

The Attitude of Graduates of Medicine Regarding Different Teaching Methods in Clinical Departments of Shiraz University of Medical Sciences

Mansoor Masjedi¹, Razieh Neshatavar^{2*}, Elham Alipour³

¹Anesthesiology and Critical Care Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

²Educational Developmental Office, Medical School, Shiraz University of Medical Sciences, Shiraz, Iran

³Namazi Hospital, Shiraz University of Medical Sciences, Shiraz, Iran

*Shiraz University of Medical Sciences
Karimkhanzand St.
Shiraz, 7134845794
Iran

Tel: +98 7132084046
Fax: +98 71 32084178
Email:
rneshatavar@yahoo.com

Background: Clinical education is a process in which students gradually acquire clinical experience and prepare themselves to solve patient's problems. Choosing the appropriate educational method is one of the most important parts of education. The aim of this study was to determine the level of learning in different educational methods using the attitudes of graduate students in major and minor department.

Methods: In this descriptive-analytical study, 82 (64%) out of 128 graduated students from the faculty of medicine were evaluated by a researcher-made questionnaire consisting of 10 questions with five-choice Likert scale and demographic information. The face and content validity was confirmed by the faculty members and its reliability was confirmed with the Cronbach Alpha's coefficient of above 80%.

Results: There was a significant relationship between gender, marital status, number of children, type of entrance quota, and average score with different educational methods. Individual study and outpatient clinics had the most impact and journal club meetings had the least impact on learning. Grand round had a great impact on women's learning, the outpatient clinic on learning of free-quota students and mortality and morbidity sessions, student conferences, and individual study on higher-grade students.

Conclusion: It is recommended that educational managers and planners consider the content and type of educational programs in the mentioned sections, considering the impact of different educational methods on learning. Due to the lack of similar studies on the attitudes of the education and training staff, further research is needed in this regard.

Keywords: Attitude, Clinical education, Educational methods, Learning

ارزیابی تاثیر روش‌های مختلف آموزش بر میزان یادگیری در بخش‌های بالینی از دیدگاه فارغ‌التحصیلان رشته پزشکی دانشگاه علوم پزشکی شیراز

زمینه و هدف: آموزش بالینی فرایندی است که در آن دانشجویان با حضور بر بالین بیمار و بصورت تدریجی تجربیاتی کسب نموده و خود را برای حل مشکلات بیمار آماده می‌سازند، انتخاب روش آموزشی مناسب یکی از مهمترین قسمتهای آموزشی می باشد. هدف از این مطالعه تعیین میزان یادگیری در روش های مختلف آموزشی با استفاده از نگرش دانشجویان فارغ التحصیل در بخشهای ماژور و مینور است.

روش: در این مطالعه توصیفی-تحلیلی، نظرات ۸۲ نفر از ۱۲۸ نفر فارغ التحصیل دانشکده پزشکی با پرسش نامه محقق ساخته ۱۰ سوالی با مقیاس لیکرت پنج گزینه ای و اطلاعات دموگرافیک، ارزیابی گردید. روایی صوری و محتوایی توسط اعضا هیات علمی و پایایی آن با ضریب آلفای کرونباخ بالای ۸۰٪ تایید شد.

یافته ها: رابطه معنی داری بین جنسیت، وضعیت تاهل، تعداد فرزندان، سهمیه ورودی و معدل با روشهای مختلف آموزشی وجود داشت. مطالعه فردی و درمانگاه سرپایی بیشترین و جلسات ژورنال کلاب کمترین تاثیر را در یادگیری داشتند. گراند راند در یادگیری زنان، درمانگاه سرپایی در یادگیری دانشجویان با سهمیه آزاد و جلسات مورتابیتی و موربیدیتهی، کنفرانس های آموزشی دانشجویی و مطالعه فردی بر یادگیری دانشجویان با معدل بالاتر تاثیر بیشتری داشت.

نتیجه گیری: توصیه می گردد که مدیران و برنامه ریزان آموزشی، محتوا و نوع ارائه برنامه های آموزشی را در بخشهای مزبور با توجه به تاثیر روشهای مختلف آموزشی بر میزان یادگیری مدنظر قرار دهند. به دلیل کمبود مطالعات مشابه در زمینه نگرش کادر آموزش و درمان، لزوم بررسی بیشتر در این زمینه بارز می باشد.

