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Evaluation of the Quality of Clinical Education Based on the Perspective of Medical Students of Shahroud University of Medical Sciences

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Abstract

Background: Improving the quality of clinical education requires a continuous review of the existing situation to identify strengths and weaknesses. The aim of the study was to evaluate the quality of clinical education based on the perspective of medical students of Shahroud university of medical sciences.

Methods: This descriptive-analytical study was conducted at1397-98. Participants were 230 medical students and interns in Shahroud university of medical sciences who were enrolled in the study. The data were collected using the clinical education quality assessment questionnaire, with a range of 0-66 points and divided into three levels: weak, moderate and desirable. T-test was used for data analysis. The Significanl level was set at 0.05.

Results: The results showed that the mean of the standard deviation of clinical education quality in terms of goals and curriculum (12.95), teacher performance (10.23), and student treatment (4.09) was desirable from medical students' point of view. (Given that the significance level is less than 0.05, these averages are desirable) while in terms of educational environment (4.60) and supervision and evaluation (4.01), it is not desirable.

Conclusions: According to the findings, clinical quality status is desirable in most aspects, but it is necessary to eliminate the weaknesses to improve the quality of clinical education in this university in terms of the educational environment, monitoring and evaluation according to the students' viewpoints.

Introduction

Clinical education is one of the most important aspects of education and learning in the occupations related to health that leads to the development of knowledge, skills, attitude and clinical competence of learners. Clinical education pursues three major goals of applying theoretical concepts, experiencing real patient situations, and performing professional roles.[1] This part of medical education provides students with the opportunity to transform their theoretical knowledge into the various mental, psychological and motor skills which are necessary for patient care.[2] Unlike classroom education, clinical education occurs in a complex social environment that is influenced by various factors.[3]

The clinical setting is a place where students are taught how to integrate theory into practice.[4] Clinical learning requires the achievement of clinical experience by students. They also need to practice the skills required by observing and participating in the design of treatment modalities and applying them to all clinical aspects under the supervision of a professor.[5] This training provides an incredible opportunity for learners to prepare for professional identity due to the insufficiency of knowledge for safe care performance.[6] Without clinical training, training efficient and skillful people would be very difficult or even impossible.[7] Due to the rapid changes in health care settings, the more productive clinical education leads to the better students' performance.[8] Learning medical students in the clinical education setting is an essential component of the curriculum.[9] Therefore, the curriculum of this field should be designed in such a way that provides the opportunity for developing the theoretical knowledge for students also it will enable them to acquire professional commitment and enhance their clinical skills to train talented and skillful students in the clinical field.[10]

There are various problems, including inconsistency between theoretical courses and clinical work, lack of clinical training goals, stressful hospital environment, less willingness of experienced teachers to attend clinical settings, lack of realistic evaluations, and lack of amenities and educational facilities such as barriers to access the goals of clinical education.[11,12] In the two studies of Pazokian, Kermanshaw et al. based on the students' point of view, the quality of clinical education was not desirable and factors such as the distribution of internships in clinical departments, high number of students, inadequate evaluation by clinical professors, insufficient access to clinical professors, lack of clinical professors, lack of proper coordination between theoretical and clinical education, the inadequacy of the time required to deal with different cases of illness to fully practice what has been learned in the clinical setting, and stressful situations have been mentioned by clinical education problems.[13,14] Undoubtedly understanding the problems of clinical education is the first step towards the quality improvement of education.[11,15]

Since clinical education is based on professional values and these values are deeply rooted in professional social institutions, the issue must be addressed like the professional community since quality of clinical education is always questionable from the medical students 'point of view, and any planning to improve the quality of clinical education depends on recognizing the problems, shortcomings, and weaknesses of the clinical education system from the students' point of view.

This study aimed to determine the quality of education. A clinical study was conducted from the perspective of medical students of Shahroud university of medical sciences.

Materials and Methods

This study was a descriptive cross-sectional study conducted with the help of medical students and interns of Shahroud university of medical sciences at 1397-98. 230 students who agreed to participate in the study were enrolled by the census method. The return rate of the questionnaires was 192 (83%). Students were presented in groups of 20 people, completing anonymous questionnaires. The scale of the questionnaire is 0-66 which is divided into three levels: weak, moderate and desirable. A score of 0-21 indicates a poor clinical education index, a score of 22-44 and a score of 45-66 indicate average and favorable clinical education indexes, respectively. Higher scores mean better clinical education status in each domain. Scores range from 0 to 22 goals and programs, 0-18 coaching performance, 0-8 student dealing, 0-10 training environment, and 0-8 monitoring and evaluation.

