

# Jefferson Scale of Empathy

## Articles by National and International Researchers

---

1. Abbiati, Milena, Anne Baroffio, and Margaret W. Gerbase. Personal Profile of Medical Students Selected through a Knowledge-Based Exam Only: Are We Missing Suitable Students? *Medical Education Online* 21 (April 12, 2016). doi:10.3402/meo.v21.29705.
2. Abrishami, Doris. “Effects of Cultural Competency Education on Radiography Students.” *Radiologic Technology* 94, no. 4 (2023): 247–58.
3. Adatia S, Tellier P, Remtulla R. Survey of Medical Student Empathy at a Canadian Medical School: A Cross-Sectional Quantitative Survey. *PRiMER*. 2022;6:6. <https://doi.org/10.22454/PRiMER.2022.535629>
4. Aggarwal, R. (2007). Empathy: Do Psychiatrists and Patients Agree? *The American Journal of Psychiatry Resident’s Journal*, 2(8), 2–3.
5. Aggarwal, Vikram Pal, Robin Garg, Nikita Goyal, Puneet Kaur, Sakshi Singhal, Nancy Singla, Deeksha Gijwani, and Aditi Sharma. “Exploring the Missing Link – Empathy among Dental Students: An Institutional Cross-Sectional Survey.” *Dental Research Journal* 13, no. 5 (September 2016): 419–23.
6. Ahmadzadeh, Azin, Mehdi Nasr Esfahani, Masoud Ahmadzad-Asl, Mohammadreza Shalbfan, and Seyed Vahid Shariat. “Does Watching a Movie Improve Empathy? A Cluster Randomized Controlled Trial.” *Canadian Medical Education Journal* 10, no. 4 (November 28, 2019): e4–12.
7. Alcorta-Garza, Adelina, Montserrat San-Martín, Roberto Delgado-Bolton, Jorge Soler-González, Helena Roig, and Luis Vivanco. “Cross-Validation of the Spanish HP-Version of the Jefferson Scale of Empathy Confirmed with Some Cross-Cultural Differences.” *Frontiers in Psychology* 7 (2016): 1002. doi:10.3389/fpsyg.2016.01002.
8. Alexander, Karen, Valerie Clary-Muronda, Jamie M. Smith, and Julia Ward. “The Relationship Between Past Experience, Empathy, and Attitudes Toward Poverty.” *Journal of Nursing Education* 59, no. 3 (March 5, 2020): 158–62. <https://doi.org/10.3928/01484834-20200220-07>.
9. Ameh, Priscilla O., Omolara G. Uti, and Opeyemi O. Daramola. “Empathy among Dental Students in a Nigerian Institution.” *European Journal of Dental Education*. Accessed January 18, 2019. <https://doi.org/10.1111/eje.12412>.
10. Antinienė, Dalia, and Žydrūnė Kaklauskaitė. “Empathy and burnout among physicians providing reanimatological and surgical treatment.” *Baltic Journal of Sport and Health Sciences* 3, no. 110 (October 1, 2018). <https://journals.lsu.lt/baltic-journal-of-sport-health/article/view/245>.
11. Anu, Priya Mathew C, Raksha R Nayak, Sini R Krishnan, T S Ranganath, and Jyothi Jadhav. “A Cross-Sectional Study on Empathy and Its Associated Factors among Medical Students of Bangalore Medical College and Research Institute, Bangalore.” *RGUHS National Journal of Public Health* 7, no. 4 (2022): 148–52.
12. Anushka, Gupta, and Lakshminarayan Nagesh. Empathy and Emotional Intelligence in Dental Practitioners of Bareilly City – A Cross Sectional Study. *National Journal of Integrated Research in Medicine* 7, no. 4 (2016): 106–12.
13. Aparicio, Dilia Esther, Alexis Enrique Ramos, Jesús Mendoza, Robert Utsman-Abarca, Aracelis Calzadilla-Núñez, and Víctor Patricio Díaz-Narváez. “Chilean Dentistry Students, Levels of Empathy and Empathic Erosion: Necessary Evaluation before a Planned Intervention Levels of Empathy, *Evaluation and Intervention*.” *Saudi Dent J* 20, no. April (2) (2018): 117–24. <https://doi.org/10.1016/j.sdentj.2017.11.004>.

# Jefferson Scale of Empathy

## Articles by National and International Researchers

---

14. Aparicioa, Dilia Esther, Alexis Enrique Ramosa, Jesús Mendozaa, Robert Utsman-Abarcab, Aracelis Calzadilla-Núñez, and Víctor Patricio Díaz-Narváez. “Levels of Empathy, Empathy Decline and Differences between Genders in Medical Students of Cartagena (Colombia).” *Educ Med.* 20, no. S2 (2019): 136–43.
15. Arispe-Alburqueque, Claudia, Jessica Yace-Martínez, Víctor Díaz-Narváez, Aracelis Calzadilla-Núñez, Robert Utsman, and Reyes-Reyes Alejandro. “Empathy and Components of Empathy in Obstetrics Students.” *Revista Habanera de Ciencias Médicas* 19, no. 1 (February 2020): 143–53.
16. Arjyal, A, A Douglas, M Subedi, and R Gongal. “A Quantitative Evaluation of Empathy Using JSE-S Tool, Before and After a Medical Humanities Module, Amongst First-Year Medical Students in Nepal.” *BMC Medical Education*, 2021, 1–16. <https://doi.org/10.21203/rs.3.rs-128016/v1>.
17. Assing Hvidt, E., J. Søndergaard, N. C. Hvidt, S. Wehberg, A. Büssing, and C. M. Andersen. “Development in Danish Medical Students’ Empathy: Study Protocol of a Cross-Sectional and Longitudinal Mixed-Methods Study.” *BMC Medical Education* 20, no. 1 (February 19, 2020): 54. <https://doi.org/10.1186/s12909-020-1967-2>.
18. Austin, E. J., Evans, P., Goldwater, R., & Potter, V. (2005). *A preliminary study of emotional intelligence, empathy and exam performance in first year medical students. Personality and Individual Differences, 39(8), 1395–1405.* doi:10.1016/j.paid.2005.04.014
19. Austin, E. J., Evans, P., Magnus, B., & O’Hanlon, K. (2007). A preliminary study of empathy, emotional intelligence and examination performance in MBChB students. *Medical Education, 41(7), 684–689.* doi:10.1111/j.1365-2923.2007.02795.x
20. Avlogiari, Efpraxia, Stella Maria Karagiannaki, Eleftherios Panteris, Anastasia Konsta, and Ioannis Diakogiannis. “Improvement of Medical Students’ Empathy Levels After an Intensive Experiential Training on Empathy Skills.” *Psychiatry and Clinical Psychopharmacology* 31, no. 4 (2021): 392–400. <https://doi.org/10.5152/pcp.2021.21089>.
21. Aziz, Aliya, and Syeda Kauser Ali. “Relationship between Level of Empathy during Residency Training and Perception of Professionalism Climate,” March 11, 2020. <https://doi.org/10.21203/rs.3.rs-16622/v1>.
22. Babar, M. G., Omar, H., Lim, L. P., Khan, S. A., Mitha, S., Ahmad, S. F. B., & Hasan, S. S. (2013). An assessment of dental students’ empathy levels in Malaysia. *International Journal of Medical Education, 4, 223–229.* doi:10.5116/ijme.5259.4513
23. Babar, Muneer Gohar Gohar, Syed Shahzad Hasan, Lee Ping Lim, Phei June Lim, Nik Mohd Mazuan Nik Mohd Rosdy, and Siti Fauzza Binti Ahmad. “Tomorrow’s Doctors and Dentists in Malaysia: Empathic or Indifferent?” *European Journal for Person Centered Healthcare* 5, no. 2 (July 6, 2017): 205–12. doi:10.5750/ejpch.v5i2.1287.
24. Baeza-Velasco, Carolina, Catherine Genty, Isabelle Jaussent, Myriam Benramdane, Philippe Courtet, and Emilie Olié. “Study Protocol of a Multicenter Randomized Controlled Trial of Mindfulness-Based Intervention versus Relaxation to Reduce Emotional Exhaustion in Medical Students in France: The ‘Must Prevent’ Study.” *BMC Psychiatry* 20, no. 1 (March 11, 2020): 115. <https://doi.org/10.1186/s12888-020-02529-9>.
25. Bahadur G. C., Krishna, Amit Arjyal, Amanda Helen Douglas, Madhusudan Subedi, and

