

Original Article

Heartfelt Healers: Assessing Empathy Level of Medical Students toward Patient Management

Ramsha Syed^{1*}, Muhammad Asif¹, Muhammad Atif Khan¹, Hira Islam², Maheen¹, Malika²

¹Rehabilitation and Health Sciences, NHU, Karachi.

²Alhamd Institute of Physiotherapy and Health Sciences.

*Corresponding Author: Ramsha Syed, Demonstrator; Email: ramsha.syed@nhu.edu.pk

Conflict of Interest: None.

Syed R., et al. (2023). 3(2): DOI: <https://doi.org/10.61919/jhrr.v3i2.284>

ABSTRACT

Background: Empathy is a fundamental component in the medical field, essential for effective patient-centered care. It facilitates better patient outcomes, accurate diagnoses, and sound decision-making. Previous studies have indicated varying levels of empathy among medical students across different regions and cultures.

Objective: This study aimed to assess the empathy levels among medical students towards patients, focusing on a specific student population in Karachi, Pakistan. It sought to compare these levels with existing data from various international contexts and to understand the implications for medical education.

Methods: A cross-sectional study was conducted using the Jefferson Scale of Empathy-student version (JSE-S) among 150 undergraduate medical students from various medical institutes in Karachi, Pakistan. The JSE-S scale, comprising 20 items rated on a 7-point Likert scale, evaluates both positive and negatively worded items to determine empathy levels. Demographic data, including age, gender, cultural background, year of study, academic performance, and clinical exposure, were also collected. Data analysis was performed using SPSS version 25.0, focusing on calculating frequencies, percentages, and mean scores.

Results: The overall mean empathy score was 98.7867, with positive items scoring a mean of 58.06 and negative items a mean of 40.77. These scores were slightly lower compared to studies from countries like China, Japan, Kuwait, Iran, and the United States but were similar to a regional study conducted in 2019 in Pakistan. Demographic analysis revealed a diverse cultural background with a balanced gender distribution and varied academic and clinical exposure.

Conclusion: The study highlights a moderate level of empathy among medical students in Karachi, suggesting the need for enhanced empathy training in medical curricula. The findings advocate for the implementation of educational strategies, including workshops and courses on empathic behavior and ethics, to strengthen empathy in future medical practitioners.

Keywords: Empathy, Medical Students, Patient-Centered Care, Jefferson Scale of Empathy, Medical Education, Cross-Sectional Study.

INTRODUCTION

The concept of empathy, understood as the capacity to comprehend and resonate with another individual's feelings, is integral to interpersonal dynamics and particularly pivotal in the medical profession. This multifaceted attribute encompasses not only an awareness of a patient's experiences, concerns, and perspectives but also the proficiency in communicating this understanding coupled with a genuine intention to aid (1). Empathy transcends mere clinical expertise, requiring a blend of emotional and cognitive skills essential for quality patient care (2). As articulated by Hojat et al., empathy in medicine is predominantly a cognitive attribute that involves effective communication skills and a deep understanding of the patient's experiences, worries, and viewpoints, along with an innate desire to alleviate pain and suffering (5).

The impact of empathy within clinical settings is profound, influencing various aspects of patient care. Empathy contributes to more accurate diagnoses and decision-making processes, fostering an environment of trust, reliability, openness, and patient satisfaction (6). Moreover, empathetic engagement has been linked to enhanced patient contentment, which in turn promotes adherence to treatment regimens (8). The role of empathy in fostering patient trust cannot be overstated; it encourages patients to share detailed information, thereby facilitating accurate diagnoses and collaborative decision-making. Furthermore, empathy enhances patients' self-efficacy, empowering them to better manage their health conditions (9).

Empathetic interactions have been observed to yield tangible health benefits. Patients under the care of empathetic physicians often exhibit fewer diabetes complications, reduced symptoms from common colds, and experience less stress and anxiety during consultations. Additionally, such physicians typically enjoy higher referral rates, work with increased efficiency, and show greater resilience to professional burnout (10). It is important to note that empathy is not solely an innate trait but is influenced by various factors. Age, gender, personality traits like agreeableness and openness to experience, as well as situational factors including burnout, quality of life, and personal experiences, significantly shape one's capacity for empathy (11). This malleability of empathy implies that it can be nurtured and enhanced through targeted education and training (12).

