gram stain (76%), nasogastric tubes (59%), lumbar puncture (29%), Ascites and pleural aspiration (43%) the students did not comment.

Under-supervision Cases of Obstetric Procedures

Pelvic examination (65%), Pap smears (59%) and vaginal delivery (22%) were under the supervision of residents and faculty members were responsible for a small percentage of monitoring. 31% of students did not comment on pelvic exam (37%), the Pap smear (70%) and vaginal delivery.

Under-supervision Cases of Procedures in Anesthetic Section

Half of the students (50%) learned tracheal intubation openings under the supervision of residents and the other half learned it under the supervision of faculty. The students did not comment on the ability in blood sampling from the vein and artery (28%) and CPR (39%).

Under-supervision Cases of General Procedures

56% cases of suprapubic catheterization were under the supervision of residents and 44 percent were under the supervision of the faculty. And about blood sampling and the urinary tract, 92% and 47% of the students did not express their opinion respectively.

The Necessity of Performing Surgery Procedures

A high percentage of students (70%) considered all of the above-mentioned procedures necessary. Only 3% of students considered all procedures superfluous and the rest of the students declared that learning these skills should be optional.
The Necessity of Performing Medical Procedures

The highest percentage is related to nasogastric tube insertion (94%) and the lowest percentage is associated with Gram stain (65%). None of the students considered teaching these procedures superfluous.

The Necessity of Performing Obstetric Procedures

More than 70% of the students consider training the mentioned procedures necessary. None of the students considered teaching them superfluous.

The Necessity of Performing Anesthetic Procedures

96 percent of interns considered oral tracheal intubation procedure and 87 percent of them considered the ability to perform venipuncture from two vessels by IV essential. None of the interns know these three procedures superfluous.

The Necessity of Performing General Procedures

More than 80 percent of the students considered training all the three mentioned procedures necessary but none of them know training these procedures superfluous.

Educational Quality of Total Procedures

About 47 percent of students recognized the quality of education average, 8% declared the education quality to be good and about 45% of them expressed their dissatisfaction with the quality of education.

Table 4: Educational quality of total procedures

<table>
<thead>
<tr>
<th>Percent</th>
<th>Number</th>
<th>Educational Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>%10</td>
<td>10</td>
<td>Highly undesirable</td>
</tr>
<tr>
<td>%35</td>
<td>35</td>
<td>Undesirable</td>
</tr>
<tr>
<td>%47</td>
<td>47</td>
<td>Average</td>
</tr>
<tr>
<td>%8</td>
<td>8</td>
<td>Good</td>
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<tr>
<td>0</td>
<td>0</td>
<td>Very good</td>
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<tr>
<td>%100</td>
<td>100</td>
<td>Total</td>
</tr>
</tbody>
</table>

Ability and Mastery in Performing Procedures Independently

63 students (63%) declared their ability average and 15 people (15%) of them evaluated their ability weak and too weak. and 22 people (22%) of them considered their ability good and very good. Considering the quality of education, the percentages were acceptable.

Table 5: ability and mastery in carrying out procedures independently

<table>
<thead>
<tr>
<th>Percent</th>
<th>Number</th>
<th>Educational Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>%3</td>
<td>3</td>
<td>Highly undesirable</td>
</tr>
<tr>
<td>12%</td>
<td>12</td>
<td>Undesirable</td>
</tr>
<tr>
<td>%63</td>
<td>63</td>
<td>Average</td>
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<tr>
<td>%21</td>
<td>21</td>
<td>Good</td>
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<tr>
<td>%1</td>
<td>1</td>
<td>Very good</td>
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<tr>
<td>%100</td>
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<td>Total</td>
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</tbody>
</table>

Discussion

Training practical skills in various sections is of particular importance and status. And improving the quality of clinical education can help doctors with adequate professional training for such environments and for remote areas. In the past few decades, all activities have focused on increasing the efficiency of human resources. But now, increasing scientific and practical productivity of human resources has been the focal point. Therefore, one way of improving the capabilities of medical personnel (scientific and practical) is to determine training needs. For this purpose, the training needs of medical interns have been set in four main sections (obstetric,
surgery, pediatrics and internal). Another point is that physical examination, history taking, diagnosis and management of emergency situations and practical skills are among important educational priorities that were mentioned in four main sections and this matter should be considered in the educational process [5].