# Jefferson Scale of Empathy

## Articles by National and International Researchers

---

- Rajesh Gongal. "A Quantitative Evaluation of Empathy Using JSE-S Tool, before and after a Medical Humanities Module, amongst First-Year Medical Students in Nepal." *BMC Medical Education* 22, no. 159 (March 8, 2022).
26. Bahadur, Krishna, and Sudarshan Paudel. "Study on Empathy among Undergraduate Students of the Medical Profession in Nepal." *Journal of Biosciences and Medicines* 05, no. 11 (November 23, 2017): 51. <https://doi.org/10.4236/jbm.2017.511007>.
  27. Bayliss, A. J., & Strunk, V. A. (2015). Measurement of Empathy Changes during a Physical Therapist's Education and Beyond. *Journal of Physical Therapy Education*, 29(2), 6.
  28. Bazarko, D., Cate, R. A., Azocar, F., & Kreitzer, M. J. (2013). The Impact of an Innovative Mindfulness-Based Stress Reduction Program on the Health and Well-Being of Nurses Employed in a Corporate Setting. *Journal of Workplace Behavioral Health*, 28(2), 107–133. doi:10.1080/15555240.2013.779518
  29. Beattie, A., Durham, J., Harvey, J., Steele, J., & McHanwell, S. (2012). Does empathy change in first-year dental students? *European Journal of Dental Education: Official Journal of the Association for Dental Education in Europe*, 16(1), e111–116. doi:10.1111/j.1600-0579.2011.00683.x
  30. Beckman, T. J., Reed, D. A., Shanafelt, T. D., & West, C. P. (2010). Impact of Resident Well-Being and Empathy on Assessments of Faculty Physicians. *Journal of General Internal Medicine*, 25(1), 52–56. doi:10.1007/s11606-009-1152-0
  31. Bilgel, Nazan, and Alis Ozcakir. "Turkish Version of the Jefferson Scale of Empathy Psychometric Properties." *European Scientific Journal* 13, no. 20 (July 2017): 101–11.
  32. Biswas, Bijit, Anima Haldar, Aparajita Dasgupta, Nazrul Mallick, and Anubrata Karmakar. "An Epidemiological Study on Empathy and Its Correlates: A Cross-Sectional Assessment among Medical Students of a Government Medical College of India." *Indian Journal of Psychological Medicine* 40, no. 4 (July 1, 2018): 364. [https://doi.org/10.4103/IJPSYM.IJPSYM\\_109\\_18](https://doi.org/10.4103/IJPSYM.IJPSYM_109_18).
  33. Blanco, Jose, Fernando Caballero, Fernando J. García, Fernando Lorenzo, and Diana Monge. "Validation of the Jefferson Scale of Physician Empathy in Spanish Medical Students Who Participated in an Early Clerkship Immersion Programme." *BMC Medical Education Open Access* 18 (2018): 1–11. <https://doi.org/10.1186/s12909-018-1309-9>.
  34. Bolton, Roberto C. Delgado, Montserrat San-Martín, and Luis Vivanco. "Role of Empathy and Lifelong Learning Abilities in Physicians and Nurses Who Work in Direct Contact with Patients in Adverse Working Conditions." *Int. J. Environ. Res. Public Health* 19, no. 5 (2022): 1–13. <https://doi.org/10.3390/ijerph19053012>.
  35. Bombeke, K., Symons, L., Mortelmans, D., Debaene, L., Schol, S., Van Royen, P., & De Winter, B. (2013). More shades of grey in my answers: an interview study revisiting attitude erosion during clerkships. *Medical Education*, 47(5), 476–484. doi:10.1111/medu.12102
  36. Bombeke, K., Van Roosbroeck, S., De Winter, B., Debaene, L., Schol, S., Van Hal, G., & Van Royen, P. (2011). Medical students trained in communication skills show a decline in patient-centred attitudes: an observational study comparing two cohorts during clinical clerkships. *Patient Education and Counseling*, 84(3), 310–318. doi:10.1016/j.pec.2011.03.007

