Ann Mil Health Sci Res. 2024 September; 22(3): e148869 https://doi.org/10.5812/amh-148869

Published Online: 2024 September 22 **Research Article**

# Attitude of Students and Professors Toward Quality of Residency Medical Education at the Selected University of Medical Sciences in Tehran in 2023

Mohammad Arbaghaei [1], Maryam Vasheghani Farahani [2], Hasan Vasighi Pirayesh [1], Zahra Sadat Asadi [3,*]

[1] Student Research Committee, School of Medicine, Aja University of Medical Sciences, Tehran, Iran
[2] Department of Forensic Medicine, School of Medicine, Aja University of Medical Sciences, Tehran, Iran
[3] Department of Community Medicine, School of Medicine, Aja University of Medical Sciences, Tehran, Iran

[*] ***Corresponding Author:*** Department of Community Medicine, School of Medicine, Aja University of Medical Sciences, Tehran, Iran. Email: 2006.asadi@gmail.com ; Zasadi@ajaums.ac.ir

**Received:** 25 May, 2024; **Revised:** 4 August, 2024; **Accepted:** 13 August, 2024

## Abstract

**Background:** Clinical education is one of the most essential components of medical student education, as it significantly impacts students' professional futures and the training of healthcare experts.

**Objectives:** This study aimed to assess the quality of clinical teaching from the perspective of residents and professors at selected medical schools in Tehran city.

**Methods:** A descriptive cross-sectional study was conducted using the census technique on 81 residents and 48 faculty members from internal medicine, surgery, radiology, anesthesia, and physical medicine in 2023. The data collection instrument was a reliable and valid questionnaire. After gathering the data, SPSS software computed the score for each item and reported it as a percentage.

**Results:** The research findings showed that residents reported morning reports are always held in 94% of the internal medicine group and 60% of the surgical group. Additionally, 80% of the residents and 100% of the professors in the surgery department stated that the group held regular mortality and morbidity meetings. Thirty-three percent of radiology and physical medicine residents mentioned that the hospital amenities are of good quality. The residents of the physical medicine department reported that theory classes are always held 83% of the time.

**Conclusions:** According to the present findings, the quality of education in internal medicine and surgical courses is optimal from the perspective of both professors and students. Periodic studies on the sustainability and improvement of current educational conditions are recommended.

*Keywords:* Clinical Education, Residency Training, Educational Evaluation, Medical Education

## 1. Background

The ultimate purpose of any educational institution is to produce specialized human resources to meet market demands. Like any other institution, the educational system may face challenges that hinder its ability to effectively fulfill its duties, resulting in wasted time and resources, both financial and human (1). In Iran, medical universities are considered the most significant institutions of higher learning. These colleges are responsible for training professionals who will maintain public health and prevent sickness. These professionals not only need to acquire essential knowledge and skills but also the appropriate attitudes to address social and personal issues that patients may face (2, 3). To achieve the primary goals of these educational facilities, it is crucial to identify educational problems, formulate solutions, and improve the quality of instruction (4, 5).

In recent years, the country's physician shortage has been partially addressed by expanding admissions caps at medical universities. However, authorities should also

focus on enhancing the quality of medical education. Providing high-quality clinical teaching is a critical and urgent issue in medical education (6). Given the diverse nature of the medical profession, the training program should be designed to foster students' intellectual growth and development, as well as provide an environment that allows them to acquire the necessary clinical knowledge and skills. Learning new skills in a safe setting that resembles real-life situations is both a science and an art and requires practice (7-9). Clinical training is dynamic because it involves continuous learning at the patient's bedside. In other words, clinical training is the most crucial aspect of medical education, where students apply the theoretical and practical knowledge they have gained to real situations and patients while interacting with teachers and the hospital environment. Any flaws in presentation result in a deficiency in the students' practical and fundamental skills training (10, 11). Problems and barriers in this field affect not only educational quality but also the future quality of medical services. Due to these shortcomings, the educational system requires fundamental attention. In this context, recognizing clinical education issues is the first step in mitigating and resolving them. To empower students in this course, educational planners should establish conducive environments in clinical departments (12, 13).

Assessing service users' satisfaction levels is a useful strategy for improving service quality. One of the program evaluation techniques involves collecting feedback from students and professors, which helps those involved in clinical training understand their performance and improve medical residents' training by minimizing potential flaws. Public health will improve when society has access to more skilled medical professionals (14, 15). Given the importance of addressing clinical education, this study aims to evaluate the quality of residency training at Aja University of Medical Sciences from the perspective of instructors and residents.

## 2. Objectives

This study aimed to assess the quality of clinical teaching from the perspective of residents and professors at selected medical schools in Tehran.