This study is approved by the ethics committee of Shahid Beheshti university of medical sciences under the code IR.SBMU.SME.REC.1398. 064. All participants participated in the study by signing the informed consent form.

Data were collected using a two-part questionnaire, the first part consisting of demographic information (age, marital status, total grade, field of study, semester, employment status during the study) and the second part consisted of 33 questions based on Likert scale in 5 areas of goals and curriculum (11 questions), faculty performance (9 questions), student dealing (4 questions), educational environment (5 questions) and supervision and evaluation (4 questions).

The validity of the questionnaire was confirmed by content validity and retest reliability has been approved by Tavakkoli et al. (2014), Wahabi et al. (2010) and Tavaklian et al. (2012) The Cronbach's alpha coefficient of these studies were 0.88, 0.85 and 80, respectively.[16,17,18] The reliability of the questionnaire was tested by the retest method which is confirmed by Rezaee et al., experiment with Cronbach's alpha coefficient of 0.91 for the whole scale.[19]

The normality of data was evaluated by the Skewness and kurtusis test. Descriptive statistics were used to describe the data, then the data were analyzed by t-test. The optimum limit in this study was significantly higher in mean compared to standard. The SPSS.ver.21 was used for the analysis. The significant level was set at 0.05.

Results

A total of 230 students have participated in the study with the consent issues, and table 1 shows the demographic characteristics of the study participants.

Table 1. Demographic distribution of research participants

Distribution	Occurence	Occurrence (%)	The cumulative frequency
Sexuality			
− Female	116	60.4	60.4
− Male	76	39.6	100
Marital status			
− Single	165	85.9	85.9
− Married	27	14.1	100
Residency status			
− Native	28	14.6	14.6
− Non-native	164	85.4	100
Age			
− 20-23	108	56.2	91.6
− 24-27	79	41.1	362.5
− 28-32	5	2.6	297.4
Year of initiation			
− 91-93	77	40.1	66.6
− 94-96	115	59.9	282.3
− Total	192	100	

According to the obtained results from the viewpoints of medical students at Shahroud university of medical sciences, the highest quality of clinical education goals and educational programs was 12.9 and the lowest scores were related to student interaction, supervision and evaluation and educational environment equal to 4. Table 2 shows the descriptive statistics of these research variables.

According to the mean of the desired limit in the present study, the mean of the dimension obtained is significantly higher than the standard score of that dimension. The results showed that the quality of clinical education in terms of goals and curriculum, teacher performance, student treatment, is desirable based on the medical students 'point of view, but the status of clinical education quality in the area of educational environment and monitoring and evaluation is not desirable from the medical students' point of view. Table 3 presents the results of the t-test to verify the research hypotheses.

Table 2. Standard deviation and mean of research variables

Variables	Number	Min score	Max score	Average	Standard Deviation
Educational goals	192	.00	22.00	12.953	12.774
Supervisor performance	192	.00	18.00	10.234	4.688
Student dealing	192	.00	8.00	4.094	2.581
Supervising and evaluation	192	.00	8.00	4.010	2.627
Educational environment	192	.00	10.00	4.604	3.257
Education quality	192	2.00	66.00	35.896	18.293

Table 3. Students' viewpoints about the quality of clinical education

Variable	Score	Statistics	Degree of freedom	Meaning level	Average differences	Difference (95% confidence percentage)	
						High-level	Low-level
Educational quality	33	2.193	191	.029	2.896	5.500	.292
Educational goals	11	2.119	191	.035	1.953	3.772	.135
Supervisor performance	9	3.648	191	.000	1.234	1.902	.567
Student dealing	4	3.648	191	.000	1.234	1.902	.567
Educational environment	5	-1.684	191	.094	-.396	.068	-.859
Supervising and evaluation	5	.055	191	.956	.010	.384	-.364

Discussion

This study aimed to describe and define the quality of clinical education based on the perspective of medical students at Shahroud university of medical sciences. Results showed that the quality of clinical education in three aspects of educational goals and curriculum, teacher performance and student attitude was desirable although monitoring and evaluation and the educational environment are not desirable.

These results are in agreement with Rezaei et al.[19], Tavakoli et al.[17], Shahbazi et al.[20] and Mohammadpour et al.[21]. It can be said that the differences in some results of these studies may be due to changing clinical environments. Since students' assessment of the quality of educational goals and programs has been well reported, the researchers believe that formulating realistic and appropriate goals is especially effective at improving the quality of clinical education, especially at the beginning of the training program. Expressing the goals enables a reasonable selection of learning activities.

