

Investigating the Status of Clinical Rounds in Universities of Medical Sciences: A Systematic Review

Khalil KomLakh¹  | Hosein Karimiyarandi^{2*}

¹Associate Professor of Neurology, Department of Neurosurgery, School of Medicine, Emam Khomeini Hospital, Tehran University of Medical sciences, Tehran, Iran

²Assistant Professor of Orthopaedics, School of Medicine, Emam Khomeini Hospital, Ilam University of Medical sciences, Ilam, Iran

*Corresponding Author E-mail: hoseinkarimiyarandi@yahoo.com

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ABSTRACT

Introduction: It is important to identify the clinical education challenges and related factors. The aim of the present systematic review was to investigate the status of clinical rounds in universities of medical sciences.

Materials: This review study was conducted with the aim of investigating the quality of and satisfaction from clinical rounds from the viewpoint of faculty members, residents, interns, and apprentices of Iran's Medical Sciences universities. The search was conducted by two members of the clinical faculty who were familiar with the subject and were expert in systematic review articles. The found articles were entered into the Word Software Ver. 2008.

Results: Initially, 88 articles were searched, of which 67 articles were excluded from the study since they were not consistent with the research objectives. Then, eight articles were entered the systematic review stage after rechecking and studying all titles and abstracts of studies. It should be noted that the sample size was not mentioned in one of the published articles. The studied wards also included internal, surgery, pediatric, endocrine, and gynecology. Furthermore, the results showed that faculty members had a higher satisfaction with clinical rounds and their quality as compared with residents and interns, so that in faculty members assigned higher scores to the quality of clinical rounds than students in all the relevant previous studies.

Conclusion: It is suggested that necessary interventional studies be conducted to increase the quality of clinical rounds, especially from the perspective of students

Keywords: Teaching Rounds, Medical, Education..

1. Introduction

A significant part of the health system budget is allocated to medical and educational hospitals and all efforts should be made to provide effective

services in an efficient manner. One of the duties of educational hospitals is teaching medical students [1]. The ultimate goal of education process in fields of medical sciences is to meet the needs of the society

and solve health-related problems because the identification of needs and problems is helpful in curriculum design, student education, and thus in providing the highest quality care and treatment services to the society [2, 3]. To improve the clinical care process, the education process should be modified. The education process in most fields of medical sciences includes two parts: theoretical and practical educations. There is a gap between theoretical and practical educations, and to ensure optimal learning of the learnt items, the gap between theoretical and practical learning should be reduced and theoretically taught items should be practically used [4-6].

In fact, to improve the educational status, the quality of theoretical and clinical education services should be increased. The main prerequisite for improving the quality of services is to ensure a rigid monitor process to achieve growth, promotion, durability, and optimization. For service recipients, quality does not only include the actions and behaviors of service providers in the organization, but also includes their mental perception and inner interpretation of the services [7, 8]. The ultimate goal in medical education is to train competent physicians and acquire the necessary knowledge, skills, and attitude to care for patients. If medical students are only taught knowledge and skills regardless of professional character training, we will face physicians who do not have the characteristics and professional responsibility of a physician. Hence, reducing the theory-practice gap should be prioritized in medical education [8, 9]. Clinical rounds are one of ways to facilitate learning in the clinical environment, in which both the faculty member and the student participate equally, and its purpose is to make changes in the student and create clinical round for the learner. In this type of

training, students, interns, and residents visit all patients, and then introduce the patient, re-examine him in the presence of the faculty member, and review the files of the patient [10-12]. Clinical rounds have faced various challenges such as time limit, in adequate supervision, lack of a clear clinical training structure, lack of necessary facilities, and support for clinical training. Therefore, it is necessary to improve clinical training through relevant interventions to reduce problems and challenges [13].

It is important to identify the clinical education challenges and related factors. In this regard, it is possible to clarify the strengths and weaknesses of clinical education by obtaining the views of students, faculty members, interns, and apprentices [14]. Challenges can be investigated by conducting evaluation as a fundamental part of clinical education and have data available to judge the extent to which students or faculty members achieve learning outcomes. In fact, the evaluation will judge the achievement level and the quality of the clinical skills of the patient in the context of patient care standards [15, 16], which is why the examination of the status of clinical rounds in universities is of particular importance [17].

