

Outstanding clinical professors, the learner's perspective

Nasrin Moazzen¹, Amir Amirabadi², Rasam Mashoufi³, Hamidreza Kianifar⁴,*

1. Innovative Medical Research Center. Department of Internal Medicine, Faculty of Medicine, Mashhad medical science. Islamic Azad University, Mashhad, Iran.
2. Innovative Medical Research Center. Department of Internal Medicine, Faculty of Medicine, Mashhad medical science. Islamic Azad University, Mashhad, Iran.
3. Innovative Medical Research Center. Faculty of Medicine, Mashhad medical science. Islamic Azad University, Mashhad, Iran.
4. Clinical Research Development Unit of Akbar Hospital, Mashhad University of Medical Sciences, Mashhad, Iran.



ABSTRACT

Background: Role of clinical teachers in education of clinical skills and appropriate performance of medical students is important. Multiple studies were done to date. The aim of this study was clarifying the characteristic of an effective professor in clinical education. **Patients and methods:** In pediatric department of Mashhad University of Medical Sciences, Mashhad, Iran, we asked pediatric residents about effective professor. Our tools were a checklist according to Kano model. Our questions were in three categories; human characteristics, teacher, and physician. Quality of each item clarify as: basic, expected and or attractive qualities. Participants could mention any item as questionable, indifferent or reverse. **Results:** Thirty pediatric resident participate in our study. Among human characteristics, having sense of responsibility (86%) and good communication skills (77%) were two of most expected qualities. Logical thinking ability (68%) and problem solving skills (68%) were mentioned as expected qualities as physicians. Accessibility (68%) and encourages of trainees to be independent (63%) were two of most teacher attributes expected by pediatric residents. Ten percent of participants don't like criticize of trainees while 65% were indifferent about this item. **Conclusion:** Clarifying attribute of clinical professors have high importance in clinical education. Among all items, sense of responsibility, good communication skills and broad prospective were most expected based on students' point of view. Determining important qualities for teaching staffs would help professors to improve their selves.

Keywords: Clinical Education, Medical Education, Attitude

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*Correspondence to: Hamidreza Kianifar, MD. Clinical Research Development Unit of Akbar Hospital, Mashhad University of Medical Sciences, Mashhad, Iran.
 Email: KianifarHR@mums.ac.ir



INTRODUCTION

Clinical education plays a pivotal role in training healthcare professionals, making it a crucial issue to address. The primary objective of clinical education is to equip individuals with the necessary skills and knowledge to provide optimal patient care, prioritizing their well-being over personal preferences and benefits. To achieve this, aspiring healthcare providers must be trained as competent, up-to-date, and knowledgeable practitioners (1-3).

One effective method of imparting these qualities is through role modeling. This teaching approach allows students to observe their professors and learn from their practical expertise and communication skills. Through role modeling, learners not only acquire positive behaviors but also gain insights from observing negative aspects of their teachers' practices. Although role modeling can occur without the professor's conscious awareness, it is vital to select medical teachers who possess competence in medical skills, teaching quality, and personal characteristics (2, 4-7).

To identify the characteristics of an effective professor in clinical

education, several studies have been conducted using Kano model questionnaires. These questionnaires assess multiple aspects of an exceptional teacher in a medical academic setting. Participants are asked to provide feedback on each question, indicating positive and negative aspects. The Kano model questionnaire serves as a valuable tool for evaluating qualitative characteristics related to educational matters(8).

In this research, our aim is to highlight the desirable characteristics of professors in medical academic hospitals from the perspective of pediatric residents. Similarly, we seek to identify the factors that lead to resident dissatisfaction, subsequently hampering the development of proper and effective relationships between learners and professors. By understanding these factors, we can strive to enhance clinical education by fostering an environment that promotes positive mentorship and effective teaching methodologies.

PATIENTS AND METHODS

In a cross-sectional study conducted in the pediatric department

of Mashhad University of Medical Sciences, we aimed to gather feedback from pediatric residents regarding effective professors. The survey was carried out between June 2023 and July 2023. To collect data, we utilized a checklist based on the Kano model, which consisted of questions categorized into three groups: human characteristics, teaching abilities, and medical expertise.