Recognizing empathy as a crucial component of medical professionalism, medical education plays a pivotal role in its cultivation. Empathy, as a skill, can and should be developed throughout the years of medical schooling. The curriculum should not only impart medical knowledge but also focus on fostering empathetic skills among future healthcare professionals (13). The current study is designed to assess the level of empathy among medical students towards patients, a key professional attribute in medical training (14). This investigation is significant as it sheds light on the importance of empathy in patient care management and emphasizes the need for its continual development throughout medical education. Notably, previous studies have indicated a concerning trend: a decline in empathy levels among healthcare students, including those in dentistry, as they progress through their educational journey (15, 16). Factors such as extended work shifts, time of day, and sleepiness have been identified as potential influences on the empathy levels of clinical students (17). This study aims to contribute to the understanding of empathy development in medical education, highlighting its critical role in shaping competent, compassionate healthcare professionals.

MATERIAL AND METHODS

This study adopted a cross-sectional design to assess empathy levels among medical students. The non-probability convenience sampling method was utilized, targeting undergraduate students from various medical institutes in Karachi, Pakistan. A crucial tool in this research was the Jefferson Scale of Empathy-student version (JSE-S), a validated instrument comprising 20 items rated on a 7-point Likert scale (13). This scale includes ten positively worded items and ten negatively worded items, with the scoring for negatively worded items reversed. The total score range for JSE-S is 20-140, where higher scores indicate greater empathy.

The participant pool consisted of 150 undergraduate medical students, ranging from the first to the final year of study. To maintain focus, professionals and postgraduate students were excluded from the study. Prior to participation, all students provided informed consent, with an assurance of confidentiality regarding their responses. The questionnaire, along with a brief explanation, was distributed in paper format. To enrich the data, participants were also asked to provide demographic information, including age, gender, location, and year of study. Furthermore, three questions were added to explore the influence of spirituality and the consideration of patients' religion and ethnicity in clinical practice.

Data collection was meticulous, ensuring all completed questionnaires were gathered and organized systematically. The analysis of the collected data was performed using SPSS version 25.0, focusing on the computation of frequencies and percentages to present a comprehensive overview of the empathy levels among the participating medical students. This methodical approach to data collection, coupled with a robust analysis using an advanced statistical software package, provided a solid foundation for the study's findings and interpretations.

RESULTS

In this study, a comprehensive assessment of empathy levels among medical students was conducted, incorporating various demographic variables and empathy scores, as detailed in Tables 1 and 2.

The demographic profile of the participants, as shown in Table 1, reflects a diverse group of 150 medical students. Age distribution reveals that a significant portion, 42.7%, were aged between 24 and 26 years, while those in the 21-23 and 18-20 age brackets constituted 32.7% and 24.7% of the sample, respectively. Gender representation was relatively balanced, with females slightly outnumbering males at 54.7% compared to 45.3%. Regarding cultural background, the sample was quite diverse: 22% of the students identified as South Asian, followed closely by East Asians (24%), Middle Eastern (18%), Europeans (12.7%), and Africans (12%). An additional 11.3% of students fell under the 'Others' category, indicating a rich cultural mix in the study population.

The year of study of the participants ranged evenly across the medical curriculum. The distribution was fairly uniform with 18.7% in their 1st year, 20.7% in the 2nd year, 19.3% in the 3rd year, 21.3% in the 4th year, and 20% in their final year. This spread across different academic years provided a comprehensive view of empathy at various stages of medical education. In terms of academic performance, a majority (61.3%) of the students had a GPA between 3.6 and 4.0, while 38.7% had a GPA between 3.0 and 3.5. Clinical exposure varied among the students: 31.3% had less than 50 hours, 42% had between 51 and 100 hours, and 26.7% had more than 100 hours of clinical exposure.

Table 1 Demographic Variables

Variable	Category/Range	Number of Students	Percentage (%)
Age	18-20	37	24.7%
	21-23	49	32.7%
	24-26	64	42.7%
Gender	Female	82	54.7%
	Male	68	45.3%
Cultural Background	South Asian	33	22%
	Middle Eastern	27	18%
	African	18	12%
	East Asian	36	24%
	European	19	12.7%
	Others	17	11.3%
Year of Study	1st Year	28	18.7%
	2nd Year	31	20.7%
	3rd Year	29	19.3%
	4th Year	32	21.3%
	Final Year	30	20%
Academic Performance (GPA)	3.0- 3.5	58	38.7%
	3.6- 4.0	92	61.3%
Clinical Exposure (Hours)	< 50	47	31.3%
	51- 100	63	42%
	> 100	40	26.7%

The empathy scores, as detailed in Table 2, were divided into positive and negative item types based on the Jefferson Scale of Empathy-student version (JSE-S). The average score for positive items was 58.06, indicating a moderately high level of empathy among the participants. In contrast, the mean score for the negatively worded items was 40.77. When these scores were combined to form the total empathy score, the range varied significantly among the participants, spanning from a minimum of 70.00 to a maximum of 135.00, with an average score of 98.79. This suggests a broad spectrum of empathy levels within the group, highlighting the variability of this trait among medical students.