In the field of teacher performance, the students stated the situation as desirable. These results were in agreement with the researches of Rezaei et al.[19], Tavakoli et al.[17], Mohammadpour et al.[21] and Pardanjani.[22] But the results of Sharifi et al.'s research[23] were inconsistent with these results. This could be related to the quality and policies of universities as well as to the ministry of health for the distribution of facilities. Also, a study conducted by Shahbazi et al. At Shahid Sadoughi university of medical sciences, the results showed that none of the aspects of clinical education were acceptable and did not provide satisfaction.[20] The differences in the findings of these studies can be due to cultural and social differences, different learner conditions and the level of skills of the studied instructors. Instructors in the clinical setting can appropriately reduce student stress. Undoubtedly, the performance of clinical supervisors is one of the most important indicators of effective clinical education. Because the clinical supervisor has a huge impact on enhancing the quality of education. However, one of the characteristics of an effective supervisor is to create appropriate communication and interaction with students either individually or in groups. Furthermore, appropriate communication reduces the amount of stress of the students in the clinical setting. Based on the findings of the present study, dealing with students was evaluated undesirable from the perspective. This finding is in agreement with the results of Rezaei,[19] Tavakoli[17] and Pardanjani.[22] However, despite this finding, Sharifi et al. found that most students were not satisfied with their teachers' attitudes to clinical education.[23] The differences in the results of these studies may be due to differences in cultural and social conditions of the environment and the subjects under assessment. Implementing a learning process in a clinical setting requires appropriate educational insight and support from staff and students. Attitudes and motivations of medical staff influence students' clinical learning experiences and outcomes. The educational environment as well as communication and mutual respect, reduces stress and on the other hand, promotes students' self-confidence and interest in the clinical environment and working with patients.

This facilitates the learning process and can provide more effective care to patients. But the quality of clinical education in terms of the educational environment in our study was reported unfavorablyfrom the students' point of view. This finding is in agreement with Sharifi et al.[23], Shahbazi et al.[20], Rezaei et al.[19], Mohammadpour et al.[21] and Pardanjani et al.[22]. Students' clinical education status seems to require a more comprehensive provision of clinical facilities and equipment, including educational and welfare facilities, which have been confirmed in similar studies. The clinical teaching environment is influenced by the students 'readiness for activities and learning outcomes and students' satisfaction with their profession. In our study, the quality of clinical education in terms of supervision and evaluation was also reported undesirable by students. These results were in accordance to Sharifi et al.[23], Shahbazi et al.[20] and Rezaei et al.[19].

Considering the differences between the statistical population and the individual characteristics of the clinical supervisors (education, work experience and type of employment) as well as the type of studied universities, the differences in the results are noticeable. Evaluation is an important part of educational planning and has a constructive effect on student and clinical teacher performance. Most students believe that existing evaluations are tasteful and have many disadvantages, which is the reason that they are dissatisfied with their clinical evaluation and consider it as an uncertain issue which requires reconsideration. Evaluation is one of the important tasks of managers and clinical supervisors but sometimes it is not done properly due to unfavorable conditions. Sometimes the managers and clinical supervisors place it at the lower priorities. Obtaining periodic feedback on the status of clinical education identifies the strengths and weaknesses of education and provides information required to modify programs and methods. It is advisable to provide students with information about the evaluation process and its objectives and to consider their related views. It seems that designing a criterion of correct, accurate and objective evaluation without personal judgment, is necessary to evaluate students' scientific and practical skills.

Limitation of the study: It should be noted that the present study was conducted in a limited cross-sectional society and its generalization is limited. The questionnaire was the only tool that is used in the study. A questionnaire is a self-reporting tool that is influenced by one's perception and honesty, and it is suggested that control variables be included for future homogenization of samples.

Based on the results, it was found that the quality of clinical education in terms of goals and curriculum, teacher performance and student attitude was favorable from the medical students' point of view, but it was not favorable in the field of educational environment and supervision and evaluation. It seems that by increasing the quality and quantity of educational equipment, welfare facilities in universities and dormitories, and increasing the number of medical staff in teaching hospitals, clinical staff whose main task is to educate medical students have no worries about the patients. So they are able to spend more time with the students. Furthermore, students deal with their supervisors during the course not only

at the end of the course. Electrical education can be a good opportunity for this aim.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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