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

37. Boissy, A., Windover, A. K., Bokar, D., Karafa, M., Neuendorf, K., Frankel, R. M., ... Rothberg, M. B. (2016). Communication Skills Training for Physicians Improves Patient Satisfaction. *Journal of General Internal Medicine*.  
<http://doi.org/10.1007/s11606-016-3597-2>
38. Bond, A. R., Mason, H. F., Lemaster, C. M., Shaw, S. E., Mullin, C. S., Holick, E. A., & Saper, R. B. (2013). Embodied health: the effects of a mind–body course for medical students. *Medical Education Online*, 18(0). doi:10.3402/meo.v18i0.20699
39. Bonuso, C. F. (2013). Empathy in the Clinical Encounter: A Study of Situational and Dispositional Empathy Levels as Associated with Clinical Training and Practice [Dissertation]. *ETD Collection for Pace University*, 1–49.
40. Boss, R. D., Geller, G., & Donohue, P. K. (2015). Conflicts in Learning to Care for Critically Ill Newborns: “It Makes Me Question My Own Morals.” *Journal of Bioethical Inquiry*, 1–12. doi:10.1007/s11673-015-9609-9
41. Bourgault, P., Lavoie, S., Paul-Savoie, E., Grégoire, M., Michaud, C., Gosselin, E., & Johnston, C. C. (n.d.). Relationship Between Empathy and Well-Being Among Emergency Nurses. *Journal of Emergency Nursing*. doi:10.1016/j.jen.2014.10.001
42. Boyle, Malcolm, Williams, Brett, Brown, Ted, McKenna, Lisa, Molloy, Liz, & Lewis, Belinda. (2010, July 29). *Attitudes Towards Patients by Undergraduate Health Students*. Presentation presented at the The 4th International Multi-Conference on Society, Cybernetics and Informatics, Orlando, Fl. Retrieved from [https://docs.google.com/viewer?attid=0.1&pid=gmail&thid=13d11e12bfd88e4b&url=https://mail.google.com/mail/u/0/?ui%3D2%26ik%3D42e5222ece%26view%3Datt%26th%3D13d11e12bfd88e4b%26attid%3D0.1%26disp%3Dsafe%26zw&docid=7ec076f44df1585721da1e21698a3d14%7C28a21c987d5cfd3eb7fedadc8f94c4ea&chan=EwAAANyjxdK8nG/XMmZNAAnK7zS910GnvJmWMbKrmwkvJ4Ncc&a=v&rel=zip;z2;Attitudes\\_Towards\\_Patients\\_by\\_Undergraduate\\_Health\\_Students.pdf](https://docs.google.com/viewer?attid=0.1&pid=gmail&thid=13d11e12bfd88e4b&url=https://mail.google.com/mail/u/0/?ui%3D2%26ik%3D42e5222ece%26view%3Datt%26th%3D13d11e12bfd88e4b%26attid%3D0.1%26disp%3Dsafe%26zw&docid=7ec076f44df1585721da1e21698a3d14%7C28a21c987d5cfd3eb7fedadc8f94c4ea&chan=EwAAANyjxdK8nG/XMmZNAAnK7zS910GnvJmWMbKrmwkvJ4Ncc&a=v&rel=zip;z2;Attitudes_Towards_Patients_by_Undergraduate_Health_Students.pdf)
43. Boyle, M., Williams, B., Brown, T., Molloy, A., McKenna, L., Molloy, L., & Lewis, B. (2010). Levels of empathy in undergraduate health science students. *The Internet Journal of Medical Education*, 1(1).
44. Braga-Simões, João, Patrício Soares Costa, and John Yaphe. “Placebo Prescription and Empathy of the Physician: A Cross-Sectional Study.” *The European Journal of General Practice* 23, no. 1 (December 2017): 98–104. doi:10.1080/13814788.2017.1291625.
45. Brazeau, C. M. L. R., Schroeder, R., Rovi, S., & Boyd, L. (2010). Relationships between medical student burnout, empathy, and professionalism climate. *Academic Medicine: Journal of the Association of American Medical Colleges*, 85(10 Suppl), S33–36. doi:10.1097/ACM.0b013e3181ed4c47
46. Brazeau, C. M. L. R., Schroeder, R., Rovi, S., & Boyd, L. (2011). Relationship between medical student service and empathy. *Academic Medicine: Journal of the Association of American Medical Colleges*, 86(10 Suppl), S42–45. doi:10.1097/ACM.0b013e31822a6ae0
47. Bridges, J, RM Picklering, H Barker, R Chable, A Fuller, L Gould, P Libberton, et al. “Implementing the Creating Learning Environments for Compassionate Care (CLECC) Programme in Acute Hospital Settings: A Pilot RCT and Feasibility Study.” *Health Services and Delivery Research*, September 2018. <https://doi.org/DOI:10.3310/hsdr06330>.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

48. Bristow, P. M. (2014). *Reel influence: Video as an instructional strategy in addressing the affective domain in instructional design*. Capella University. Retrieved from <http://gradworks.umi.com/36/25/3625747.html>
49. Brockhouse, R., Msetfi, R. M., Cohen, K., & Joseph, S. (2011). Vicarious exposure to trauma and growth in therapists: The moderating effects of sense of coherence, organizational support, and empathy. *Journal of Traumatic Stress, 24*(6), 735–742. doi:10.1002/jts.20704
50. Brooks, Audrey J., Mei-Kuang Chen, Elizabeth Goldblatt, Maryanna Klatt, Benjamin Kligler, Mary S. Koithan, Mary Jo Kreitzer, et al. “Introducing Integrative Primary Health Care to an Interprofessional Audience: Feasibility and Impact of an Asynchronous Online Course.” *EXPLORE*, August 12, 2019. <https://doi.org/10.1016/j.explore.2019.08.002>.
51. Brown, T., Boyle, M., Williams, B., Molloy, A., Palermo, C., McKenna, L., & Molloy, L. (2011). Predictors of empathy in health science students. *Journal of Allied Health, 40*(3), 143–149.
52. Brown, T., Williams, B., Boyle, M., Molloy, A., McKenna, L., Molloy, L., & Lewis, B. (2010). Levels of empathy in undergraduate occupational therapy students. *Occupational Therapy International, 17*(3), 135–141. doi:10.1002/oti.297
53. Bruggi, Francesco, and Francesco Falaschi. “Correlation Between Attending Physicians’ Empathy and Readmission Rate in Internal Medicine.” *Am J Biomed Sci & Res.* 16, no. 4 (June 17, 2022). <https://doi.org/10.34297/AJBSR.2022.16.002254>.
54. Buck, Era, Mark Holden, and Karen Szauter. “Changes in Humanism During Medical School: A Synthesis of the Evidence.” *Medical Science Educator*, July 10, 2017, 1–7. doi:10.1007/s40670-017-0438-9.
55. Bukowski, Henryk, Catherine Sweeney, Deirdre Bennett, Gabriella Rizzo, and Colm M.P. O’Tuathaigh. “Medical Student Empathy and Breaking Bad News Communication in a Simulated Consultation.” *Patient Education and Counseling*, September 15, 2021. <https://doi.org/10.1016/j.pec.2021.09.017>.
56. Butterfield, S. (2013). New research links empathy to outcomes. ACP Internist. Retrieved from <http://www.acpinternist.org/archives/2013/03/empathy.htm>
57. Bylund, C. L., & Makoul, G. (2005). Examining empathy in medical encounters: an observational study using the empathic communication coding system. *Health Communication, 18*(2), 123–140. doi:10.1207/s15327027hc1802\_2
58. Byrd, Courtney T., Robyn L. Croft, and Ellen M. Kelly. “Improving Clinical Competence Through Simulated Training in Evidence-Based Practice for Stuttering: A Pilot Study.” *American Journal of Speech-Language Pathology*, November 2022. [https://doi.org/10.1044/2022\\_AJSLP-22-00116](https://doi.org/10.1044/2022_AJSLP-22-00116).
59. Cai, Fei, Merima Ruhotina, Melissa Bowler, Elisabeth Howard, Phinnara Has, Gary N. Frishman, and Kyle Wohlrab. “Can I Get a Suggestion? Medical Improv as a Tool for Empathy Training in Obstetrics and Gynecology Residents.” *Journal of Graduate Medical Education* 11, no. 5 (September 10, 2019): 597–600. <https://doi.org/10.4300/JGME-D-19-00185.1>
60. Calabrese, L. H., Bianco, J. A., Mann, D., Massello, D., & Hojat, M. (2013). Correlates and Changes in Empathy and Attitudes Toward Interprofessional Collaboration in Osteopathic Medical Students. *JAOA: Journal of the American Osteopathic*