واژه های کلیدی: آموزش بالینی، روش های آموزشی، نگرش، یادگیری

تعیین نظره خرجی فرع الطب البشری فی جامعة شیراز للمعلوم الطبیه حول طرقه التعلیم فی الأقسام السریریه

الأرضیه والهدف: التعلیم السریري هو تعلیم الطلاب خلال حضورهم فی الأقسام السریریه ما یؤدی لكسبهم تجارب وحلول لمشاكل الرضی بصوره تدریجیه. اختیار الطریقه المناسبه للتعلیم هی واحده من أهم أقسام التعلیم. الهدف من هذه الدراسة تعیین میزان التعلیم لدى الطلیبه بالاستفاده من آراء الطلاب الخرجین من الأقسام الرئیسیه والفرعیه.

الطریقه: فی هذه الدراسة التوصیفیه التحلیلیه تم الأخذ برأی ۸۲ طالب خریج من أصل ۱۲۸ من طلاب کلیه الطب تم وضع ورقه الأسئلة الإستفساریه من ۱۰ أسئلة ذات خمس خیارات حسب مقیاس لیکرت. تم تأیید دقة المحتوى توسط أعضا الریسه التدریسیه وتم أيضا الاستفادة من ضریب کرونباخ وكانت الدقه أكثر من ۸۰ بالمئه.

العیاص: وجد هناك علاقه ذات معنی بین الجنس، الوضع العائلی، تعداد الأولاد، منحه الدخول للجامعة والمعدل مع طرقه التدریس المختلفه. حازت المطالعه الفریدیه والعیادات علی أكثر موضعین مؤثرین فی التعلیم وحازت جلسات الجملات العالمیه علی أقل عامل مؤثر علی تعلیم الطلیبه. الجوله التعلیمی السریریه فی قسم النسائیة والعیادات فی تعلیم طلاب ذوی الدخول حسب المنحه الحره و جلسات الوقیات والمراضه والمؤتمرات التعلیمیة كان لهما تأثیر أكثر علی الطلیبه ذوی المعدلات العالیة.

النتیجه: ینصح بأن یقوم المدرس والمخططین التعلیمیین بالأخذ بعین الإعتبار بالأدور السابقه وذلك لتحصین الواقع التعلیمی مع الإلتیباه لتأثیر العوامل المختلفه التعلیمیة. وبسبب قلة الدراسات والتحقیقات حول موضوع نظره الكادر التعلیمی لذلك یلزم التحقیق أكثر فی هذا الموضوع.

الكلمات الدلیلیه: الطرحه التعلیمیة، التعلیم، التعلیم السریري، نظره

شیراز یونیورسیتی آف میڈیکل سائنسس کے فارغ التحصیل میڈیکل طلباء کی نظر سے کلینیکل سطح پر تعلیم کی مختلف روشوں کے اثرات کا جائزہ

ہیک گراؤنڈ: کلینیکل تعلیم ایسی روش تعلیم کو کہتے ہیں جس میں میڈیکل طلباء بیمار کو دیکھ کر علاج معالجے کے طریقوں کی تعلیم حاصل کرتے ہیں، کلینیکل تعلیم سے طلباء کو بیماروں کے علاج کرنے کا تجربہ حاصل ہوتا ہے۔ تعلیمی مراکز کا بنیادی هدف موثر روش تعلیم کا انتخاب ہے، اس تحقیق کا هدف تعلیم کی مختلف روشوں کی افادیت کا جائزہ لینا ہے۔ میچر اور مائیر لیول پر میڈیکل طلباء کے نظریات کے مطابق یہ تحقیق انجام پائی ہے۔

روش: اس تحقیق میں ایک سو انتھائیس طلباء میں سے بیاسی طلباء کو سوالنامہ دیا گیا تھا جس میں لائیکرت اسکیل کے مطابق پانچ جوابات پر مشتمل سوالات تھے۔ اس میں ڈیموگرافیکس کا بھی جائزہ لیا گیا تھا۔