2. Aim

Concerning the importance of the education quality in universities, especially in clinical fields, the aim of the present systematic review was to investigate the status of clinical rounds in universities of medical sciences.

3. Methods

This systematic review study was conducted with the aim of investigating the quality of and satisfaction from clinical rounds from the viewpoint of faculty members, residents, interns, and apprentices of Iran universities of medical

sciences. The search was carried out by using the keywords (Persian and English equivalents) clinical round, quality, satisfaction, resident, intern, apprentice, intern, faculty members, clinical experts, clinical education, and students' viewpoints for studies conducted during 2000 to 2021.

The search was done by two members of the clinical faculty who were familiar with the subject and were expert in systematic review articles. The reference of the searched articles was further used as a search source in addition to the

domestic and international databases. The found articles were entered into the Word Software Ver. 2008.

4. Results

Initially, 88 articles were searched, of which 67 articles were excluded from the study since they were not consistent with the research objectives. Then, eight articles were entered the systematic review stage after rechecking and studying all titles and abstracts of studies (Figure 1).

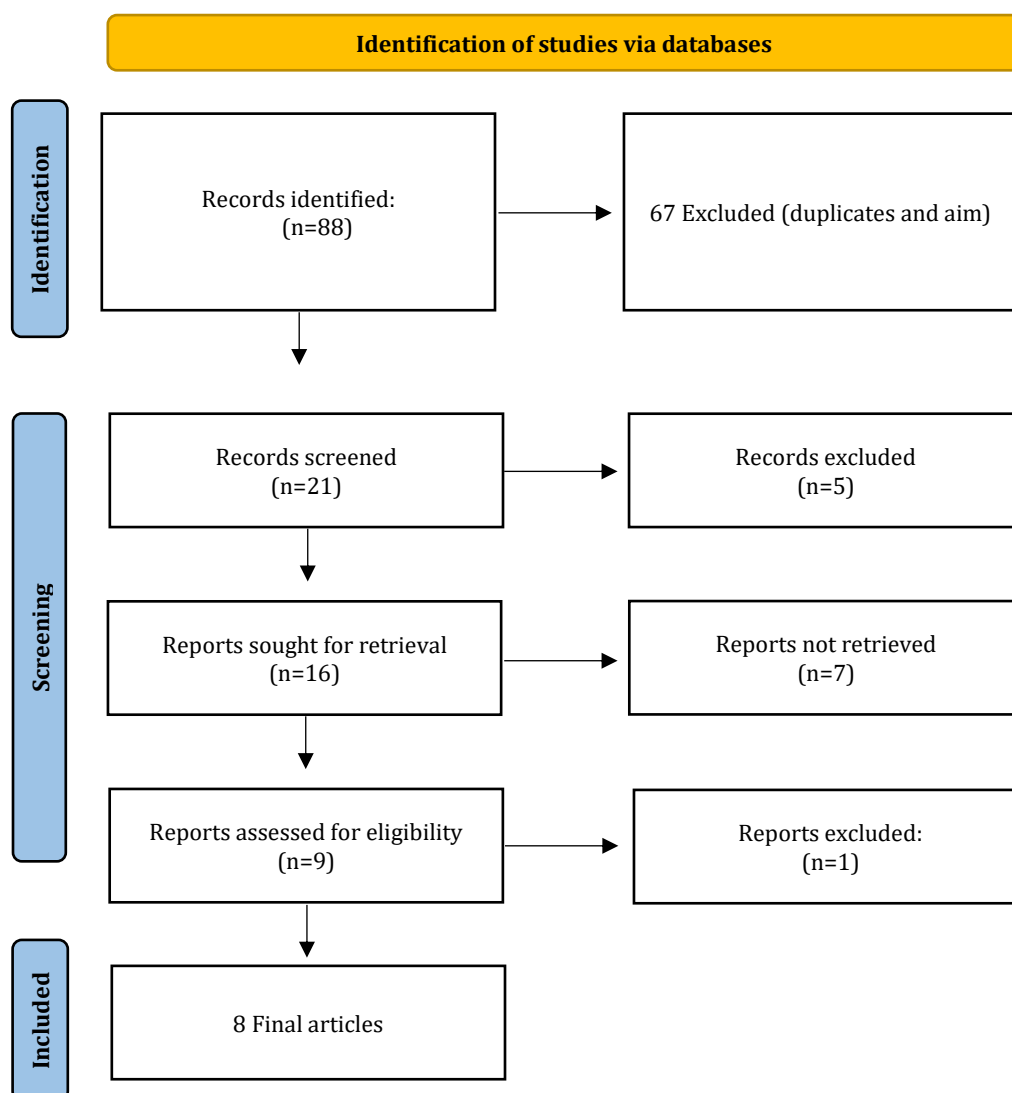


Figure 1. Flowchart of the current systematic review

The sample size was equal to 1123 people who were selected from different universities in Tehran, Shahrekord,

Mashhad, Ahvaz, Birjand, Ahvaz, and Yazd (Table 1). It should be noted that the sample size was not mentioned in one of

the published articles. The studied wards also included internal, surgery, pediatric, endocrine, and gynecology. Furthermore, the results indicated that faculty members had higher satisfaction with clinical rounds and their quality as compared

with residents and interns so that in faculty members assigned higher scores to the quality of clinical rounds than students in all the relevant previous studies (Table 1).

Table 1. Specifications of articles entered in the systematic review

No.	Author	Years	Aim	University name	City	N	Outcomes