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Association*, 113(12), 898–907. doi:10.7556/jaoa.2013.068
61. Calzadilla-Núñez, Aracelis, Víctor P. Díaz-Narváez, Yolanda Dávila-Pontón, Juan Aguilera-Muñoz, Natalia Fortich-Mesa, Dilia Aparicio-Marenco, and Alejandro Reyes-Reyes. “Erosion of Empathy during Medical Training by Gender. A Cross-Sectional Study.” *Archivos Argentinos De Pediatría* 115, no. 6 (December 1, 2017): 556–61. <https://doi.org/10.5546/aap.2017.eng.556>.
  62. Canale, S. D., Louis, D. Z., Maio, V., Wang, X., Rossi, G., Hojat, M., & Gonnella, J. S. (2012). The Relationship Between Physician Empathy and Disease Complications: An Empirical Study of Primary Care Physicians and Their Diabetic Patients in Parma, Italy. *Academic Medicine: Journal of the Association of American Medical Colleges*, 87(9), 1243 doi:10.1007/s11606-009-1193-4–1249.
  63. Caro, Marilaf, Magdalena, Montserrat San-Martín, Roberto Delgado-Bolton, and Luis Vivanco. “Empathy, Loneliness, Burnout, and Life Satisfaction in Chilean Nurses of Palliative Care and Homecare Services.” *Enfermería Clínica*, June 3, 2017. doi:10.1016/j.enfcli.2017.04.007.
  64. Carrard, Valerie, Céline Bourquin, Sylvie Berney, Katja Schlegel, Jacques Gaume, Pierre-Alexandre Bart, Martin Preisig, Marianne Schmid Mast, and Alexandre Berney. “The Relationship between Medical Students’ Empathy, Mental Health, and Burnout: A Cross-Sectional Study.” *Medical Teacher*, July 13, 2022. <https://doi.org/10.1080/0142159X.2022.2098708>.
  65. Castellón-Montenegro, H, D Barraza-Ospino, YM Borré-Ortiz, G Lastre-Amell, AM Erazo-Coronado, and VP Diaz- Narvaez. “Empathy in Nursing Students from the Metropolitana University of Barranquilla (Colombia).” *Texto Contexto Enferm* [Internet], 2020, 29:e20180314. <https://doi.org/10.1590/1980-265X-TCE-2018-0314>.
  66. Cataldo, K. P., Peeden, K., Geesey, M. E., & Dickerson, L. (2005). Association between Balint training and physician empathy and work satisfaction. *Family Medicine*, 37(5), 328–331.
  67. Catarucci, Fernanda Martin, Thays Herbst Carvalho, Susan Andrews, Emmanuel A. Burdmann, and Karina Pavão Patrício. “Empathy in medical students: effects of a stress management program.” *Revista Brasileira de Educação Médica* 46, no. 2 (2022): 1–7. <https://doi.org/10.1590/1981-5271v46.2-20210290>.
  68. Catlow, Rachel, Faustina Aikins-Snyper, Michelle Carson M, Anju Jaggi, and Suzanne Bench. “Empathy in Action in Healthcare (EACH): A Mixed Methods Study of Nurses’ and Therapists’ Empathy.” *International Journal of Orthopaedic and Trauma Nursing*, March 26, 2020, 100777. <https://doi.org/10.1016/j.ijotn.2020.100777>.
  69. Cavanaugh, Kelly. “Empathic Instruction through Literary Narratives: A QuasiExperimental Study of an Occupational Therapy Course.” The University of Maine, 2021. <https://digitalcommons.library.umaine.edu/cgi/viewcontent.cgi?article=4421&context=etd>
  70. Chaitoff, Alexander, Michael B. Rothberg, and Kathryn A. Martinez. “Physician Empathy and Diabetes Outcomes.” *Journal of General Internal Medicine*, July 24, 2019. <https://doi.org/10.1007/s11606-019-05188-z>.
  71. Chaitoff, Alexander, Bob Sun, Amy Windover, Daniel Bokar, Joseph Featherall, Michael B. Rothberg, and Anita D. Misra-Hebert. “Associations Between Physician Empathy, Physician Characteristics, and Standardized Measures of Patient Experience.”

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Academic Medicine: Journal of the Association of American Medical Colleges*, April 4, 2017. doi:10.1097/ACM.0000000000001671.
72. Chandler, Charles. "Clinician Empathy and Alliance Building with Patients during Clinician and Patient Interactions in a Drug Addiction Treatment Center in Northeastern New Jersey." Grand Canyon University, 2021. <https://www.proquest.com/openview/fc6382a21472f06500eade8e01408561/1?cbl=18750&diss=y&pq-origsite=gscholar>.
  73. Chapman, Mimi V., William J. Hall, Kent Lee, Robert Colby, Tamera Coyne-Beasley, Steve Day, Eugenia Eng, et al. "Making a Difference in Medical Trainees' Attitudes toward Latino Patients: A Pilot Study of an Intervention to Modify Implicit and Explicit Attitudes." *Social Science & Medicine*, May 5, 2017. doi:10.1016/j.socscimed.2017.05.013.
  74. Chatterjee, Anirban, Rajkrishna Ravikumar, Satendra Singh, Pranjal Singh Chauhan, and Manu Goel. "Clinical Empathy in Medical Students in India Measured Using the Jefferson Scale of Empathy—Student Version, Clinical Empathy in Medical Students in India Measured Using the Jefferson Scale of Empathy—Student Version." *Journal of Educational Evaluation for Health Professions*, *Journal of Educational Evaluation for Health Professions* 14 (December 27, 2017): 33. <https://doi.org/2017.14.0.33>.
  75. Chen, Allen K., Anagha Kumar, and Aviad Haramati. "The Effect of Mind Body Medicine Course on Medical Student Empathy: A Pilot Study." *Medical Education Online* 21, no. 0 (June 27, 2016). doi:10.3402/meo.v21.31196.
  76. Chen, Andrew, Jessie J. Hanna, Adithya Manohar, and Anthony Tobia. "Teaching Empathy: The Implementation of a Video Game into a Psychiatry Clerkship Curriculum." *Academic Psychiatry: The Journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry*, December 4, 2017. <https://doi.org/10.1007/s40596-017-0862-6>.
  77. Chen, A. M. H., Kiersma, M. E., Yehle, K. S., & Plake, K. S. (2015). Impact of an Aging Simulation Game on Pharmacy Students' Empathy for Older Adults. *American Journal of Pharmaceutical Education*, 79(5), 1–10.
  78. Chen, D. C. R., Kirshenbaum, D. S., Yan, J., Kirshenbaum, E., & Aseltine, R. H. (2012). Characterizing changes in student empathy throughout medical school. *Medical Teacher*, 34(4), 305–311. doi:10.3109/0142159X.2012.644600
  79. Chen, D. C. R., Pahilan, M. E., & Orlander, J. D. (2010). Comparing a self-administered measure of empathy with observed behavior among medical students. *Journal of General Internal Medicine*, 25(3), 200–202. doi:10.1007/s11606-009-1193-4
  80. Chen, D., Lew, R., Hershman, W., & Orlander, J. (2007). A cross-sectional measurement of medical student empathy. *Journal of General Internal Medicine*, 22(10), 1434–1438. doi:10.1007/s11606-007-0298-x
  81. Chen, J. T., LaLopa, J., & Dang, D. K. (2008). Impact of patient empathy modeling on pharmacy students caring for the underserved. *American Journal of Pharmaceutical Education*, 72(2).
  82. Chen, J. Y., Chin, W. Y., Fung, C. S. C., Wong, C. K. H., & Tsang, J. P. Y. (2015). Assessing medical student empathy in a family medicine clinical test: validity of the CARE measure. *Medical Education Online*, 20(0). Retrieved from <http://med-ed-online.net/index.php/meo/article/view/27346>

