Vol. 2 No. 3 (2025)

ONLINE ISSN :3007-309X
PRINT ISSN :3007-3081

Journal of Medical & Health Sciences Review

EMPATHY IN HEALTHCARE: A COMPARATIVE STUDY OF CONSULTANT DOCTORS' PRACTICES IN PRIVATE AND PUBLIC MEDICAL SECTORS.

Wasif Ullah Khan[1], Muhammad Shoaib Khan[1], Saman Fazil[1], Aleena Khan[1], Kashmala Fazil[2], Numan Khan[1], Suhaib Mesbah[1], Muhammad Rehan Ahmed[1], Mehr Un Nisa[3], Fahad Khan[1]

[1]Northwest School of Medicine, Peshawar, Email: drwasifkhan0@gmail.com , shoaibkhanmarwat31@gmail.com , samanfazil1249@gmail.com , phenomenal.love08@gmail.com , nomiwazird@gmail.com , sdawar125@gmail.com , officemail70061@gmail.com , khanfahad1480@gmail.com

[2] Khyber Medical College, Peshawar , Email: kashmalafazilkk@gmail.com

[3] Khyber Girls Medical College, Peshawar, Email: mehernisa3322@gmail.com

ARTICLE INFO:

Keywords:
Consultants, Empathy, Jefferson Scale of Empathy, Physicians, Physician-Patient Relations, Private Sector, Public Sector

Corresponding Author:
Wasif Ullah Khan,
Northwest School of Medicine, Peshawar,
Email: drwasifkhan0@gmail.com

Article History:
Published on 22 September 2025

ABSTRACT

Background: Empathy is a critical component of effective patient care, influencing clinical outcomes, patient satisfaction, and treatment adherence. Variations in empathy among physicians across healthcare sectors and specialties may impact the quality of care.

Objectives:. To assess and compare empathy levels among consultant doctors working in public and private tertiary care hospitals in Peshawar, Pakistan, and to examine associations with demographic and professional characteristics

Methodology: A cross-sectional study conducted from May-August 2024 in public and private hospitals. Total of 115 consultants participated. Empathy was measured using the Jefferson Scale of Empathy (JSE). Demographic and professional data, including age, sex, specialty, and sector of practice, were collected via a structured questionnaire. Data were analyzed using IBM SPSS Statistics version 27. Independent-samples t-tests and one-way ANOVA were used, with statistical significance set at $p<0.05$.

Results: Private sector consultants reported significantly higher empathy scores (M 91.73, SD = 11.07) compared with public sector consultants (M = 85.78, SD = 13.52; p = 0.013). Age was significantly associated with empathy (p= 0.006), with the highest scores in the 35-45 years group. No significant differences were found between males and females (p = 0.572). Empathy varied by specialty (p = 0.047), with dermatology scoring highest.

INTRODUCTION:

Empathy is a unique characteristic of human being due to which he would be able to feel and understand feeling of other humans.[1] Emotion and Empathy are two complex frameworks however their components are not well characterized.[2] Talkative patient will be very challenging for consultants to know its cause of illness within allotted time so doctor have to care about both about making effective diagnosis and also about care about the good behavior of consultant to patient.[3]

A systemic review from Oxford university conclude that female consultants are more empathic to patients than males.[4] A meta-analysis study from UK conclude that consultant who shows empathy to his patient will benefit the patient in reducing pain, anxiety and satisfaction etc.[5] A study from Australia shows that many of the Australian consultants spend their most of the time on their private clinics.[6] Another study from UK shows that there is positive relation between empathy of consultant and therapeutic effects on patient[7]. A study from UK tells us that consultation on telephone are more empathic than face to face consultation.[8] Another study from France tells us that those patients are benefited from empathy of physician who have high or average emotional skills.[9] In India around 70% of health facilities are provided by private sectors.[10]

The present study seeks to compare empathy levels among consultant doctors in public and private healthcare sectors. Understanding which sector demonstrates greater empathy will provide valuable insights for patients in selecting care providers and may inform strategies to enhance empathic practice across clinical settings.