The questionnaire was divided into two parts, each containing 30 items. Participants were asked to rate each item on a 5-point Likert scale, considering both positive and negative dimensions. For instance, one of the questions asked, “What is your opinion on the importance of good communication skills in your professor?” Similarly, we inquired about their perception when their professor lacked good communication skills. The quality of each item was classified as basic (M), expected (O), or attractive (A) qualities. Additionally, participants had the option to mark an item as questionable (Q), indifferent (I), or reverse (R).

Prior to their participation, all pediatric residents provided informed consent, and the study adhered to the ethical principles outlined in the Declaration of Helsinki’s Guideline on Good Clinical Practice (Code: IR.MUMS.REC.1402.082). Detailed copies of the questionnaires can be found in Appendix 1 and Appendix 2.

Statistical analysis was conducted using SPSS software version

16 (SPSS Inc., Chicago, USA –version 16). Descriptive statistics were presented by frequency (percentage) for qualitative variables.

RESULTS

Twenty-five pediatric residents, with a mean age of 30.7 years (ranging from 25 to 50 years), participated in our study. When examining personal characteristics, the learners’ viewpoint revealed that a sense of responsibility (86%), good communication skills (77%), and broad prospective (77%) were considered the most important attributes.

Regarding pediatrician attributes, problem-solving skills (68%) and logical thinking (68%), along with procedural skills (63%) and awareness of their limitations (63%), were among the most highly expected characteristics.

In terms of teacher attributes, the participants expressed that accessibility (68%), supporting trainees to be independent (63%), and providing appropriate feedback to trainees (54%) were the most desired qualities.

Ten percent of the participants strongly opposed criticizing trainees by the professor, while 65% remained indifferent towards this attribute. Furthermore, more than half of the participants believed