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

83. Chen, Po-Jui, Chien-Da Huang, and San-Jou Yeh. "Impact of a Narrative Medicine Programme on Healthcare Providers' Empathy Scores over Time." *BMC Medical Education* 17 (July 5, 2017): 108. doi:10.1186/s12909-017-0952-x.
84. Chen, Xiangfan, Yin Zhang, Xianlin Xu, Wei Wang, Hong Yan, Shiyue Li, and Ningxi Yang. "Mediating Roles of Anxiety, Self-Efficacy, and Sleep Quality on the Relationship Between Patient-Reported Physician Empathy and Inflammatory Markers in Ulcerative Colitis Patients." *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research* 25 (October 21, 2019): 7889–97. <https://doi.org/10.12659/MSM.917552>.
85. Chen, Yi-Han, Chiu-Yueh Hsiao, and Hui-Wen Chien. "Attitudes Toward People With Schizophrenia Among Undergraduate Nursing Students." *Journal of the American Psychiatric Nurses Association*, May 2022, 1–9. <https://doi.org/10.1177/10783903221096360>.
86. Cheng, J.-F., Lai, Y.-M., Livneh, H., & Tsai, T.-Y. (2011). [Establishing reliability and validity of the Chinese version of the jefferson scale of empathy (healthcare providers version)]. *Hu Li Za Zhi The Journal of Nursing*, 58(2), 41–48.
87. Cheung, D. H., & Reeves, A. (2014a). Can We Teach Empathy?: Evidence from the Evaluation of a Course Titled "Compassion in Medicine." *The Journal of Alternative and Complementary Medicine*, 20(5), A7–A7. doi:10.1089/acm.2014.5015.abstract
88. Cheung, D. H., & Reeves, A. (2014b). Can We Teach Empathy?: Evidence from the Evaluation of a Course Titled "Compassion in Medicine." *The Journal of Alternative and Complementary Medicine*, 20(5), A7–A7. doi:10.1089/acm.2014.5015.abstract
89. Chiracu, Adrian, and Andreea Dona Iordan Dumitru. "Burnout, Empathy and Well-Being in Medical and Psychology Students." University of Bucharest, 2021. <https://studiadoctoralia.ro/index.php/sdpsych/article/view/124>.
90. Christensen, Heather R., Aaron M. Marshall, and Joanna Rebitski. "Impact of Experiential Learning of Nutrition Therapy on Medical Students." *Medical Science Educator*, March 21, 2023. <https://doi.org/10.1007/s40670-023-01771-6>.
91. Christodoulou-Fella, Maria, Nicos Middleton, Elizabeth D. E. Papathanassoglou, and Maria N. K. Karanikola. "Exploration of the Association between Nurses' Moral Distress and Secondary Traumatic Stress Syndrome: Implications for Patient Safety in Mental Health Services." Research article. *BioMed Research International*, 2017. <https://doi.org/10.1155/2017/1908712>.
92. Chun, K. H., & Lee, Y. H. (2016). Improvement of debate competence: an outcome of an introductory course for medical humanities. *Korean J Med Educ*, 28(1), 87–93. <http://doi.org/DOI: http://dx.doi.org/10.3946/kjme.2016.13>
93. Collins, David M. "Presented in Partial Fulfillment of the Requirements for the Degree Master of Dental Hygiene in the Graduate School of The Ohio State University." The Ohio State University, 2021. [https://etd.ohiolink.edu/apexprod/rws\\_etd/send\\_file/send?accession=osu1619124591231362&disposition=inline](https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=osu1619124591231362&disposition=inline)
94. Collins, Lauren, Shoshana Sicks, Richard W. Hass, Tracey Vause-Earland, Julia Ward, Courtney Newsome, and Mishael Khan. "Self-Efficacy and Empathy Development through Interprofessional Student Hotspotting." *Journal of Interprofessional Care* 0, no. 0 (April 1, 2020): 1–4. <https://doi.org/10.1080/13561820.2020.1712337>.



## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

95. Colliver, J. A., Conlee, M. J., Verhulst, S. J., & Dorsey, J. K. (2010). Reports of the Decline of Empathy During Medical Education Are Greatly Exaggerated: A Reexamination of the Research. *Academic Medicine*, 85(4), 588.
96. Canseco, José Manuel Blanco, Catalina Valcárcel Sierra, María del Carmen Guerra Jiménez, Estefanía Ortigosa Rodríguez, Fernando García López, Fernando Caballero Martínez, Luisa Cabello Ballesteros, and Diana Monge Martín. “Clinical Empathy among Family and Community Medicine Residents and Tutors. The View of Physicians and Patients.” *Primary Care* 50, no. 10 (December 3, 2018): 8.
97. Canseco, Blanco JM, Alfonso A Blanco, Martínez F Caballero, Solís MM Hawkins, Agulló T Fernández, and García L Lledó. “Medical Empathy in Medical Students in Madrid: A Proposal for Empathy Level Cut-off Points for Spain.” *PLoS ONE* 17, no. 5 (May 23, 2022): e0267172. <https://doi.org/10.1371/journal.pone.0267172>.
98. Claudino, Felipe Cesar de Almeida, Marcelle Medeiros Lucena, Enri Bobsin da Silva, Anne Baroffio, and Margaret W Gerbase. “Association between Empathy and Personality in Medical Students.” *Rev. Bras. Educate Med.* 44, no. 4 (2020). <https://doi.org/10.1371/journal.pone.0185860>
99. Consorti, F., Notarangelo, Potasso, & Toscano. (2012). Developing professionalism in Italian medical students: an educational framework. *Advances in Medical Education and Practice*, 55.
100. Consorti, F., Potasso, L., & Toscano, E. (2012). [The concept of medical professionalism of medical students: basic assessment for a cohort study.]. *La Clinica Terapeutica*, 163(6), e377–e386.
101. Costa, M. J., Costa, P., & Magalhães, E. (2013). Response to “Are personality traits really weak/moderate predictors of empathy?.” *Medical Teacher*, 35(7), 611–612. doi:10.3109/0142159X.2013.786179
102. Costa, P., Alves, R., Neto, I., Marvão, P., Portela, M., & Costa, M. J. (2014). Associations between Medical Student Empathy and Personality: A Multi-Institutional Study. *PLoS ONE*, 9(3), e89254. doi:10.1371/journal.pone.0089254
103. Costa, Patrício, Marco Antonio de Carvalho-Filho, Marcelo Schweller, Pia Thiemann, Ana Salgueira, John Benson, Manuel João Costa, and Thelma Quince. “Measuring Medical Students’ Empathy: Exploring the Underlying Constructs of and Associations Between Two Widely Used Self-Report Instruments in Five Countries.” *Academic Medicine: Journal of the Association of American Medical Colleges*, November 1, 2016. doi:10.1097/ACM.0000000000001449. <https://www.ncbi.nlm.nih.gov/pubmed/27805956>
104. Costa, P., Magalhães, E., & Costa, M. J. (2012). A latent growth model suggests that empathy of medical students does not decline over time. *Advances in Health Sciences Education*. Retrieved from <http://link.springer.com/article/10.1007/s10459-012-9390-z?null>
105. Crandall, S. J., & Marion, G. S. (2009). Commentary: identifying attitudes towards empathy: an essential feature of professionalism. *Academic Medicine*, 84(9), 1174.
106. Croft, Robyn L., Courtney T. Byrd, and Ellen M. Kelly. “The Influence of Active Listening on Parents’ Perceptions of Clinical Empathy in a Stuttering Assessment: A Preliminary Study.” *Journal of Communication Disorder* 100, no. November–December (2022). <https://doi.org/10.1016/j.jcomdis.2022.106274>.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