1	Rohani <i>et al.</i> [18]	2016	Internal medicine, Surgery, pediatric, and gynecology	The viewpoint of medical students, residents, and faculty members	Tehran	237	Concerning the quality of clinical rounds from the perspective of in residents and faculty members, 62% of them evaluated it as good and very good, 27.6% as average, and 10.4% as poor and very poor. Likewise, the quality of clinical rounds was evaluated good and very good, average, poor, and very poor by 29.24%, 36.3%, and 34.3% of interns and apprentices, respectively. Moreover, the quality of conducting of clinical rounds was 1.82, 1.92, and 3.13 by interns, residents, and faculty members. The above figure was further equal to 1.87, 1.87, 1.89, and 2.1 in the pediatric, surgical, internal, and gynecology wards, respectively.
2	Alla <i>et al.</i> [19]	-	The quality of the clinical round from the viewpoint of interns, apprentices and residents	Endocrine	Tehran	57	A total of 61.4% of the participants evaluated the grand round quality of the endocrine ward as good or very good. In addition, the grand round quality was evaluated optimal by 100% of the specialized and subspecialized residents, and 86.8% of the interns and apprentices. According to the participants, the most important goals of the clinical rounds include reasoning and critical thinking (56.1%), strengthening decision-making skills (52.6%), evidence-based medicine (47.4%), and statement of scientific findings (43.9%). The highest and the lowest level of satisfaction with the very good evaluation of the quality of the weekly grand rounds belonged to the faculty members (63.15%) and interns w (4.34%), respectively. Furthermore, grand rounds were regarded as useful by 70.73% of faculty members and residents and 53.62% of students. Moreover, optimal duration of the grand rounds was one to one and half an hour from the perspective of 63.15% of faculty members, and less than one hour by 63.41% of residents, and 80.16% of interns.
3	Heidari <i>et al.</i> [20]	2021	Comparing the perspectives of faculty members, interns, apprentices, and residents	Pediatric	Mashhad	235	It should be noted faculty members assigned a higher evaluation score as compared with interns, and results of comparing the average score of 20 items showed a significant difference in this regard. Also, the mean (SD) score of faculty members was equal to was 65 (16.13), which was higher than the optimal average score of 44. In addition, the mean (SD) score of interns was equal to 47.52 (19.35), which was close to the optimal average score of 44. The results revealed a significant mean difference between the two groups due to the higher scores given by the faculty members clinical round items.
4	Malekpour <i>et al.</i> [21]	2021	Comparing the status of clinical rounds from the viewpoint of faculty members and students	Internal medicine, pediatric, gynecology, and trauma	Shahr ekord	60	