## 3. Methods

The current study, a descriptive cross-sectional study, was conducted in 2023 to examine residents' clinical training. The sample, selected using the census technique, included all residents and professors from the University of Medical Sciences in the fields of internal medicine, surgery, radiology, anesthesia, and physical medicine. The study's statistical population consisted of 48 faculty members and 81 residents.

A valid and reliable questionnaire developed by Shoja et al. from Mazandaran University of Medical Sciences was used as the data collection method, following discussions with the researcher and adhering to all ethical guidelines for the study (16). The survey contained thirty items divided into two sections, with questions categorized based on variations in their responses. The validity of the questionnaire was tested and verified by a group of experts, and its reliability was confirmed by a Cronbach's alpha coefficient of 70%.

The questionnaires were distributed to the professors and residents after explaining the project's objectives and were collected upon completion. The results were analyzed descriptively after the statistical analysis of the collected questionnaires. SPSS software version 22 was used to analyze the questionnaire items.

The Aja University of Medical Sciences Research Ethics Committee reviewed and approved all aspects of the study, and all participants provided informed consent before participating (ethics code: IR.AJAUMS.REC.1402.039).

## 4. Results

In the current study, 60 residents and 22 faculty members from the Departments of Internal Medicine, Surgery, Radiology, Anesthesiology, and Physical Medicine at Aja University of Medical Sciences participated to evaluate the quality of residency training. The participants completed questionnaires (Tables 1 and 2).

The findings of the study revealed that 94% of the internal medicine group and 60% of the surgical group residents stated that the morning report is always held. Additionally, residents indicated that 100% of internal medicine and 93.3% of surgery faculty members always participate in the morning meetings. Conversely, internal medicine and surgery professors reported that they participate in the morning report approximately 90% of the time. Regarding the regular night clinical rounds conducted by the chief resident, 55.6% of the internal medicine group and 80% of the surgical group residents shared positive feedback. The surgery group professors reported that night clinical rounds are conducted about 60% of the time. According to the professors, the attendance of professors during the morning clinical rounds in the surgery group was 85.7%. However, residents noted that 38.9% of internal

**Table 1.** Field of Study, Number of Residents Participants, and Participation Percentage

| Field of Study | Total Number | Number of Resident Participants | Participation Percentage |
|---|---|---|---|
| **Internal medicine** | 23 | 18 | 78 |
| **Surgery** | 17 | 15 | 88 |
| **Radiology** | 24 | 15 | 62.5 |
| **Anesthesiology** | 9 | 6 | 66 |
| **Physical medicine** | 8 | 6 | 75 |
| **Total** | 81 | 60 | 74 |

**Table 2.** Field of Study, Number of Professors Participants, and Participation Percentage

| Field of Study | Total Number | Number of Professors Participants | Participation Percentage |
|---|---|---|---|
| **Internal medicine** | 16 | 9 | 56 |
| **Surgery** | 13 | 7 | 53 |
| **Radiology** | 7 | 3 | 42 |
| **Anesthesiology** | 7 | 2 | 28 |
| **Physical medicine** | 5 | 1 | 20 |
| **Total** | 48 | 22 | 45 |

medicine professors and 13.3% of surgery professors participate in the morning clinical rounds (Table 3).

In the radiology department, 90% of the time, professors oversee senior residents teaching other residents. The training groups associated with the radiology department had the highest satisfaction rate (100%) regarding how text review sessions helped them prepare for the upgrade exam. Furthermore, 80% of residents and 100% of professors in the surgical department reported that the department holds regular mortality and morbidity meetings. Instruction and rotations were received by 57% of residents in the internal medicine group, 64% in the surgery group, 72% in the anesthesia group, 61% in the physical medicine group, and 64% in the radiology group.

The findings also demonstrated that, from the perspectives of instructors and teaching residents, the physical medicine group had the highest rate of participation in theory classes, with 100% and 83%, respectively. Additionally, 33% of radiology and physical medicine residents rated the hospital's amenities as good quality. Regarding satisfaction with the electronic logbook system, 67% of radiology residents expressed the highest level of satisfaction, while anesthesiology residents had the lowest satisfaction level at 20%.

## 5. Discussion

This study aims to investigate the attitudes of professors and residents at a selected University of Medical Sciences in Tehran regarding the quality of clinical education across different departments.

The results of the present study showed that, according to the residents, the morning report is always and regularly held in 94% of the internal medicine group and 60% of the surgical group, which aligns with the findings of Shoja et al., who reported that the morning report is always held in 64.2% of cases (16). The study also found that, from the perspectives of residents and professors, more than 90% of the professors always participate in the morning report, consistent with a study conducted in Kashan. Zamani and colleagues found that professors regularly attend morning report sessions in most cases (17). In contrast, the present study differs from the findings of Adibi and Daryazadeh, who reported that professors' attendance at morning report meetings is very irregular. This discrepancy could be due to the lack of a mandate requiring professors to participate in the meetings, which was not the case at the university where we conducted our study (18).