نتیجے: جنسیت، شادی شدہ یا غیر شادی شدہ ہونے، بچوں کی تعداد، اور کوٹے نیز اوسط نمبر کے لحاظ سے مختلف تعلیمی روشوں میں خاصہ رابطہ پایا جاتا تھا۔ تعلیم کی روشوں میں خود سے مطالعہ کرنا اور آؤٹ پیسٹ کلینیک کا سب سے زیادہ اثر دیکھا گیا جبکہ جنرل کلب کی روش سب سے کم موثر واقع ہوئی۔ گریڈ راونڈ خواتین کی تعلیم میں موثر واقع ہوا، جبکہ کوٹے کے بغیر آنے والے طلباء کے لئے مارٹییلیٹی اور مارٹییلیٹی کے جلسات موثر واقع ہوئے جبکہ اچھے نمبر لانے والے طلباء کے لئے اپنا مطالعہ اور طلباء کی کانفرنس کی روشیں موثر ثابت ہوئیں۔

سفارش: میڈیکل طلباء کا تعلیمی نصاب بنانے والوں سے تاکید کی جاتی ہے کہ ہر شعبہ کے لئے وہ روشیں اختیار کی جائیں جن سے طلباء کو زیادہ سے زیادہ فائدہ ہوتا ہو۔ اس موضوع پر کم تحقیقات کی وجہ سے اس ضمن میں مزید وسیع تحقیقات کی گنجائش پائی جاتی ہے۔

کلیدی الفاظ: تعلیمی روشیں، موثر، افادیت

INTRODUCTION

In the new era, our definition of clinical education includes any kind of education offered in the presence of the patient, regardless of the environment in which the training is provided. With this definition, clinical education can be done at the outpatient clinic, in the hospital, in the patient's home and even in the classroom.

Clinical education can be considered as learning facilitating activities in a clinical setting in which clinical instructors and students are equally involved and aim to make measurable changes in the student so that all students are able to practice different skills they have learned with adequate competency at the end of their study, since the emphasis in the medical system is on enhancing professional skills (1, 2).

Clinical teachers need to have sufficient knowledge and skills and special features to know when and how to use these skills. Awareness of educational and knowledge strategies in the field of teaching-learning principles, arises an opportunity for the attention of teachers and learners to various aspects of patient's care (3).

The importance of clinical education is in providing the opportunity to allocate the human aspect to patient care through engaging in the process of treatment. The active learning process provides the best conditions for clinical education, and patients feel that they are actively involved in education as well as improving the patients' understanding of their illness and related diagnosis-treatment measures. There are challenges in this regard that may be related to the teacher, the educational environment, the educational system, patient, or other matters.

Clinical education is the most important part of the curriculum that consists of various elements such as professor, student, patient and clinical environment. Understanding these elements and understanding the problems are the first steps to improve the quality of higher education (4).

In clinical education, the ultimate goal is acquiring excellence and professional skills. Operating rooms, departments, emergency rooms, outpatient clinics, intensive care units, private clinics and classrooms are areas for problem solving and clinical learning in clinical settings. To achieve the desired clinical education, this training should be reviewed and evaluated (5, 6).

In a study by Sharifi et al., 68% of students reported that quality of clinical education was undesirable, and satisfaction with infirmery education, clinical education, and theoretical education were 52%, 52%, and 78%, respectively (5).

Therefore, in practical skills training, a student's skill model must be presented so that what is expected of the student needs to be demonstrated effectively and fully in this model, and ultimately adequate monitoring and evaluation is carried out on the student's activity (7).

In general, since any planning to improve the quality of clinical education depends on the recognition of the problems, inadequacies, and shortcomings in the clinical education system from the viewpoints of the students, this study aimed to assess the various educational methods (department's round, outpatient clinic, journal club,

mortality and morbidity sessions) based on the viewpoints of medical students of Shiraz University of Medical Sciences on the extent of learning in major and minor departments

METHODS

This is a descriptive-analytic study. The target population includes all graduates of the year 2017 and 128 newly graduated medical students from Shiraz Faculty of Medicine were chosen using census method. They have referred to the Education Development Department of the Faculty of Medicine within four months after graduation. Each student was given a questionnaire after the objectives of the plan was explained, and the questionnaires were collected after completion. Students were excluded from the study if they did not want to complete the questionnaire.