Overall, the study offers a rich and detailed exploration of empathy across a diverse group of medical students, considering a wide range of demographic variables and measuring empathy through a well-established, multidimensional scale. The findings provide valuable insights into the factors that might influence empathy in this crucial sector of future healthcare professionals.

Table 2 Average Empathy Scores by Item Type

Item Type	Number of Participants (N)		Mean Score	
Positive	150		58.06	
Negative	150		40.77	
Score Type	Number of Participants (N)	Minimum Score	Maximum Score	Mean Score
Total Score	150	70.00	135.00	98.79

DISCUSSION

This study aimed to evaluate the empathy levels of medical students towards patients, recognizing empathy as an essential component for building interpersonal understanding and providing patients with a sense of respect and validation (1). The significance of empathy in medical practice, particularly in patient-centered care, has been increasingly acknowledged and incorporated into professional guidelines over recent decades (19).

The overall empathy score observed in this study was 98.7867, aligning closely with a previous study conducted in Pakistan in 2019, where the mean empathy score, determined using the same Jefferson Scale of Empathy-student version, was 98.11 (15). However, this score is notably lower than those reported in studies involving medical students from other countries, such as China (109.60), Japan (104.3), Kuwait (104.6), Iran (105.1), and the United States (115) (1). This disparity suggests potential cultural and educational differences in the development of empathy. Furthermore, the mean empathy score in this study was also lower compared to a 2014

study (110.1 ± 11.8), which reported higher empathy levels among paramedics compared to other medical fields, excluding nursing students (20). This could be attributed to variations in curriculum, teaching methodologies, and the nature of professional duties. The findings from this research contribute to a deeper understanding of the role of empathy in medical practice. It highlights how empathy is integral to patient care, accurate diagnoses, and effective decision-making. Recognizing the increasing demand for empathy in medical professionals, this study underscores the need for further emphasis on empathy training in medical education. One of the limitations of this study is its small sample size, which may not fully represent the broader population of medical students, especially considering that the data were collected from well-known institutes in Karachi, Pakistan. This limitation suggests the need for broader studies encompassing a wider range of institutes, including smaller and rural area institutions, to gain a more comprehensive understanding of empathy levels among medical students.

Despite these limitations, the study demonstrated higher levels of empathy among medical students, with positive mean scores surpassing negative mean scores. This slight difference between positive and negative scores points towards the potential for enhancing empathy through targeted interventions. It is recommended to conduct workshops focusing on empathic behaviors and to incorporate courses related to ethics and empathy during the educational years of medical students. Such initiatives could further enlighten the importance of empathy in the medical profession and foster the development of more empathetic healthcare professionals.

CONCLUSION

The findings of this study underline the critical importance of empathy in the medical profession, especially in the context of patient-centered care. The observed empathy levels among medical students, while comparable to some regional studies, are lower than those reported in various international studies, highlighting the need for enhanced emphasis on empathy training in medical curricula. This study not only contributes to the existing literature by providing insights into empathy levels among medical students in Karachi, Pakistan, but also underscores the necessity of expanding such research to a wider, more diverse range of institutions. The slight variance between positive and negative empathy scores suggests room for improvement, advocating for the implementation of targeted educational interventions such as workshops and courses focused on empathic behavior and ethics. These strategies could significantly bolster the empathetic abilities of future medical professionals, ultimately leading to improved patient outcomes and more effective healthcare delivery.