The results also showed that night clinical rounds are held 80% of the time in the surgical group and 55.6% in the internal medicine group, consistent with findings from a study conducted at Shahid Sadoughi University of Medical Sciences. That study indicated that clinical rounds, when conducted correctly, serve as a tool to improve medical education by enhancing students' attitudes and clinical skills (19). Furthermore, 80% of surgical residents stated that their group always holds mortality and morbidity meetings, which is not

**Table 3.** The Attitude of Professors and Residents Towards Some Items in the Internal Medicine and Surgery Group

| Professors/Residents | Internal Medicine | Surgery |
|---|---|---|
| **Always holding a morning report** | | |
| Professors | | |
| Abundance | 6 | 5 |
| Abundance percentage | 66.7 | 71.4 |
| Residents | | |
| Abundance | 17 | 9 |
| Abundance percentage | 94.4 | 60 |
| **Professors always participate in morning reports** | | |
| Professors | | |
| Abundance | 8 | 6 |
| Abundance percentage | 88.9 | 86.7 |
| Residents | | |
| Abundance | 18 | 14 |
| Abundance percentage | 100 | 93.3 |
| **Conducting regular night clinical rounds by chief resident** | | |
| Professors | | |
| Abundance | 4 | 4 |
| Abundance percentage | 44.4 | 57.1 |
| Residents | | |
| Abundance | 10 | 12 |
| Abundance percentage | 55.6 | 80 |
| **Attendance of morning clinical rounds by professors** | | |
| Professors | | |
| Abundance | 3 | 6 |
| Abundance percentage | 33.3 | 85.7 |
| Residents | | |
| Abundance | 7 | 2 |
| Abundance percentage | 38.9 | 13.3 |

consistent with the findings of Shoja et al., where only 20% of residents reported that these meetings are always held. The primary reason for this discrepancy could be differences in the educational structure of the two hospitals (16).

Additionally, 67% of the residents in the radiology department reported that the electronic logbook system has desirable features, which is consistent with another study showing that nursing students were satisfied with the electronic logbook system in some courses (20).

It appears that the different results of these studies may be influenced by the research environment, the educational structure of the institution, the level of student acceptance, and the motivation to participate in residency programs. More studies are recommended to further assess the status of clinical education.

### 5.1. Conclusions

The present findings suggest that the quality of education in internal medicine and surgical courses is considered optimal from the perspectives of both professors and students. Periodic studies regarding the sustainability and improvement of current educational conditions are recommended.

## Footnotes

**Authors' Contribution:** All authors participated in the conception and design, data analysis, interpretation, manuscript writing, and approval of the final version.

**Conflict of Interests Statement:** The authors declare that they have no conflict of interest.

**Data Availability:** Datasets presented in the study are available upon request from the corresponding author during submission or after publication. Due to some considerations, the data is not available to the public.

**Ethical Approval:** The study protocol was approved by the ethics committee of the Aja University of Medical Sciences (IR.AJAUMS.REC.1402.039 ), ensuring compliance with ethical guidelines.