The measurement tool is a researcher-made questionnaire of which face and content validity was confirmed by the faculty members, and its reliability with Cronbach's alpha coefficient was above 80%. The questionnaire was designed as closed response and includes demographic information (gender, marital status, spouse's job, spouse's education, number of children, native and non-native students, entrance quota and total score), and 10 questions to measure the impact of various educational items in learning, each questioned the impact of one educational item on learning, and responses were used on a five-choice Likert scale (very low, low, moderate, high and very high). Data were entered into Spss18 after coding, the effect of each item on learning was calculated as percentage. Also, the relationship between different items (department's round, outpatient clinic, journal club, mortality and morbidity sessions) on the amount of learning with gender, marital status, spouse's job, spouse's education, number of children, native and non-native students, entrance quotas was examined using Chi-square test. In cases where the default of the Chi-square test was not met, exact equivalent test was used. The relationship between educational items and the mean score was measured using Spearman test.

RESULTS

Comments from 82 (64%) of the 128 graduates were reviewed.

Of these, 46% were female and 54% were male, 50.8% were married and 49.2% were single. In this study, the most effective teaching methods were related to individual study (73%) and the outpatient clinic (76%), rounds (45%), assistant and teacher training conference (61.5%), student educational conference (44%), and accompaniment with a professor or assistant professor for medical counseling (53%), respectively. The lowest impact was assigned to journal club meetings (11%), grand round (18%), morbidity and mortality sessions (17%), respectively, and the impact of morning reports (27%) was observed (Figure 1).

In terms of the impact of the educational method in Likert scale, the percentage of the impact of self-study, outpatient clinic, student education conference, attending and resident educational conference, accompaniment with a professor or assistant professor for medical counseling was high and very high, and the morning report, round and the grand round