Methodology

This cross-sectional observational study was conducted over a period from May to August in two tertiary care hospitals in Peshawar, Pakistan: Khyber Teaching Hospital, a government facility, and Northwest General Hospital, a private institution. These hospitals were selected to represent both public and private healthcare sectors and serve a diverse range of patient populations, making them suitable for comparative analysis. The study population comprised consultant doctors with at least three years of independent clinical practice following their specialist training, ensuring that participants had adequate professional experience and had likely developed mature patient communication skills. Both male and female consultants were included without restrictions, and the age range of participants was between 35 and 75 years. Resident doctors, interns, and consultants with fewer than three years of practice were excluded, as were consultants who were on extended leave or unavailable during the study period. Participants were approached in person at their workplace, informed about the objectives and procedures of the study, and invited to participate voluntarily. Written informed consent was obtained from each participant before data collection commenced. Data were gathered using a structured questionnaire that included demographic and professional variables such as age, sex, specialty, and sector of employment, along with the Jefferson Scale of Empathy (JSE), a validated and widely recognized tool for measuring physicians and other healthcare professionals empathy. The JSE consists of multiple items rated on a Likert scale, producing a total empathy score where higher values reflect greater self-reported empathy. The English version of the JSE was administered in its standard format without modifications, and all demographic data were self-reported by the participants. Ethical approval for the study was obtained from the institutional review board of Northwest School of Medicine, Peshawar. Participation was voluntary and confidentiality was maintained. Data entry and statistical analysis were performed using IBM SPSS Statistics version 27. Descriptive

statistics, including means and standard deviations for continuous variables and frequencies and percentages for categorical variables, were calculated. Independent samples t-tests were used to compare mean empathy scores between two groups such as public versus private sector and male versus female consultants, while one-way analysis of variance (ANOVA) was applied to compare means across more than two groups such as different age categories and medical specialties. A p-value of less than 0.05 was considered statistically significant for all analyses.

Results

A total of 115 consultants participated in the study, comprising 62 males (53.9%) and 53 females (46.1%). The age of participants ranged from 35 to 75 years, with a mean of (47.17 ± 8.09) years. Of the total, 49 consultants (42.6%) were from the private sector and 66 (57.4%) from the public sector, as shown in Table 1.

Table1: Showing Frequency Distribution of Demographics of the participants.

Characteristics	Categories	Frequency (n)	Percentage (%)
Gender	Male	62	53.9
	Female	53	46.1
Sector	Private	49	42.6
	Public	66	57.4
Specialty	Cardiology	8	7.0
	Dermatology	7	6.1
	Ent	7	6.1
	Gastroenterology	5	4.3
	General medicine	17	14.8
	General surgery	21	18.3
	Gynecology	8	7.0
	Nephrology	2	1.7
	Neurosurgery	7	6.1
	Ophthalmology	2	1.7
	Pediatrics	16	13.9
	Plastic surgery	2	1.7
	Psychology	1	0.9
	Pulmonology	10	8.7
	Radiology	2	1.7
Total(N)	115	115	100.0

Gender-based analysis showed no statistically significant difference in empathy scores, with females averaging slightly higher than males, but without meaningful variation (p 0.572)as displayed in Table 2.

Gender	N	Mean Empathy Score(M)	SD	P value
Male	62	87.69	13.36	0.572
Female	53	89.05	12.25	

Table 2: Showing Comparison of empathy mean score by participants' gender.

In contrast, age demonstrated a significant association with empathy (p = 0.006); the 35-45 years group recorded the highest mean empathy score(92.72±13.02) while a gradual decline was observed in older groups, reaching the lowest levels in those aged 66 years or above as shown in Table 3

.

Age Groups	N	Mean Empathy Score(M)	SD	P value
35-45	54	92.72	13.02	0.006
46-55	45	84.66	11.75	
56-65	14	84.14	11.40	
66 and above	2	81.00	2.82	

Table 2: Showing Comparison of empathy mean score by participants' age groups.

Specialty-wise comparison showed significant differences (p = 0.047). Dermatology had the highest mean score of (104.85 ± 16.08), followed by plastic surgery at (99.50 ± 4.94,n = 2). Lower scores were recorded for general surgery (83.76 ± 8.56) and pulmonology at (83.30 ± 14.73) as represented in Table 4.

Specialty	N	Mean Empathy Score(M)	SD	P value
Cardiology	8	86.00	23.72	0.47
Dermatology	7	104.85	16.08	
ENT	7	86.85	15.32	
Gastroenterology	5	87.00	9.35	
General Medicine	17	86.70	7.48	
General surgery	21	83.76	8.56	
Gynecology	8	95.50	5.90	
Nephrology	2	83.50	20.50	
Neurosurgery	7	88.28	10.41	
Ophthalmology	2	94.00	2.82	

Pediatrics	16	89.93	11.52	
Plastic surgery	2	99.50	4.94	
Psychology	1	72.00	0	
Pulmonology	10	83.30	14.73	
Radiology	2	89.50	7.77	
Total	115	88.32	12.83	

Table 4: Showing Comparison of mean empathy score by specialty.

Sectoral analysis revealed that private sector consultants had a mean empathy score of (91.73 ± 11.07) higher than(85.78 ± 13.52) in the public sector (85.78 ± 13.52), a statistically significant associationwas found (p = 0.013) as shown in Table 5 and Figure 1.

Health Care Sector	N	Mean Empathy Score(M)	SD	P value
Private	49	91.73	11.07	0.013
Public	66	85.78	13.52	

Table5: Showing the comparison of Mean Empathy Score by Health care sector.