Since practical skills in medical schools of our country have not been taught seriously so far and since no study has been carried out in this field at the Schools of Shiraz, Fasa and Jahrom, we decided to carry out a research in this field on the interns of medical schools of Shiraz, Fasa and Jahrom and compared the results with other studies, so that we take a step, however small, in order to determine the status of students' practical skills in dealing with patients, its contributing factors and making this skill all the better:

In this study, the ability of interns in performing procedures independently was totally at a low level. Only 22 students (22%) stated that they had sufficient proficiency to perform their skills. 63 interns (63%) evaluated their ability moderate and 15 of them (15%) expressed their inability to perform clinical skills.

In the case of venous and arterial blood sampling, 7 students evaluated their ability to be good and one person assessed his ability very good. In Tabriz 45.5 percent of students were proficient enough in blood sampling from a vein [8]. In Shiraz University of Medical Sciences, students from the fifth year that enter clinical sections as students are required to take all blood samples from patients; in a way that, they will be asked to do much of blood taking.

Without having had any prior training in this area, especially in the pediatric ward in which the doctors are responsible for taking blood from babies and even their most experienced personnel are faced with difficulties in taking blood from babies at times. So how is it possible for a student who has not even take a syringe in his hand before entering the section can take blood sample with full skill and do not face with problems such as patients' and their parents' protests.

Another point is that statistics of Kingdom related to real conditions while statistics that we got was in fact the evaluation the students had about performing the procedures. And if the circumstances were such that they were checked in a real situation and under the supervision of a professor, certainly lower results would be achieved. In Lorestan study, 72.1 percent of students were not able to do CPR [7]. In the procedure of endotracheal tube, 46 percent of students expressed that they had the necessary ability in this regard. In a study that took place in Tabriz, only 9% of students had sufficient capability for endotracheal tube [8].

Taking one-month anesthesia course offered at externship level seems to have a great impact on raising the students’ ability in the procedure of endotracheal tube to the extent that 68% of students were completely satisfied with the quality of education in this section. However, there is long way to achieve an appropriate level.

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Among the skills that students were trained in the surgical ward, the two procedures of dressing and suture had a higher percentage than other procedures. So that 65% of the students assume they are able to dress postoperative wounds that have been wrapped basically. This is because of the high frequency of performing this procedure
in clinical practice and in different wards. Because during the period of being a student, it is the student who is in charge of changing the patient’s dressing. In many cases, the student is required to perform this procedure two or three times daily. And this frequency at performing the work has a significant role in improving his skills.

Similar research that have been done in this area all prove the fact that students’ confidence in performing the procedure properly has a direct and close relationship with the frequency of their exposure to the procedures. Thus, the conditions that give students more opportunities to perform procedures can increase his skill in dealing with special circumstances. 48% of students believed that they sutured well because they have done this procedure many times in surgery department and even they have taken a course of month, ear, nose and throat. While the interns’ capability was not desirable in other procedures such as chest tube insertion, cut down, scharotomy, circumcision, casting and drainage of abscesses of the skin surface.

At Gorgan University of Medical Sciences, 53.2 percent of the students were not acquainted with correct dressing and 77.4% of them were not familiar with casting and believed that there should be education about these skills [9]. Another point is that the exposure conditions with these procedures are not the same for all students. For example, in the hospital and in his shift, a student may face with a large number of patients who need to have a chest tube or with patients who require immediate action for endotracheal tube and CPR etc., and therefore, they have seen or even done these procedures more.

While another may not even deal with one single case. In other words, the intervention of chance is not neutral. This was the case with other wards to the extent that in obstetric ward, 83 percent of students evaluated that they were able to perform the procedure of vaginal delivery and episiotomy and in the medical ward, 88 percent of them considered themselves capable of nasogastric tube insertion because they had done these procedures repeatedly. Therefore, it is necessary to develop conditions that allow all students to receive the same training. On the other hand, when we pay attention to the educational quality that students receive about these skills we realize that the educational quality is not desirable.

Only 8 percent of interns considered the educational quality good. 47 percent of them evaluated it moderate and 45 percent of them expressed their dissatisfaction with the educational quality. Similar studies in other universities also showed roughly the same conclusions. Undoubtedly, improving this situation in higher education will be impossible without effort and planning. More work experience is associated with an increase a majority of skills. Students can gradually, and through work experience, improve their skills.

Due to their importance and learnability, faculties can play an important role in helping the students to understand business skills and gain the competencies that go beyond the available academic and technical knowledge and skills. Unfortunately, the current situation of medical education in our country, again, does not have the desirable quality to provide services to people, despite all measures taken to make this education common and popular. And clinical education that is one of the most sensitive sections of medical education is little of interest. And training teachers have not been successful in teaching clinical skills of medical students.