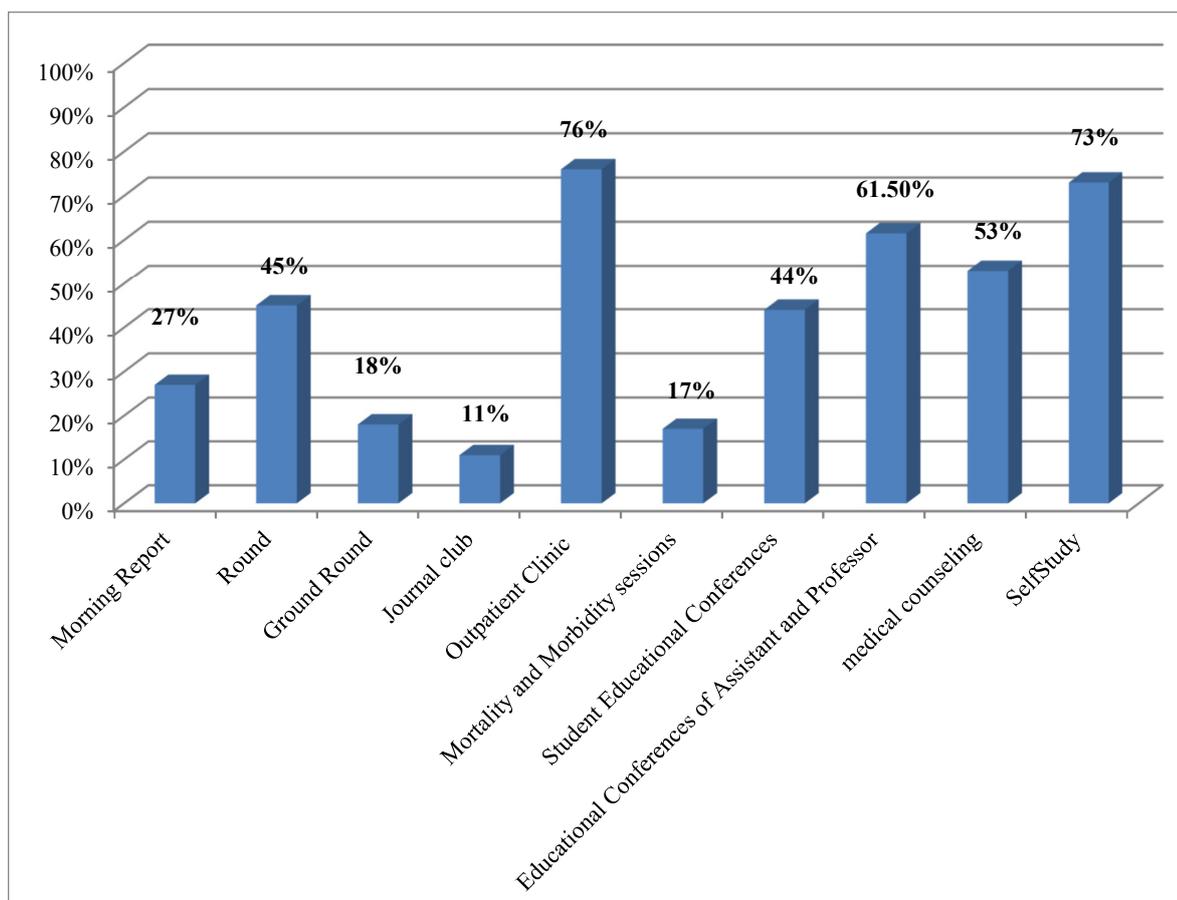


Figure 1. Comparison of Frequency Percentage of Educational Methods from the Viewpoint of Graduates of Medicine from Shiraz University of Medical Sciences

was moderate, and the journal club, and mortality and morbidity sessions were low and very low (Table 1).

In order to examine the relationship between the amount of learning with gender, marital status, spouse's job, spouse's education, number of children, native and non-native students, entrance quota, the Chi-square test was used in each item and the following results were obtained:

Gender had significant relationship only with the grand run, as the effect of this item on women's learning was higher than that of men (P-value <0.05).

Marital status had significant relationship only with educational conferences and it was observed that its effect on married people's learning was higher than single individuals (P-value <0.05).

The number of children had significant relationship only with self-study, meaning that the effect of this item on the learning of students who did not have a child was higher (P-value <0.05).

Entrance quota had significant relationship only with the outpatient clinic, as the effect of this item on students with a free quota was higher (P-value <0.05).

There was no significant relationship between job, spouse's education, native and non-native students and educational items, which means that these variables did not affect the educational items on learning (P-value <0.05).

The relationship between educational methods and the general mean of the variables was evaluated using Spearman's correlation coefficient. It was observed that there was a direct relationship only between the mortality and morbidity sessions, student conferences and self-study, which means that these 3 items have more effect on learning in students with a higher average score.

DISCUSSION

Clinical education is a process in which students attend the patient's bedside and gradually acquire the skills of diagnosis and management of the patient and prepare their minds using the logical experiences obtained to solve the patient's problems.

Therefore, education is considered for different learners in different departments and in different ways, including outpatient clinics, journal club meetings, mortality and morbidity sessions, morning reports, educational student, assistant, and professor conferences, and etc. For example, morning report, along with the clinical rounds and outpatient training is a common, useful, and valuable method (the gold standard) in clinical education. This method, having characteristics and standards, plays an effective role in helping students to learn.

Therefore, with the development of the country's health

Table 1. Comparison of Frequency Distribution of Different Educational Methods on the Level of Learning from the Viewpoints of Graduates of Medicine from Shiraz University of Medical Sciences

Educational Method	Very High	High	Moderate	Low	Very Low	Total
Morning Report	5 (6.3%)	17 (20.7%)	32 (40%)	16 (20%)	10 (12.5%)	80
Department's Round	10 (12.5%)	26 (32.5%)	28 (35%)	12 (15%)	4 (5%)	80
Grand Round	2 (2.5%)	12 (15%)	25 (31.3%)	20 (25%)	21 (26.3%)	80
Journal Club Sessions	1 (1.3%)	7 (9%)	20 (25.6%)	25 (32.1%)	25 (32.1%)	78
Outpatient Clinic	36 (45%)	25 (31.3%)	11 (13.8%)	2 (2.5%)	6 (7.5%)	80
Mortality and Morbidity Sessions	2 (2.6%)	11 (14.1%)	22 (28.2%)	23 (29.5%)	20 (25.6%)	78
Student Educational Conferences	9 (11.3%)	26 (32.5%)	21 (26.3%)	15 (18.8%)	9 (11.3%)	80
Educational Conferences of Assistant and Professor	17 (21.3%)	32 (40%)	23 (28.8%)	4 (5%)	4 (5%)	80
Accompaniment with professor or assistant professor for medical counseling	15 (20.3%)	24 (32.4%)	21 (28.4%)	10 (13.5%)	4 (5.4%)	74
Self-study	33 (44.6%)	20 (27%)	17 (23%)	1 (1.4%)	3 (4.1%)	74

system and the role of physicians in this system, it is essential that physicians have the essential abilities to serve patients (8).