Data were analyzed using IBM SPSS Statistics version 27. Means ± SD were reported for continuous variables, and frequencies for categorical variables. Independent-samples t- tests were used to comparetwo groups such as gender and sector, while one-way ANOVA assessed differences across multiple groups like age groups and specialty.

DISCUSSION

This study investigated empathy among consultant doctors across public and private medical sectors and observed statistically significant differences, with physicians in private hospitals exhibiting higher empathy scores. Furthermore, age and specialty were also found to influence empathy levels, while gender did not demonstrate a significant association.

The higher empathy scores among private sector physicians align with research demonstrating that physicians operating under private insurance models or less pressured systems tend to have more time per patient, facilitating empathetic interactions.[11] This is further supported by evidence from Ethiopia, where patients rated private hospitals more empathetic due to shorter wait times and better perceived physician engagement.[12]

Our results did not find a significant difference between mean empathy score and gender which is consistent with a study of Iraq where no significant association was found.[13] Although our results align with certain research that has suggested slightly higher empathy level among female practitioners due to spending more time with patients and emotional responsiveness.[14]

Age-related findings in our study showed significantly higher empathy scores among younger physicians aged 35-45, with a steady

decline as age increased. This mirrors results from Iranian teaching hospitals, where the 36-45 age group demonstrated greater empathy[15] and aligns with literature suggesting that empathy tends to diminish over the course of a medical career due to burnout, emotional fatigue, and desensitization from prolonged clinical exposure.[16]

Notably, this study also observed specialty-based empathy variations. Specialty like dermatology showed elevated empathy scores, consistent with study of Japan where second highest mean empathy score was observed in residents of dermatology.[17] Conversely, surgical and high-pressure specialties have been associated with lower empathy levels.[18]

Broadly, empathy contributes to stronger therapeutic alliances, better adherence, and improved clinical outcomes. It is a foundational component of effective and patient-centered medical practice.[19,20] Moreover, evidence suggests empathy training interventions are effective and should be institutionally integrated, especially in public healthcare systems, where physicians report lower empathy due to increased workload and limited patient interaction time.[21,22]

In summary, our results substantiate the influence of sectoral context, specialty orientation, and age on consultant empathy. They underscore the need for organizational support, specialty-specific empathy cultivation, and burnout mitigation to sustain empathic clinician-patient interactions.

Limitations and Future Directions

However, several limitations temper our interpretations. First, the cross-sectional design precludes causal inference, and longitudinal studies would better capture the trajectory and determinants of empathy over time. Second, the sample size, along with its uneven distribution across specialties and age groups, may have reduced the statistical power to detect subtle differences, particularly in gender comparisons. Future research should aim for larger and more stratified sampling to improve generalizability. Third, the study relied on self-reported empathy measures, which are susceptible to social desirability and response biases. Incorporating patient-rated empathy assessments or objective behavioral measures, such as observational coding or eye-tracking, could provide more robust and triangulated insights.

Conclusion

Empathy levels among consultants in Peshawar differ significantly according to healthcare sector, age, and specialty, but not gender. Private sector consultants and those in certain specialties such as dermatology and plastic surgery reported higher empathy. These findings highlight the influence of systemic, professional, and career-stage factors on empathic practice and support the implementation of targeted interventions, particularly in public sector settings.

Acknowledgment

The authors would like to thank all participating consultants for their time and valuable contributions to this study. We also acknowledge the administrative support provided by Northwest General Hospital and Khyber Teaching Hospital, Peshawar.

Conflict of Interest statement

The author declares no conflict ofinterest related to this publication.

Financial disclosure statement

No financial support or external funding was received for the completion of this work approval for this study.

References

1. Chen J. Empathy for distress in humans and rodents. Neuroscience bulletin. 2018 Feb;34(1):216-36.. https://doi.org/10.1007/s12264-017-0135-0

2. Thompson NM, Uusberg A, Gross JJ, Chakrabarti B. Empathy and emotion regulation: An integrative account. Progress in brain research. 2019 Jan 1;247:273-304.https://doi.org/10.1016/bs.pbr.2019.03.024