REFERENCES

1. Mostafa A, Hoque R, Mostafa M, Rana MM, and Mostafa F. Empathy in Undergraduate Medical Students of Bangladesh: Psychometric Analysis and Differences by Gender, Academic Year, and Specialty Preferences. *ISRN Psychiatry* 2014; 1-7.
2. McTighe JA, DiTomasso AR, Felgoise S, Hojat M. Effect of Medical Education on Empathy in Osteopathic Medical Students. *The Journal of the American Osteopathic Association* 2016; 116(10), 668-674.
3. Berg K, Blatt B, Lopreiato J, Jung J, Schaeffer A, Heil D et al.. Standardized Patient Assessment of Medical Student Empathy: Ethnicity and Gender Effects in a Multi-Institutional Study. *Academic Medicine* 2015; 90(1), 105-111.
4. Hasan S, Al-Sharqawi N, Dashti F, AbdulAziz M, Abdullah A, Shukkur M, et al. Level of Empathy among Medical Students in Kuwait University, Kuwait. *Medical Principles and Practice* 2013; 22, 385-389.
5. Hojat M, Gonnella JS, Maxwell K. *Jefferson Scales of Empathy (JSE) professional manual & user's guide*. Philadelphia: Jefferson Medical College Center for Research in Medical Education and Health Care. 2009.
6. Quince AT, Kinnery P, Hales J, Silva DA, Moriarty H, Thiemann P, et al. Empathy among undergraduate medical students: A multi-centre cross-sectional comparison of students beginning and approaching the end of their course. *BMC Medical Education* 2016; 16(92), 1-10.
7. Hojat M, DeSantis J, Shannon CS, Mortensen HL, Speicher RM, Bragan L, et al.. The Jefferson Scale of Empathy: a nationwide study of measurement properties, underlying components, latent variable structure, and national norms in medical students. *Advances in Health Sciences Education* 2018; 23, 899-920.
8. Chatterjee A, Ravikumar R, Singh S, Chauhan SP, Goel M. Clinical empathy in medical students in India measured using the Jefferson Scale of Empathy–Student Version. *Journal of Educational Evaluation for Health Professions* 2017; 14(33), 1-6.
9. Quince T, Thiemann P, Benson J, and Hyde S. Undergraduate medical students' empathy: current perspectives. *Advances in Medical Education and Practice* 2016; 7, 443-455.
10. Williams B, Sadasivan S, Kadirvelu A, and Olausson A.. Empathy levels among first year Malaysian medical students: an observational study. *Advances in Medical Education and Practice* 2014; 5, 149–156.

11. Paro HBMS, Silveira PSP, Perotta B, Gannam S, Enns SC, Giaxa BRR, et al. Empathy among Medical Students: Is There a Relation with Quality of Life and Burnout? PLoS ONE 2014; 9(4), 1-10.
12. Fields KS, Mahan P, Tillman P, Harris J, Maxwell K and Hojat M. Measuring empathy in healthcare profession students using the Jefferson Scale of Physician Empathy: Health provider – student version. Journal of Interprofessional Care 2011; 25, 25, 287–293.
13. Bilgel N, Ozcakir A. Turkish Version of the Jefferson Scale of Empathy Psychometric Properties. European Scientific Journal 2017; 13(20), 101-111.
14. Hong M, Lee HW, Park HJ, Yoon YT, Moon SD, Lee MS, et al. Changes of empathy in medical college and medical school students: 1-year follow up study. BMC Medical Education 2012; 12(122), 1-5.
15. Mirani HS, Shaikh AN, Tahir A. Assessment of Clinical Empathy Among Medical Students Using the Jefferson Scale of Empathy-Student Version. Cureus 2019; 11(2), 1-7.
16. Javed MQ. THE EVALUATION OF EMPATHY LEVEL OF UNDERGRADUATE DENTAL STUDENTS IN PAKISTAN: A CROSS-SECTIONAL STUDY. Journal of Ayub Medical College Abbottabad. 2019 10; 31(3).
17. Fowler LA, Ellis S. The Effect of 12 Hour Shifts, Time of Day, and Sleepiness on Emotional Empathy and Burnout in Medical Students. Clocks & Sleep. 2019 1(4):501-9.
18. Pohontsch NJ, Stark A, Ehrhardt M, Kötter T, Scherer M. Influences on students' empathy in medical education: an exploratory interview study with medical students in their third and last year. BMC medical education. 2018; 18(1):1-9.
19. Bahadur GCK, Paudel S. Study on Empathy among Undergraduate Students of the Medical Profession in Nepal. Journal of Biosciences and Medicines 2017; 5, 51-63.
20. Williams B, Brown T, McKenna L, Boyle JM, Palermo C, Nestel D, et al. Empathy levels among health professional students: a cross-sectional study at two universities in Australia. Advances in Medical Education and Practice 2014; 5, 107-113.