In this study, the attitudes of medical students and the impact of different methods on their learning in Shiraz University of Medical Sciences were studied. The results of this study showed that the most effective educational method on learning is related to self-study and outpatient clinic, which is consistent with the study of Azizi et al., since learning style is convergent in clinical students and they have the highest ability to use thoughts and the least effect was observed in journal club meetings and grand round sessions, which shows that the environment and learning tasks affect the learning style (9).

In the study of Khadem et al, it is stated that the effect of the clinic on the better learning of the materials is desirable and it is in line with the current study in this respect (10).

In the present study, there is a significant relationship between gender (women) and grand round, marital status and educational conference, in the study by Khadem et al., there was a significant relationship between the reduction of learning motivation in future job opportunities in men and the level of concern in married individuals is higher which is compatible with the study of Khadem et al. (10).

The results of current research showed that there was a significant relationship between lack of child and self-study, entrance quota (free quota) and outpatient clinic, which is consistent with the study of Ghaderi et al. They also concluded that the student's interest is meaningfully related with the entrance quota (especially native quota), meaning that the main factor for academic achievement is related to the internal motivation, including self-study and interest in the field related to being native (11).

The results of the study showed that the satisfaction of the morning report, round and grand round was moderate and journal club, and mortality and morbidity sessions were low and very low; however, in a study in Karachi, the dissatisfaction rate of the final-year medical students regarding clinical education and the mentioned topics is

estimated as 85%. In the Fast & Bullipo's study, medical students' attitude was reported to be appropriate regarding the morning report, which is not consistent with the current study. In a study by Rohani et al. 70% of students have described grand round as weak and very weak, which is consistent with the current study (12-14).

The results showed that students with a higher grade experience more effective learning in three teaching methods, including mortality and morbidity sessions, student conferences and self-study, which indicate that they are dissatisfied with other methods.

In a study by Fasihi et al., It has been argued that being engaged with theoretical education different from clinical education has a negative effect on individual performance at any time and can also lead to a loss of student's clinical time (1).

Another point that students emphasize is that the system governing the educational departments is such that in the major clinical departments, the presence of students in the clinic is less important and the organization of educational clinics in the major departments are considered as not sufficient. In contrast, the morning reports have significantly improved student's satisfaction in major clinical departments. The educational frameworks in the educational centers sometimes can not meet the new needs and provide standard educational space, and offering continuing education programs to graduates of medical disciplines seems necessary, as emphasized in other studies (12, 15).

The recommendations of the therapeutic team, due to better understanding of these patients regarding what should be provided to patients in the form of these services, and what is currently presented, along with the opinions of the patients, will lead to a more complete and correct understanding of the current conditions of the treatment system and it can help solve and overcome defects and possible shortcomings. As a group receiving the medical education services, the views of these people should be considered in evaluating educational processes so that their relative awareness of the advantages and disadvantages of

each educational program, including clinical rounds, can be addressed to improve these processes (16).

Since the goal is to determine the amount of learning by different educational methods using the attitudes of graduates in major and minor sections, previous studies have shown that assistants consider morning reports to be the most valuable educational activity (17), while in this study, students mentioned the effect of this educational item on learning as average (27%) and given that in the present study, the effect of the clinical round on learning is evaluated as average, it is therefore suggested to improve the clinical rounds by conducting group visit of externs, interns, and even assistants simultaneously, the number of visits in a clinical course decreases and only mentioning more practical aspects or specific points about the same disease on the patient's bedside and other issues and theoretical discussions regarding the disease and treatment should be mentioned at the conference halls, which were considered as alternatives to the studied clinical rounds.

Considering the sample size limitation in the current study and in similar studies, it can be admitted that research on the attitudes of the education and treatment staff and the teams

providing medical services are very low in number comparing different educational methods and their impact on learning; this calls for further investigation and discussion in this regard. It is recommended that the managers and educational planners of the universities, take into account the content and type of educational programs in the clinical departments, considering the effectiveness of different educational methods on learning.