3. Giroldi E, Veldhuijzen W, Bareman F, Bueving H, van der Weijden T, van der Vleuten C, et al. Effective communication with talkative patients: 10 tips. Nederlands Tijdschrift Voor Geneeskunde. 2016 Jan 1;160:D184-.https://pubmed.ncbi.nlm.nih.gov/27189094/
4. Howick J, Steinkopf L, Ulyte A, Roberts N, Meissner K. How empathic is your healthcare practitioner? A systematic review and meta-analysis of patient surveys. BMC Medical Education. 2017 Aug 21;17(1):136. https://doi.org/10.1186/s12909-017-0967-3
5. Howick J, Moscrop A, Mebius A, Fanshawe TR, Lewith G, Bishop FL, et al. Effects of empathic and positive communication in healthcare consultations: a systematic review and meta-analysis. Journal of the Royal Society of Medicine. 2018 Jul;111(7):240-52. https://doi.org/10.1177/0141076818769477
6. Freed GL, Turbitt E, Allen A. Public or private care: where do specialists spend their time?. Australian Health Review. 2016 Sep 5;41(5):541-5. https://doi.org/10.1071/AH15228
7. Smith KA, Bishop FL, Dambha-Miller H, Ratnapalan M, Lyness E, Vennik J, et al. Improving empathy in healthcare consultations—a secondary analysis of interventions. Journal of general internal medicine. 2020 Oct;35(10):3007-14.https://doi.org/10.1007/s11606-020-05994-w
8. Vennik J, Hughes S, Lyness E, McDermott C, Smith KA, Steele M, et al. Patient perceptions of empathy in primary care telephone consultations: A mixed methods study. Patient education and counseling. 2023 Aug 1;113:107748.https://doi.org/10.1016/j.pec.2023.107748
9. Lelorain S, Cattan S, Lordick F, Mehnert A, Mariette C, Christophe V, et al. In which context is physician empathy associated with cancer patient quality of life?. Patient education and counseling. 2018 Jul 1;101(7):1216-22.https://doi.org/10.1016/j.pec.2018.01.023
10. Menberu M, Kar S, Behera MR. Review on public private mix TB control strategy in India. Indian Journal of Tuberculosis. 2022 Jul 1;69(3):277-81.https://doi.org/10.1016/j.ijtb.2021.07.007
11. Neumann M, Bensing J, Wirtz M, Wübker A, Scheffer C, Tauschel D et al. The impact of financial incentives on physician empathy: a study from the perspective of patients with private and statutory health insurance. Patient education and counseling. 2011 Aug 1;84(2):208-16.https://doi.org/10.1016/j.pec.2010.07.012
12. Tateke T, Woldie M, Ololo S. Determinants of perceived health care provider empathy at public and private hospitals in central Ethiopia. Science. 2013 Aug;1(3):156-64. https://doi.org/10.11648/J.SJPH.20130103.18
13. Abidalkarem GA, Hasan LA. Physician Empathy and Its Relation to Age, Gender, and Years of Experience. Iraqi Journal of Community Medicine. 2024 Jul 1;37(2):117-21.https://journals.lww.com/ircm/fulltext/2024/07000/physician_empathy_and_its_relation_to_age,_gender,.11.aspx?context=latestarticles
14. Howick J, Steinkopf L, Ulyte A, Roberts N, Meissner K. How empathic is your healthcare practitioner? A systematic review and meta-analysis of patient surveys. BMC Medical Education. 2017 Aug 21;17(1):136.https://doi.org/10.1186/s12909-017-0967-3
15. Mohammadi A, Kamali K. Physician empathy towards patients: A survey in Iranian teaching hospitals. International Journal of Hospital Research. 2016 Jun 1;5(2):52-7.http://dx.doi.org/10.15171/ijhr.2016.10
16. Razi MO, Fouzia R, Razzaque MS. Decline of empathy among healthcare apprentices. International Medical Education.

2023 Oct 5;2(4):232-8.https://doi.org/10.3390/ime2040022
17. Watari T, Houchens N, Nishizaki Y, Kataoka K, Otsuka T, Nakano Y, et al. Empathy competence and future specialty among medical residents in Japan: a nationwide cross-sectional study. Scientific Reports. 2023 Aug 23;13(1):13742.https://doi.org/10.1038/s41598-023-41011-w
18. Subramaniam TS, Valuyeetham PS, Ambu VK. Empathy amongst doctors: an observational study. The Medical journal of Malaysia. 2023 May;78(3):344-9.https://pubmed.ncbi.nlm.nih.gov/37271844/
19. Han C, Wu Q, Liu C, Wang P. Patient's perceived empathy can predict doctor-patient relationship in medical interaction. BMC Medical Education. 2025 May 21;25(1):741.https://doi.org/10.1186/s12909-025-07117-7
20. Bunin J, Shohfi E, Meyer H, Ely EW, Varpio L. The burden they bear: a scoping review of physician empathy in the intensive care unit. Journal of critical care. 2021 Oct 1;65:156-63. https://doi.org/10.1016/j.jcrc.2021.05.014
21. Riess H. (2022). Empathy can be taught and learned with evidence-based education. Emergency medicine journal : EMJ, 39(6), 418–419. https://doi.org/10.1136/emermed-2021-212078
22. Kim SH, Lee YM. Physician empathy in Korean clinical contexts: developing a conceptual framework and exploring influencing factors. Korean Journal of Medical Education. 2023 Feb 28;35(1):9. https://doi.org/10.3946/kjme.2023.245