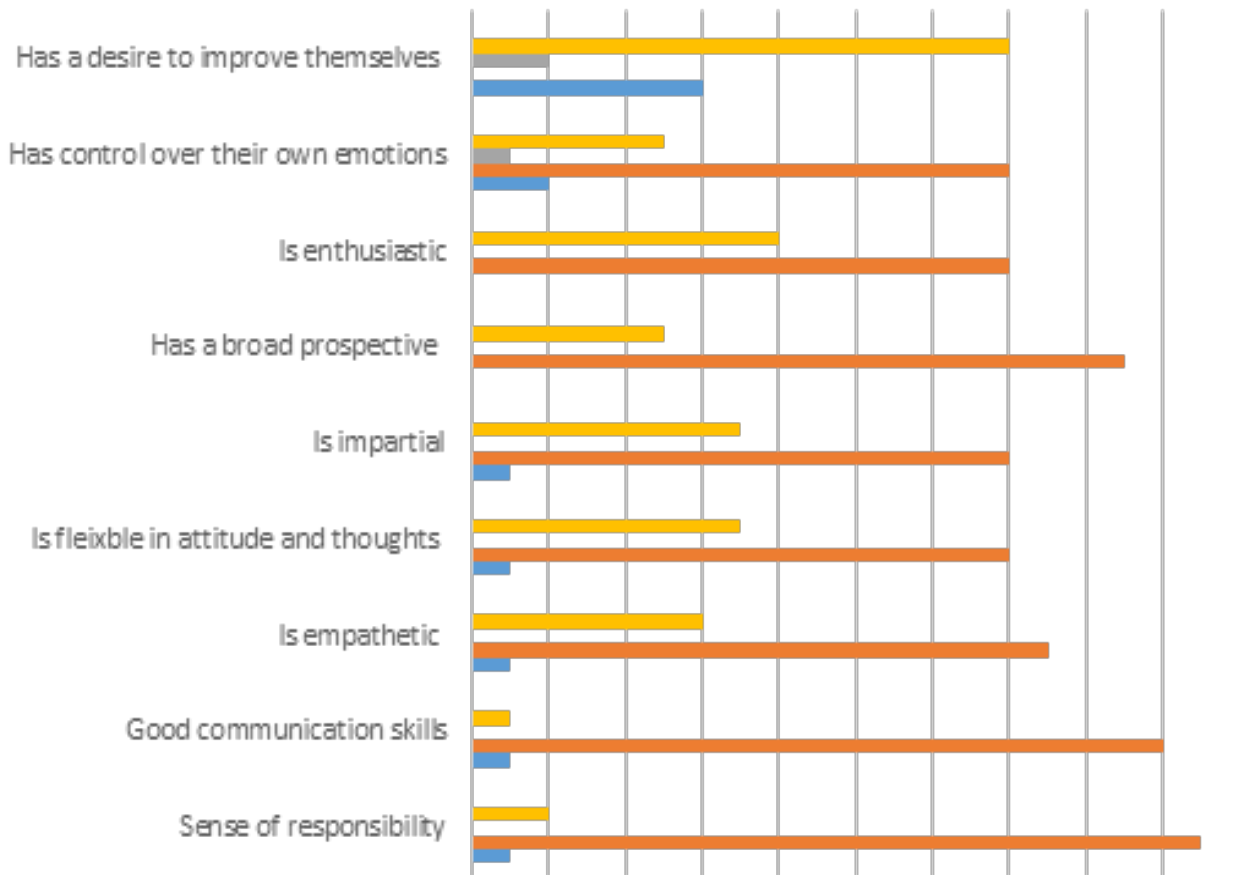


Figure 1. Personal characteristics of the outstanding professors in academic hospitals in viewpoint of pediatric residents