And many of these students will be considered graduated without gaining sufficient skills in performing clinical procedures. As a result, these students who are the would-be doctors and future prospective of this country feel they are not ready to perform the things that they as a doctor are supposed to do on real patients. So, in order to improve the quality of clinical training, the structure of main changes in educational strategies should be dependent on two important factors, e.g. the student and the clinical instructor.

In this study, a high percentage of students (over 80%) considered training 25 skills
essential. About 3 percent of them expressed training 7 skills of these 25 skills superfluous and the rest of the students knew them optional. In a study conducted at Lorestan University of Medical Sciences, the survey showed that learning 21 out of 30 skills have been recognized essential by more than 80% of students and only 2 skills were evaluated necessary by less than 50 percent of students [7].

In a study that was done at the University of Gorgan, 81.6% of clerkship medical and 63.6 percent of the interns considered teaching clinical skills necessary [9]. In a study of Kerman University of Medical Sciences, 98 percent of students considered stomach and bladder catheterization, 97% considered CPR training, 95% assessed injections and dressing and 88% evaluated check vital signs essential for teaching [10]. Consultant Forum for General Medicine program and professors planning internal medicine considered training 10 basic procedures such as taking blood from an artery and vein, the ECG, pap smears, blood culture, throat culture, gastric intubation, cardiopulmonary resuscitation, catheter urine, spinal fluid necessary [11].

Other studies have shown that teaching the majority of clinical skills is necessary and that medical education should be planned in such a way that a doctor, individually and by using brief diagnostic facilities and with the help of practical knowledge that he will face with in his real-life professional situations, can make the right, timely and appropriate decisions about his patients. The most important and valuable element of medical universities is their faculty members who have different responsibilities.

But their main, and indeed their most important, task is to teach and to train students so that the quality of education should be as equally effective in motivating students and in creating vitality, innovation in them as in the subsequent increase in teachers’ performance all the more. In the educational system of Shiraz University of Medical Sciences, resident play an important role in teaching clinical students so that the majority of students’ knowledge, in both theoretical and practical aspects at the clinical level, is taught by residents and faculty has much less role in this area, especially in training and supervising the practical skills, which is of course a touch of pity. In this study, the majority of the supervised procedures were the endotracheal tube and suprapubic procedures to the extent that all students participating in the study announced, at the end of the study, that they had learned these two procedures under full supervision.

50 percent of them had been taught endotracheal tube by residents and 56 percent had been taught suprapubic by residents. Regarding a number of procedures, the results were as follows: In the intravenously (72%), lumbar fluid (71%), pelvic exam (69%), suturing (68%), Pap smears (63%), CPR (61%), dressing, Ascites fluid aspiration and pleural each has been done with the supervision of the residents only in 48 percent cases. In the other procedures, the results were too low.

Unfortunately, most students have not learned these skills under the supervision of qualified people in this field. For example, 92% of students leaned taking blood samples from venous and arteries from personnel, nurses or from students who were able to perform this procedure. Examining similar studies in other universities were also likewise.

For example, at Lorestan University of Medical Sciences, a high percentage of students (60.8%) had failed to learn the essential skills of competent people instead they had learned these skills on their own or with the help of other students. Only 39.2 percent of them stated that they had learned practical skills in a scientific way and under the supervision of experts in this field [7]. In a study at Gorgan University of Medical Sciences, 66.3 percent of students considered the role of faculty in teaching practical skills helpful [9]. In a study conducted under the name of “Resident as a lecturer in clinical skills”, a high percentage of students (98%) knew residents as their teachers. Therefore, the residents’ role has long been considered
as a requirement [12]. An obvious question arises here and that is that if residents have learned this skill completely? Studies carried out in this area have increased concerns about the students’ educational system led by residents. One study showed that a large proportion of local residents did not have enough skill in performing practical procedures. And a small percentage of planning executives believed that their residents had sufficient skills to perform common procedures [13]. Evidence and results indicate that there are several obstacles in teaching and learning practical skills that removing these barriers requires a fundamental change in the structure of the available educational system.

Firstly, faculty members do not have the necessary and adequate time to teach these skills and they spend all students’ energy on visiting patients in the clinics and in training centers and this fact make the students’ education theoretical and drag it to the bedside. As a result, there is no room for teaching practical skills. Maybe teaching these skills is not desirable for them. In spite of that, it is commonly believed that teachers are one of the important and effective elements of the educational system and in improving the quality of education and that they can lead their students towards noble objectives, using all available resources and their experience.