107. Crump, William J., Craig H. Ziegler, and Steve Fricker. "Does Empathy Really Decline during Residency Training? A Longitudinal Look at Changes in Measured Empathy in a Community Program." *Journal of Regional Medical Campuses* 4, no. 4 (2021). <https://doi.org/10.24926/jrnc.v4i4X.4206>.
108. Crump, William J., Craig H. Ziegler, and R. Steve Fricker. "A Residency Professional Identity Curriculum and a Longitudinal Measure of Empathy." *Journal of Regional Medical Campuses* 1, no. 4 (October 19, 2018). <https://doi.org/10.24926/jrnc.v1i4.1353>.
109. Cyrus, Ali, Bahman Salehi, Mahdyieh Naziri, Bahman Sadeghi Sedeh, and Rana Vosoulie. "Empathic Communication and Essential Instruction for Medical Students." *Journal of Biology and Today's World* 6, no. 6 (October 6, 2017): 97–101. <https://doi.org/10.15412/J.JBTW.01060601>.
110. D'souza, Prima Cheryl, Smitha L. Rasquinha, Trina Lucille D'souza, Animesh Jain, Vaman Kulkarni, and Keshava Pai. "Effect of a Single-Session Communication Skills Training on Empathy in Medical Students." *Academic Psychiatry: The Journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry*, December 6, 2019. <https://doi.org/10.1007/s40596-019-01158-z>.
111. Dal Santo, L., Pohl, S., Saiani, L., & Battistelli, A. (2013). Empathy in the emotional interactions with patients. Is it positive for nurses too? *Journal of Nursing Education and Practice*, 4(2), p74. <http://doi.org/10.5430/jnep.v4n2p74>
112. Damiano, Rodolfo Furlan, Luciana Maria de Andrade Ribeiro, Amanda Guedes dos Santos, Barbara Almeida da Silva, and Giancarlo Lucchetti. "Empathy is Associated with Meaning of Life and Mental Health Treatment but Not Religiosity Among Brazilian Medical Students." *Journal of Religion and Health*, October 25, 2016, 1–15. doi:10.1007/s10943-016-0321-9.
113. Danilewitz, Marlon, Jacques Bradwejn, and Diana Koszycki. "A Pilot Feasibility Study of a Peer-Led Mindfulness Program for Medical Students." *Canadian Medical Education Journal* 7, no. 1 (March 31, 2016): e31–37.
114. Dávila-Pontón, Yolanda, Alejandro Reyes-Reyes, Aracelis Calzadilla-Núñez, Robert Utsman, Pilar A. Torres-Martínez, and Víctor P. Díaz-Narváez. "Empathy and Personality Styles in Medical Students." *Revista Colombiana De Psicología* 29, no. 2 (December 2020): 73–87. <https://doi.org/10.15446/rcp.v29n2.82988>.
115. De Villalba, Teresa Varela, Maria Jorgelina Ulloque, Silvina Villalba, Raúl Villalba, and Víctor Patricio Díaz-Narváez. "Levels of Empathy in Dentistry Students: Measurement and Comparison in Two Academic Periods. Universidad Católica de Cordoba (UCC) Argentina." *Salud Uninorte. Barranquilla (Col.)* 34, no. 3 (2018): 641–51.
116. Dean, Sue, Maralyn Foureur, Chris Zaslowski, Toby Newton-John, Nickolas Yu and Evangelos Pappas. "The Effects of a Structured Mindfulness Program on the Development of Empathy in Healthcare Students." *NursingPlus Open* 3 (2017) 1-5.
117. DeCaro, Renée, Maureen K. O'Connor, Christina DiTerlizzi, Nana Sekyi-Appiah, John Polk, and Andrew E. Budson. "Educating Students While Recruiting Underrepresented Populations for Alzheimer's Disease Research: The Student Ambassador Program." *BMC Medical Education* 22, no. Article #707 (October 5, 2022). <https://doi.org/10.1186/s12909-022-03749-1>

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

118. Dehning, S., Reiß, E., Krause, D., Gasperi, S., Meyer, S., Dargel, S., ... Siebeck, M. (2014). Empathy in high-tech and high-touch medicine. *Patient Education and Counseling*, 95(2), 259–264. doi:10.1016/j.pec.2014.01.013
119. Del Canale, S., Louis, D. Z., Maio, V., Wang, X., Rossi, G., Hojat, M., & Gonnella, J. S. (2012). The relationship between physician empathy and disease complications: an empirical study of primary care physicians and their diabetic patients in Parma, Italy. *Academic Medicine: Journal of the Association of American Medical Colleges*, 87(9), 1243–1249. doi:10.1097/ACM.0b013e3182628fbf
120. Delgado Bolton, Roberto C., Montserrat San-Martín, and Luis Vivanco. “Role of Empathy and Lifelong Learning Abilities in Physicians and Nurses Who Work in Direct Contact with Patients in Adverse Working Conditions.” *Int. J. Environ. Res. Public Health* 19 (2022): 1–13. <https://doi.org/10.3390/ijerph19053012>.
121. Delgado-Bolton, R., San-Martín, M., Alcorta-Gonzalez, A., & Vivanco, L. (2015). [Medical empathy of physicians-in-training who are enrolled in professional training programs. A comparative intercultural study in Spain]. *Europe PMC, In press*. [http://doi.org/DOI: 10.1016/j.aprim.2015.10.005](http://doi.org/DOI:10.1016/j.aprim.2015.10.005)
122. Delgado-Bolton, Roberto, Montserrat San-Martín, and Luis Vivanco. “Role of a Semiotics-Based Curriculum in Empathy Enhancement: A Longitudinal Study in Three Dominican Medical Schools.” *Frontiers in Psychology* 8 (2017). <https://doi.org/10.3389/fpsyg.2017.02018>.
123. DelPrete, Angela, Christin Giordano, Analia Castiglioni, and Caridad Hernandez. “Medical Students’ Attitudes Toward Non-Adherent Patients Before and After a Simulated Patient-Role Activity and Small-Group Discussion: Revisited.” *Cureus* 8, no. 4. Accessed August 23, 2016. doi:10.7759/cureus.576.
124. Detsomboonrat, Palinee, Sudthida Theppanich, Suttida Banyen, Sansern Hongviphat, Yutthana Khamnil, Komsun Lapauthaya, Anupap Somboonsavatdee, and Saw Nay Min. “Empathy Level towards Patients among Thai Dental Students: A Cross-Sectional Study.” *BMC Oral Health* 23, Article number 184 (2023). <https://bmcoralhealth.biomedcentral.com/articles/10.1186/s12903-023-02891-6>.
125. Di Lillo, M., Cicchetti, A., Scalzo, A. L., Taroni, F., & Hojat, M. (2009). The Jefferson Scale of Physician Empathy: Preliminary Psychometrics and Group Comparisons in Italian Physicians. *Academic Medicine*, 84(9), 1198–1202.
126. Díaz-Narváez, Víctor Patricio, Ana María Erazo Coronado, Jorge Luis Bilbao, Farith González, Mariela Padilla, Madeline Howard, María Guadalupe Silva, et al. “Empathy Gender in Dental Students in Latin America: An Exploratory and Cross-Sectional Study.” *Health* 7 (2015): 1527–35.
127. Díaz-Narváez, V. P., Coronado, A.M.E., Bilbao, J.L., González, F., Padilla, M., Howard, M., Silva, G., Arboleda, J., Bullen, M., Utsman, R., Fajardo, E., Alonso, L.M., Cervantes, M. (2015). Empathy Levels of Dental Students of Central America and the Caribbean Health, 2015, 7, 1678-1686. Published Online December 2015 in SciRes. <http://dx.doi.org/10.4236/health.2015.712182>
128. Díaz-Narváez, V. P., Gutierrez-Ventura, F., de Villalba, T. V., Salcedo-Rioja, M., Calzadilla-Núñez, A., Hamdan-Rodríguez, M., & Cervantes, M. (2015). Empathy Levels of Dentistry Students in Peru and Argentina. *Health*, 07(10), 1268–1274. <http://doi.org/10.4236/health.2015.710141>