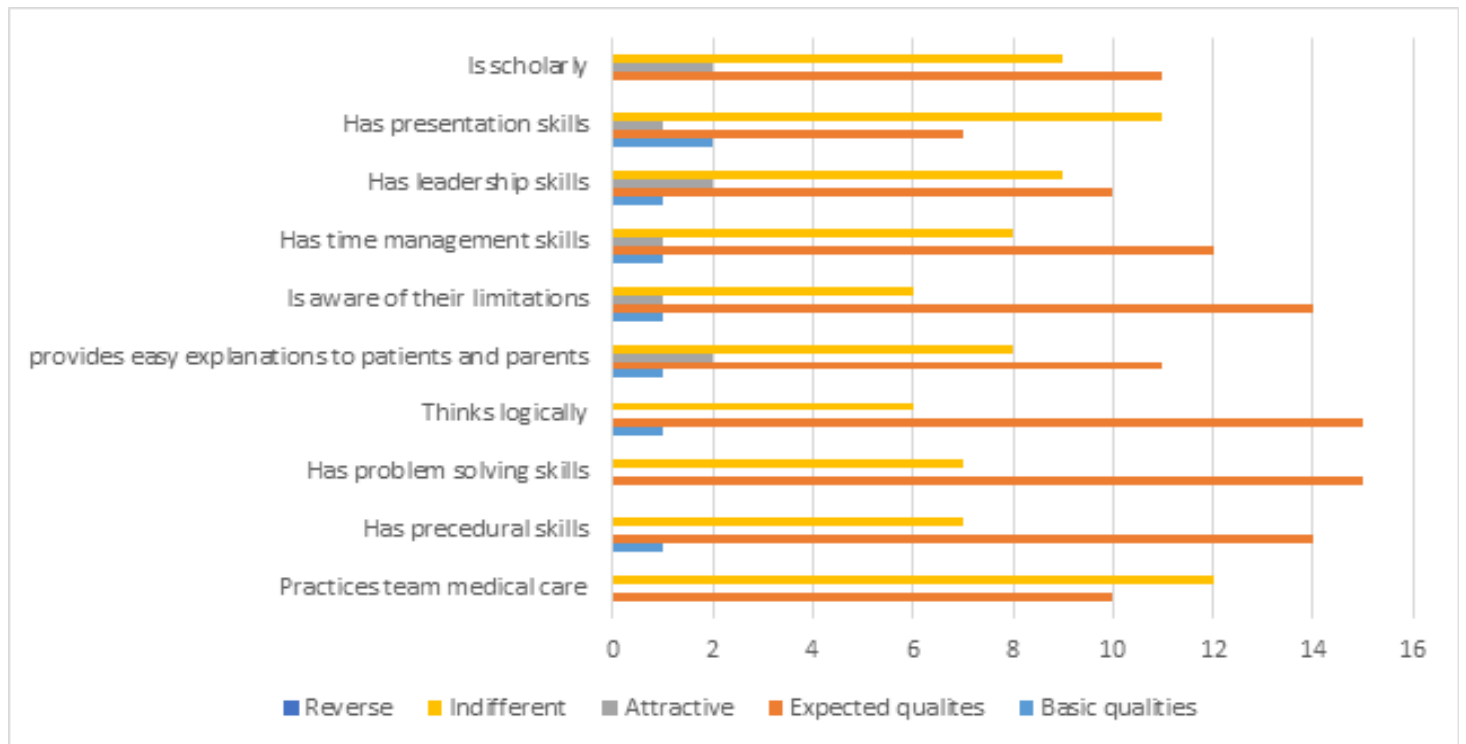


Figure 2. Practical characteristics of the outstanding professors in academic hospitals in viewpoint of pediatric residents