According to the students, the proposed methods do not have the same level of learning, and the way in which training is presented in the current form is not the ultimate solution for training a physician for the future. Revision and modification of the training method especially in the field of rounds and grand rounds, and morning reports can improve the process for undergraduates.

ACKNOWLEDGMENTS

The researchers appreciate all medical students who provided their experiences.

Conflict of interests: The authors declare that they have no competing interests.

REFERENCES

1. Fasihi Harandi T, Soltani Arabshahi K, Tahami A, Alizade S. Viewpoints of medical students about the quality of clinical education, Iran University of Medical Sciences. *Journal of Qazvin University of Medical Sciences and Health Services* 2004; 30: 4-9. [In Persian].
2. Khorsandi M, Khosravi SH. Clinical education from the viewpoints of nursing and midwifery students in Arak University in 1991. *Journal of Arak University of Medical Sciences* 2002; 5(1): 29-32. [In Persian].
3. Rahimi A, Ahmadi F. The obstacles and improving strategies of clinical education from the viewpoints of clinical instructors in Tehran's nursing schools. *Tehran University of Nursing. Iranian journal of medical education* 2005; 5(2): 73-80. [In Persian].
4. Neshatavar R, Masjedi M, Bazrafkan L. Evaluation of general department of surgery in medical school. Shiraz University of Medical Sciences. *Proceeding of second conference of Kurdistan University of Medical Sciences*, 2012. [In Persian].
5. Khorgami Z, Danaie G, Damari B. Clinical skills centers Standards. *Iranian journal of medical education* 2002; 2: 36. [In Persian].
6. Sharifi B, Ghafarian Shirazi HR, Momeninejad M, Saniee F, Hashemi N, Jabarnejad A, et al. A survey of the quality and quantity of clinical education from the viewpoint of medical student. *Journal of Jahrom University of Medical Sciences*, 2012; 10(2): 48-53.
7. Green JL. Peer support systems and professional identity of student nurses undertaking a UK learning disability nursing program. *Nurs Educ Pract* 2018; 30: 56-61.
8. Elliott D. Early mornings and apprehension: Active learning in lectures. *J Hosp Leisure Sport and Tourism Educ* 2005; 4(1): 53-8.
9. Azizi F, Khanzadeh A, Hosseini M. Study of learning styles based on Kolb's Theory medical students of Qazvin University of Medical Sciences. *Iranian journal of medical education* 2002; 7: 87. [In Persian].
10. Khadem N. A survey of graduates of the Mashhad Medical School on the coordination of educational attainment with educational goals in providing medical services to the community. *Journal of Mashhad University of Medical Sciences* 2009; 51(4): 233-8. [In Persian].
11. Ghaderi R, Dastjerdi R, Soroush Z, Mohebbati M. Influential factors in medical students' attitudes towards studying medicine in 2002. *Iranian journal of medical education* 2004; 10: 47-54. [In Persian].
12. Aziz A, Kazi A, Jahangeer A, Fatmi Z. Knowledge and skills in community oriented medical education (COME) self-ratings of medical undergraduates in Karachi. *J Pak Med Assoc* 2006; 56(7): 313-17.
13. Rohani M, Baradaran HR, Sanagoo A, Sarani M, Yazdani S, Alizadeh HR. Attitudes of Medical Students, Interns, Residents and Attending Professors Toward Grand Rounds in Iran University of Medical Sciences. *Razi journal of medical sciences* 2016; 23: 115-24. [In Persian].
14. Fassett RG, Bollipo SJ. Morning report; an Australian experience. *The medical journal of Australia* 2006; 184 (4): 159-61.
15. Lindblom P, Scheja M, Torell E, Astrand P, and Felländer-Tsai LJ, Interprof Care. Learning orthopaedics: assessing medical students' experiences of interprofessional training in an orthopaedic clinical education ward. *J Interprof Care* 2007; 21(4): 413-23.
16. Adibi P, Alizade R. The effects of clinical rounds on patients in internal wards of hospitals affiliated to Isfahan University of Medical Sciences: The viewpoints of clinical care team. *Iranian journal of medical education* 2007; 7(1): 15. [In Persian].
17. Hosseini J, Malekanrad E, Einollahi B, Montazmanesh N. Training and clinical evaluation: What every clinical instructor must know. 1st ed; 1964. [In Persian].