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

129. Díaz-Narváez, V., Núñez, A. C., Carrasco, D., Bustos, A., Zamorano, A., Silva, H., ... Reyes, A. (2016). Levels of Empathy among Dental Students in Five Chilean Universities. *Health*, 8, 32–41.
130. Diaz-Narvaez, Victor P., Luz M. Alonso-Palacio, Sara E Caro, Maria Silva, Joel Arboleda-Castillo, Jorge Bilbao, Jesus Iglesias-Acsota, et al. "Compassionate Care" Component of the Construct Empathy in Medical Students In Colombia And Dominican Republic." *Acta Medica Mediterrane* 33 (2017): 101–7.
131. Díaz-Narváez, VP, A Calzadilla-Núñez, PA Torres-Martínez, M Cervantes-Mendoza, and E Fajardo-Ramos. "Empathy and Ontogeny: A Conceptual Approach." *West Indian Med J* 66, no. 3 (2017): 1–12. <https://doi.org/10.7727/wimj.2046.344>.
132. Díaz-Narváez, Víctor Patricio, Ana María Erazo Coronado, Jorge Luis Bilbao, Farith González, Mariela Padilla, Aracelis Calzadilla-Núñez, María Guadalupe Silva-Vetri, et al. "Reconsidering the 'Decline' of Dental Student Empathy within the Course in Latin America." *Acta Med Port* 30, no. 11 (2017): 775–82. <https://doi.org/10.20344/amp.8681>.
133. Díaz-Narváez, Víctor Patricio, Nuvia Estrada-Méndez, Yesenia Arévalo-López, Aracelis Calzadilla-Núñez, and Robert Utsman-Abarca. "Empathy, Components of Empathy and Curricular Evaluation of the Faculty of Dentistry, Evangelical University of El Salvador." *Pesq Bras Odontoped Clin Integr* 17, no. 1 (2017): e3759. <http://dx.doi.org/10.4034/PBOCI.2017.171.40>.
134. Díaz Narváez, Victor Patricio, and Alejandro Reyes Reyes. "Erosion of Empathy during Medical Training by Gender. A Cross-Sectional Study." *Arch Argent Pediatr* 115, no. 6 (2017): 556–61. <https://doi.org/10.5546/aap.2017.eng.556>.
135. Díaz-Narváez, Víctor Patricio, Ana Cristina Amezaga-Avitia, Pablo Alexander Sarabia-Alvarez, Macarena Lagos-Elgueta, Monserrat Saavedra-Madrid, Pablo Silva-Reyes, Mariela Padilla, and María Paz Rodríguez-Hopp. "Chilean Dentistry Students, Levels of Empathy and Empathic Erosion: Necessary Evaluation before a Planned Intervention: Levels of Empathy, Evaluation and Intervention." *The Saudi Dental Journal* 30, no. 2 (April 1, 2018): 117–24. <https://doi.org/10.1016/j.sdentj.2017.11.004>.
136. Díaz-Narváez, Víctor, Yaneth Herazo-Beltrán, Aracelis Calzadilla-Núñez, Lizet Osorio-Cerda, and Aura Esther Gauna-Quiñonez. "Diagnosis of the Empathic Situation in Students of Physioteraphy: Cross-Sectional Study." *Salud Uninorte. Barranquilla (Col.)* 34, no. 3 (2018): 664–74. <http://dx.doi.org/10.14482/sun.34.3.615.82>.
137. Díaz-Narváez, Víctor P., Aracelis Calzadilla-Núñez, Paulina López-Orellana, Robert Utsman-Abarca, and Luz Marina Alonso-Palacio. "Empathic Decline and Training in Nursing Students." *Rev Esc Enferm USP* 54 (2020): e03619. <https://doi.org/10.1590/S1980-220X2019006803619>.
138. Díaz-Narváez, Víctor P., Aracelis Calzadilla-Núñez, Alejandro Reyes-Reyes, Gloria Lastre Amell, Herminia Castellón-Montenegro, Irma Andrade Valles, Shirley Fernández-Aragón, et al. "Empathy, Psychometrics, Cut-off Points in Nursing Students from Latin America." *International Nursing Review*, June 29, 2022. <https://doi.org/10.1111/inr.12783>.
139. Díaz-Narváez, Víctor P., Víctor Pedrero Castillo, Alejandro Reyes-Reyes, Mariela Padilla, Farith González-Martínez, Joyce Huberman, Aracelis Calzadilla-Núñez, et al. "The

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Jefferson Scale of Empathy: Measurement Properties, Underlying Components, Norms, and Cutoff Points in Dentistry Students in Latin America. A Multicentric Study.” *Interciencia* VOL. 46, no. No 4 (April 2021).  
<https://repositorio.unphu.edu.do/handle/123456789/3660>.
140. Díaz-Narváez, Víctor P., Aracelis Calzadilla-Núñez, Alejandro Reyes-Reyes, María G. Silva-Vetri, Pilar Torres-Martínez, Eugenia Smirna González-Díaz, Luz Marina Alonso-Palacio, et al. “Psychometry and Cut-off Points of the Jefferson Scale of Empathy in Medical Students in Central America and the Caribbean.” *PRHSJ* 41, no. 1 (March 2022).
141. Diaz-Perez, Anderson, Shirley Paola Fernández Aragón, Víctor Patricio Díaz Narváez, Ailem Fernández Beleño, Elkin Navarro-Quiroz, and Carmenza Leonor Mendoza Cataño. “Empathy in the Curriculum for Patient Care.” *Global Journal of Health Science* 10, no. 4 (2018): 93–99. <https://doi.org/10.5539/gjhs.v10n4p93>.
142. Díez, Nieves, Loreto García del Barrio, Maria Cristina Rodríguez-Díez, Raquel Martín-Lanas, Alfredo Gea, and Manuel João Costa. “Validation of the Jefferson Scale of Patient Perception of Physician Empathy Spanish (Spain) Version in Primary Care.” *Family Medicine* 54, no. 8 (2022): 621–28.
143. Dinoff, Adam, Sean Lynch, Azeb Shahul Hameed, Jennifer Koestler, Stephen J. Ferrando, and Lidia Klepacz. “When Did the Empathy Die?” *Medical Science Educator*, 2023. <https://doi.org/10.1007/s40670-023-01768-1>.
144. do Rosário, Sobral, Francisco, Diana V. Almeida, Jorge Oliveira, Maria Luisa Lima, and João Filipe Raposo. “Close Reading and Creative Writing – CrewD Program. An Alternative Educational Method for Group Care Intervention in Type 2 Diabetes Management. A Randomized Trial.” *Canadian Journal of Diabetes*, July 31, 2019. <https://doi.org/10.1016/j.jcjd.2019.07.149>.
145. Dohrenwend, A. M. “Defining Empathy to Better Teach, Measure, and Understand Its Impact.” *Academic Medicine : Journal of the Association of American Medical Colleges*, August 2018. <https://doi.org/10.1097/ACM.0000000000002427>.
146. Doreille, Alice, Eve Vilaine, Xavier Belenfant, Wided Tabbi, Ziad Massy, Emmanuelle Corruble, Odile Basse, et al. “Can Empathy Be Taught? A Cross-Sectional Survey Assessing Training to Deliver the Diagnosis of End Stage Renal Disease.” *Plos One*, September 8, 2021. <https://doi.org/10.1371/journal.pone.0249956>.
147. Dorough, Ramona Jewel Maria, Maria Adamuti-Trache, and Caitlin Holt Siropaides. “Association of Medical Student Characteristics and Empathy After a Communication Workshop.” *Journal of Patient Experience* 8 (2021): 1–7. <https://doi.org/10.1177/23743735211065273>.
148. Down, Susan, Aus Alzaid, William H. Polonsky, Anne Belton, Steven Edelman, Victoria Gamerman, Friederike Nagel, Jisoo Lee, James Emmerson, and Matthew Capehorn. “Physician Experiences When Discussing the Need for Additional Oral Medication with Type 2 Diabetes Patients: Insights from the Cross-National IntroDia® Study.” *Diabetes Research and Clinical Practice*, January 11, 2019. <https://doi.org/10.1016/j.diabres.2019.01.012>.
149. Driscoll, Laura, Julie Ann Starr, Mary Beth Holmes, and Elizabeth Murphy. “Participant Outcomes of a Student-Run, Intensive, Short-Term, Task-Specific Rehabilitation Program for Individuals Post-Stroke.” *J Allied Health* 51, no. 1 (Spring 2022): e27–32.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