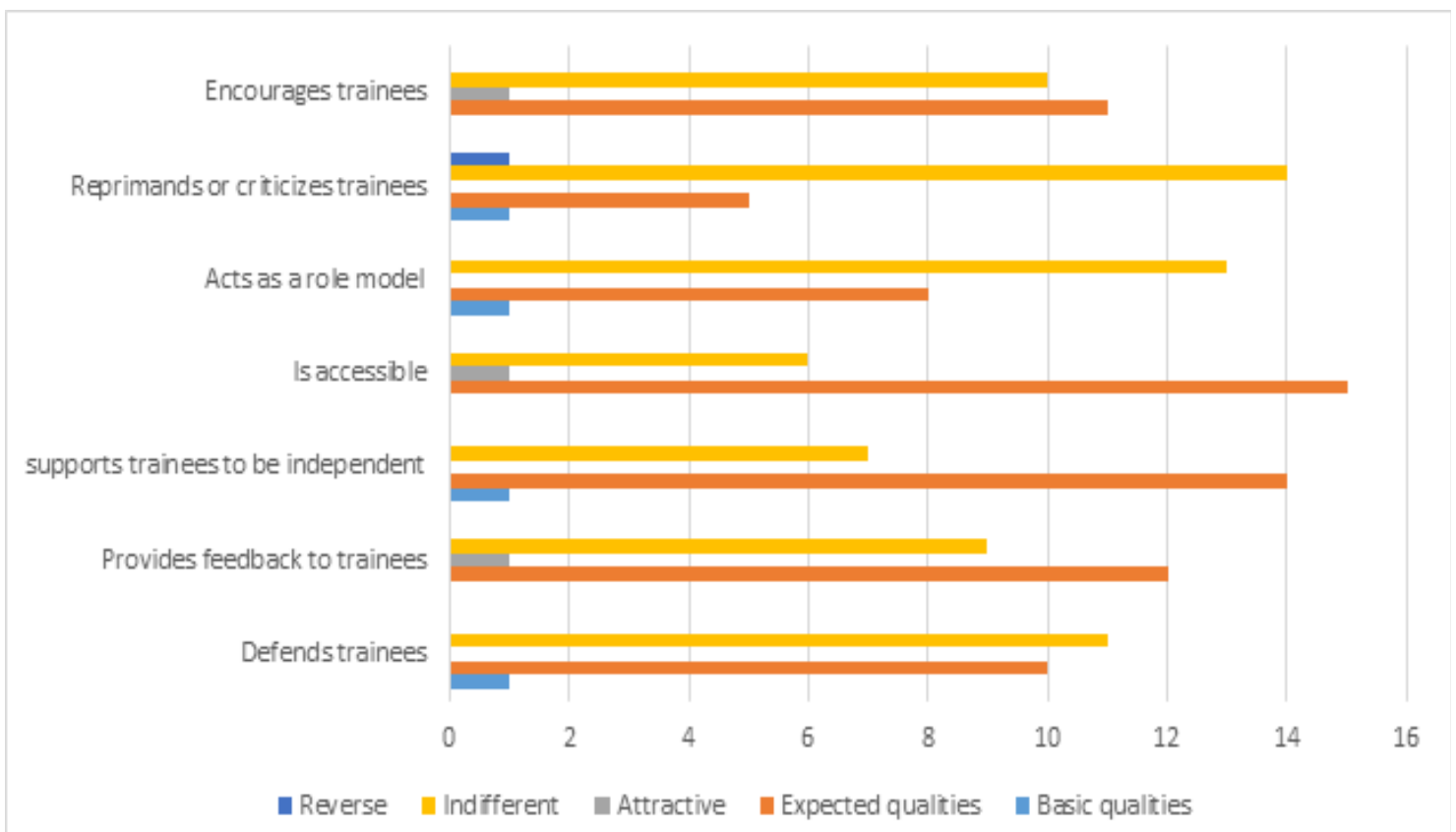


Figure 3. Teacher attribute in academic hospitals according the viewpoint of pediatric residents

that having a desire to improve themselves, acting as a role model, and conducting assessments of trainees did not significantly impact the quality of the clinical instructor.

Additionally, 10% of the participants found leadership skills, research abilities, and the ability to explain diseases to parents and patients as attractive features in clinical professors. Detailed assessments of these items can be found in Figures 1-3.

DISCUSSION

There have been numerous studies aimed at improving the training of medical students, but less attention has been given to enhancing the professionalism of residents and faculty members (9). Residents, who are doctors that have graduated from medical schools, often have limited experience in their specialty field. It is crucial to adequately prepare them over the course of a few years to practice independently (10, 11). One of the most effective methods for professional development is role modeling (12), wherein learners can observe the attitudes and behaviors of their educators (2). Therefore, it is essential to identify the characteristics of an effective clinical professor in clinical education. In this study, we conducted research to provide guidance on becoming an effective professor from the perspective of residents. We evaluated their characteristics in three categories: personal characteristics, physician attributes, and teacher attributes. Understanding these characteristics can help enhance the quality of clinical professors.

According to our findings in two academic children's hospitals, the most commonly expected characteristics of a distinguished professor, as perceived by pediatric residents, fell within each category. These characteristics were a sense of responsibility, logical thinking, and accessibility. However, when considering all the items collectively, the top three attributes were related to personal characteristics: sense of responsibility, good communication skills, and broad perspective. This aligns with the study conducted by Elzubeir in 2001, which evaluated the characteristics of a role model from the perspective of interns and residents. The study found that positive and respectful attitudes towards patients and colleagues, honesty, and knowledge were the most significant factors in being a role model, while research skills held less importance (13). In another study in 2022, Ahmady et al. assessed the qualities of a successful role model in clinical education. They discovered that being patient and caring, serving as a perfect nurturer and facilitator, and possessing professional knowledge were among the key characteristics of an inspiring medical teacher. Additionally, these teachers should be capable of effectively teaching learners while providing patient care (2). Our study also identified these qualities as important characteristics of clinical professors.

LIMITATIONS

During our study, one limitation was the focus on pediatric residents. Future research should include residents from various specialties to compare the essential qualities of outstanding professors in different fields. Furthermore, developing quantitative measures for assessing these characteristics will enhance our understanding of effective medical teachers.

CONCLUSION

In conclusion, clarifying attribute of clinical professors have high importance in clinical education. Among all items, sense of responsibility, good communication skills and broad perspective were most expected based on students' point of view. Determining important qualities for teaching staffs would help professors to improve their selves.

CONFLICT OF INTERESTS

The authors declare there is no conflict of interests.

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