**Funding/Support:** There was no funding for this study to be declared.

**Informed Consent:** Written informed consent was obtained from all study participants.

## References


1. Beigzadeh A, Yamani N, Bahaadinbeigy K, Adibi P. Challenges and Problems of Clinical Medical Education in Iran: A Systematic Review of the Literature. *Strides in Dev Med Educ*. 2020;**16**(1). https://doi.org/10.5812/sdme.89897.
2. Fazeli S, Esmaeili AA, Mohammadi Y, Raeisoon MR. [Investigating the Compliance of the Curriculum Content of the Psychiatric Department of Medicine (Externship and Internship) with the Future Job Needs from the Perspective of General Practitioners]. *Res Med Educ*. 2021;**13**(3):72-9. FA. https://doi.org/10.52547/rme.13.3.72.
3. Khazaei L, Ghavami H. [The Quality of Clinical Education in an Academic Teaching Hospital Based on General Medical Education Standards]. *Horizo Med Educ Dev*. 2022;**13**(4):48-0. FA. https://doi.org/10.22038/hmed.2021.59901.1171.
4. Lee J, Kwon HJ, Park SY, Jung JH. Importance of multimodal resident education curriculum for general surgeons: perspectives of trainers and trainees. *BMC Med Educ*. 2024;**24**(1):518. [PubMed ID: 38730375]. [PubMed Central ID: PMC11088119]. https://doi.org/10.1186/s12909-024-05515-x.
5. Nejatifar F, Gharib C, Monfared A, Shenavar I, Alavi SA, Hojati A, et al. [Internal evaluation of residency training course in internal medicine of Guilan University of Medical Sciences in 2022]. *Res Med Educ*. 2022;**14**(1):79-88. FA. https://doi.org/10.52547/rme.14.1.79.
6. Dastjerdi R, Mozaffari S, Moodi Ghalibaf A, Mohammadi Y. Quality of Clinical Education as a Propulsive Engine for Academic Satisfaction: A Cross-Sectional Study at Birjand University of Medical Sciences, Birjand, Iran. *Jundishapur J Health Sci*. 2023;**15**(2). e136607. https://doi.org/10.5812/jjhs-136607.
7. Gandomkar R. [A Critique on Increasing the Numbers of Medical Sciences Trainees]. *Iran J Med Ethics History Med*. 2022;**15**(1):322-33. FA. https://doi.org/10.18502/ijme.v15i23.12653.
8. Hakim A. Investigating the challenges of clinical education from the viewpoint of nursing educators and students: A cross-sectional study. *SAGE Open Med*. 2023;**11**:20503121221143600. [PubMed ID: 36760513]. [PubMed Central ID: PMC9905028]. https://doi.org/10.1177/20503121221143578.
9. Goli-Roshan S, Aziznejad-Roshan P, Khafri S, Gholizadah-Gardrodbary M. [The Effect of Training Based on Educational Needs on Clinical Learning of Undergraduate Nursing Students]. *Res Med Educ*. 2017;**9**(2):12-3. FA. https://doi.org/10.29252/rme.9.2.12.
10. Rayatdoost E, Jahromi RR, Ayalbar A, Kalani N. Factors Affecting The Quality Of Clinical Education From The Perspective Of Medical Students. *Int J Med Investig*. 2022;**11**(1):142-53. FA.
11. Khanpoor H, Amerzadeh M, Alizadeh A, Khosravizadeh O, Rafiei S. Developing a responsive model to societal needs in medical education. *BMC Med Educ*. 2024;**24**(1):370. [PubMed ID: 38575947]. [PubMed Central ID: PMC10996077]. https://doi.org/10.1186/s12909-024-05355-9.
12. Salmani F, Eghbali B, Ganjifard M, Mohammadi Y, Kafian Atary S, Tavakoli T. Barriers to quality of clinical education from the viewpoints of medical students of Birjand University of Medical Sciences in the academic year 2018-2019. *J Birjand Univ Med Sci*. 2020;**27**(1). https://doi.org/10.32592/JBirjandUnivMedSci.2020.27.1.108.
13. Keshmiri F, Nasiriani K. The components of student's professional responsibilities in the process of clinical education: A scoping review. *J Med Educ Dev*. 2023;**16**(50):60-70. FA. https://doi.org/10.32592/jmed.2023.16.50.60.
14. Sharifi B, Ghafarian Shirazi H, 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 students. *Pars Jahrom Univ Med Sci*. 2012;**10**(2):57-64. https://doi.org/10.29252/jmj.10.2.57.
15. Ghahrani N, Siamian H, Balaghafari A, Aligolbandi K, Vahedi M. The Opinion of Students and Faculty Members about the Effect of the Faculty Performance Evaluation. *Mater Sociomed*. 2015;**27**(4):267-71. [PubMed ID: 26543421]. [PubMed Central ID: PMC4610664]. https://doi.org/10.5455/msm.2015.27.267-271.
16. Shoja A, Sadeghimahalli F, Akhlaghi A, Moradi S. Quality of Different Residency Programs in Mazandaran University of Medical Sciences, 2019: A Mixed Method Study. *J Mazandaran Univ Med Sci*. 2021;**31**(198):159-68. FA.
17. Zamani B, Momen-Heravi M, Vakili Z. Standardization of Morning Reports in Internal Medicine Department at Kashan University of Medical Sciences. *Iran J Med Educ*. 2019;**19**(0):90-100. FA.
18. Adibi P, Daryazadeh S. Status of holding morning report sessions from participants' viewpoint: A qualitative study. *Dev Strategies Med Educ*. 2020;**7**(2):61-70. FA. https://doi.org/10.29252/dsme.7.2.61.
19. Ghalmani SY, Souleymani MH, mirbagheri EA, barghoun F, keshmiri F. [Night time educational round: A tool for developing clinical education]. *J Med Educ Dev*. 2018;**13**(3):209-16. FA. https://doi.org/10.18502/jmed.v13i3.336.
20. Fazljo E, Nasiriani K, Tavangar H, Dehghani N. Survey of Nursing Students and Educators' Satisfaction with the Logbook of Adult-Elderly Nursing Courses. *Med Educ*. 2022;**10**(1):19-30. FA. https://doi.org/10.22088/mededj.10.1.19.