Second: most residents personally do not have enough skill because they have not learned these skills scientifically. And they would like to learn these skills in order to teach them, especially medical, pediatric and anesthesia residents.

Third: patients and their parents do not like to be used as an object to train students or something is done on their patients, especially if the patient needs immediate therapeutic action, for example CPR or chest tube insertion in patients who have come down with shortness of breath.

Fourth: Above all, the students’ apathy and reluctance in learning is a big and worrying problem that today has plagued the realm of medicine more than ever. It is, in fact, a serious threat to the main goal of medical science which is helping to save lives and relieve human sufferings.

Unfortunately, most medical students, especially interns, lack sufficient incentive to take advantage of their scientific and practical potential. For example, they would fail to do dressings with patience and passion, although they fully know all the stages of dressing.

In a study carried out by Amini on the performance of medical interns about common diseases in pediatric ambulatory care in Shiraz teaching hospitals, in terms of taking the temperature, most interns checked the child's temperature by axillary method because they were to disinterested to check the temperature by using a rectal. Although all interns actually knew that axillary temperature was not an accurate method. But regarding the physical examination of children with diarrhea, 92 percent of them carried out this work in an acceptable desirable way.

This was largely due to the fact that there are widely accepted guidelines by the World Health Organization about diarrhea in children and about main notes in physical examination, especially the key symptoms. These instructions have been translated into Persian and are fully taught to students in the pediatric ward [14]. There are guidelines in the educational programs of surgery, medical, pediatrics and gynecology wards that a number of practical skills that students must learn have been included.

These guidelines should be provided to students so that they are aware of the skills that should be taught in wards by professors or assistants. This can increase the quality of education and lead to active participation of students in the process of diagnosis and of treatment of disease. For example, the training program provided in the surgery ward states that, providing the presence of any case, residents must boost the feeling of confidence in the interns and partly in externs about doing some minor procedures and some of emergency savory procedures so that they do these small performances.

Conclusion
Medical education is a great investment that should receive special attention due to its association with the health of society and its fundamental role in the development. Despite different and persistent assessments and efforts, medical education has not reached its proper and principled position yet. Students, as the core of education, do not have a regular program; the level of their learning is not acceptable. And despite their continuous participation in education, they lack sufficient confidence in the diagnosis and treatment.

Their motivation has been declining over time and they have less scientific and practical power compared to their prior graduates. The best solution to solve this problem and improve the quality of education is addressing the practical and clinical issues and involving students in medical education all the more. Given the current situation of healthcare in the country, planning medical education, in fact, had better be adjusted and revised based on principles of community-based medicine and clinical medicine and the centrality of student.

Neglecting acquiring practical skills in medical education has resulted in poor results such as doctors’ lack of confidence in relation to their abilities and skills at times of crisis and directly affects the quality of health services in the community. Therefore, listing skills and developing clear learning objectives and proper planning in order to achieve these goals are of particular importance and removing this shortcoming is an important step in the quality of medical education. In teaching curricula in general medicine, answering such questions as below are always at the center of attention: What type of doctors will training will teaching curriculum produce? What competencies will they have? Are they trained towards health promotion? Are they committed to the ethical principles of the medical profession? Do they have the necessary practical potential in vital circumstances?

To overcome the problems of medical education, we must first identify them and then take the necessary measures to prevent and fix existing bugs. Appropriate executive programs in education and the commitment of training unit leaders for the implementation of the program will help the prosperity and forward movement. In fact, to improve the quality of education we should do at least three things: Educate, enable, encourage.

In this study, the findings clearly show the lack the practical skills training in medical schools of Shiraz, Fasa and Jahrom and the ability of medical students is far from ideal situation. So, In order to improve the quality of education in the field and for hope of educating doctors with the necessary professional competence, the following hints are recommended:

- Incorporating a course under the name of “teaching clinical skills in medical education curriculum”
- Training in clinical skills centers and exercising with real patients
- Evaluating students after training by observing how they perform skills on real patients
- Familiarizing medical students with preliminary skills practically in the form of special workshops during a semester which can be effective in creating motivation and interest in them.
- Providing a thorough written guide to all students at the beginning of each clinical course and monitoring its implementation
- Developing an organized plan with a well-equipped laboratory with experienced and passionate teachers to teach practical skills to medical students

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