5	Daryazadeh <i>et al.</i> [22]	2021	Quality of clinical rounds	Physicians, residents, interns, and apprentices	Kashan	320	The mean scores assigned to clinical rounds by the participants are significantly higher than the average value, which indicates that the status of clinical rounds is optimal from the perspectives of physicians, interns, and apprentices. A total of 68% of the faculty members, 52% of the residents, and 48% of the interns reported the quality of the clinical rounds was optimal and none of the participants agreed with the removal of the round from the educational program. In addition, 87.7% of professors, 77.8% of residents, and 48% of students reported their ward as very good.
6	Sadeghi <i>et al.</i> [23]		The quality of holding the clinical round	Professors, students, and residents	Ahvaz	114	A total of 73% of the participants reported high and very high satisfaction with clinical rounds. Moreover, 82% of the participants agreed with the necessity of holding the clinical round, 72% agreed with the appropriate time of the clinical round, 71% agreed with the role of the night round in increasing clinical skills, 67% agreed with the possibility of asking questions and participating in the discussion, and also 66% agreed with the possibility of patient examination.
7	Ghelmani <i>et al.</i> [24]	2018	Night training round	Residents and apprentices	Yazd	-	Concerning the students' attitude towards the effectiveness of educational programs, the highest and the lowest scores were assigned to the clinic and grand conference, and also the clinical round score was higher in men than in women. Likewise, the mean (SD) of the clinical round score was 85 (2.3).
8	Mortazavi Moghadam <i>et al.</i> [25]	2016	Effectiveness of educational rounds	Internal medicine	Birjand	100	

5. Discussion

The aim of the present systematic review was to determine the educational round status in medical sciences universities. Clinical education is faced with challenges. In this regard, Khosravi *et al.* investigated the challenges of clinical evaluation of nursing students in a qualitative study. The data analysis led to the emergence of four themes and 10 categories. These themes and categories included: Issues of evaluation agents (professional characteristics of the trainer, self-evaluation, clinical communication, and training), evaluation requirements (tool efficiency and practical evaluation), evaluation process (goal-based evaluation, evaluation clarity, time, and type of evaluation), and psychological atmosphere (relationships and self-confidence) [16]. Also, Afsari Mamghani *et al.* also found in their review study that nursing education was faced with challenges which were extracted in

27 articles reviewed in clinical nursing education of Iran in 2014.

According to the findings, effective factors in clinical education include the instructor (poor knowledge of the instructor, poor interest and motivation of the instructor, lack of support of students by the instructor, etc.), management and planning (lack of clinical instructor, poor planning, clinical, low interdepartmental coordination, etc.), students (low motivation, poor theoretical literacy, and inappropriate learning strategies), and staff (improper treatment of students or instructors, poor sense of professional commitment, following improper habits in the wards, etc.). All the above factors were mentioned as the most important challenges [26].

Concerning the quality of clinical rounds, it was shown that the quality level and satisfaction of educational courses was higher among faculty members than residents and interns. In a study of

satisfaction with faculty members' performance, Lotfi *et al.* showed a difference between the opinions of faculty members and students. That is, students wanted faculty members to be permanently stationed in an educational treatment center, while faculty members preferred (fixed or rotating) [27] which is consistent with the results of the present study regarding the difference in the opinions of faculty members and students concerning the factors affecting the quality of clinical education.

This is the first study on the quality of clinical rounds from the viewpoints of faculty members and students, which is one of the strengths of the present study. However, the small sample size is also one of the limitations of this study.

5. Conclusion

It is suggested to do the essential interventional studies in order to increase the quality of clinical courses, especially from the students' perspectives.

Abbreviation

Not Abbreviation in the article

Conflict of interest

No Conflict of interest

Consent for publications

Ok

Availability of data and material

Ok

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Orcid

Khalil

Komlakh:

<https://www.orcid.org/0000-0002-8291-5540>

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