150. du Vaure, Céline Buffel, Cédric Lemogne, Lucie Bunge, Annie Catu-Pinault, Nicolas Hoertel, Christian Ghasarossian, Marie-Eve Vincens, Eric Galam, and Philippe Jaury. “Promoting Empathy among Medical Students: A Two-Site Randomized Controlled Study.” *Journal of Psychosomatic Research* 103 (December 1, 2017): 102–7. <https://doi.org/10.1016/j.jpsychores.2017.10.008>.
151. Duarte, Marta Isabel Ferreira, Mário Lino Barata Raposo, Paulo Joaquim Fonseca da Silva Farinha Rodrigues, and Miguel Castelo Branco. “Measuring Empathy in Medical Students, Gender Differences and Level of Medical Education: An Identification of a Taxonomy of Students.” *Investigación En Educación Médica*. Accessed September 13, 2016. doi:10.1016/j.riem.2016.04.007.
152. Duke, P., Grosseman, S., Novack, D. H., & Rosenzweig, S. (2014). Preserving third year medical students’ empathy and enhancing self-reflection using small group “virtual hangout” technology. *Medical Teacher*, 1–6. doi:10.3109/0142159X.2014.956057
153. Duran, Esteban, Mariela Padilla, Robert Utsman, Alejandro Reyes-Reyes, Aracelis Calzadilla-Núñez, and Victor Diaz-Narvaez. “Analysis of the Relationship between Empathy and Family Functioning in Dentistry Students of the Latin American University of Science and Technology (Ulacit), San Jose, Costa Rica.” Barcelona, Spain, 2017. <https://doi.org/10.21125/edulearn.2017.081>
154. Dyrbye, L. N., Eacker, A. M., Harper, W., Power, D. V., Massie, F. S., Jr, Satele, D., ... Shanafelt, T. D. (2012). Distress and empathy do not drive changes in specialty preference among US medical students. *Medical Teacher*, 34(2), e116–122. doi:10.3109/0142159X.2012.644830
155. Elias, Cezanne M., Cleveland G. Shields, Jennifer J. Griggs, Kevin Fiscella, Sharon L. Christ, Joseph Colbert, Stephen G. Henry, et al. “The Social and Behavioral Influences (SBI) Study: Study Design and Rationale for Studying the Effects of Race and Activation on Cancer Pain Management.” *BMC Cancer* 17 (August 25, 2017): 575. <https://doi.org/10.1186/s12885-017-3564-2>.
156. Eom, Sohee, and Suk-Sun Kim. “Factors associated with Nurses’ Moral Sensitivity.” *Journal of Korean Academy of Psychiatric and Mental Health Nursing* 27, no. 3 (September 1, 2018): 199–207. <https://doi.org/10.12934/jkpmhn.2018.27.3.199>.
157. Epinat-Duclos, Justine, Alexandre Foncelle, François Quesque, Eric Chabanat, Alexandre Duguet, Jean Baptiste Van der Henst, and Yves Rossetti. “Does Nonviolent Communication Education Improve Empathy in French Medical Students?” *International Journal of Medical Education* 12 (2021): 205–18. <https://doi.org/10.5116/ijme.615e.c507>.
158. Fan, Angela P., Russell O. Kosik, Lei Huang, Yuhong Gjiang, Selina S. Lien, Xudong Zhao, Xiaojie Chang, Yuhwa Wang, and Qi Chen. “Burnout in Chinese Medical Students and Residents: An Exploratory Cross-Sectional Study.” *The Lancet* 390 (December 1, 2017): S84. [https://doi.org/10.1016/S0140-6736\(17\)33222-1](https://doi.org/10.1016/S0140-6736(17)33222-1).
159. Fan, Angela P, Russell O Kosik, Guo-Tong Xu, Qiaoling Cai, Selina Lien, Lei Huang, Xudong Zhao, Xiaojie Zhang, Yuhwa Wang, and Qi Chen. “Factors Associated with Professionalism in Chinese Medical Students: An Exploratory Cross-Sectional Study.” *The Lancet*, The Lancet-CAMS Health Summit, 2016, 388, Supplement 1 (October 2016): S32. doi:10.1016/S0140-6736(16)31959-6.
160. Fashami, Fatemeh Mirzayeh, Mona Nili, and Mina Mottaghi. “Measuring Empathy in

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Iranian Pharmacy Students: Using The Jefferson Scale of Empathy-Health Profession Students.” American Association of Colleges of Pharmacy, no. PAP (May 22, 2022): 1–10.
161. Feingold, Jordyn H., Douglas A. Drossman, William Chey, Jacob E. Kurlander, Carolyn B. Morris, Shrikant Bangdiwala, and Laurie Keefer. “Preliminary Development and Validation of the Patient-Physician Relationship Scale for Physicians for Disorders of Gut-Brain Interaction.” *Neurogastroenterology & Motility* n/a, no. n/a (n.d.): e13976. <https://doi.org/10.1111/nmo.13976>.
162. Ferreira-Valente, Alexandra, Patrício Costa, Marta Elorduy, Montserrat Virumbrales, Manuel J. Costa, and Jorge Palés. “Psychometric Properties of the Spanish Version of the Jefferson Scale of Empathy: Making Sense of the Total Score through a Second Order Confirmatory Factor Analysis.” *BMC Medical Education* 16 (September 19, 2016): 242. <https://doi.org/10.1186/s12909-016-0763-5>.
163. Ferreira-Valente, Alexandra, Joana S. Monteiro, Rita M. Barbosa, Ana Salgueira, Patrício Costa, and Manuel J. Costa. “Clarifying Changes in Student Empathy throughout Medical School: A Scoping Review.” *Advances in Health Sciences Education*, July 27, 2016, 1–21. doi:10.1007/s10459-016-9704-7.
164. Fernández-Olano, C., Montoya-Fernández, J., & Salinas-Sánchez, A. S. (2008). Impact of clinical interview training on the empathy level of medical students and medical residents. *Medical Teacher*, 30(3), 322–324. doi:10.1080/01421590701802299
165. Fields, S. K., Hojat, M., Gonnella, J. S., Mangione, S., Kane, G., & Magee, M. (2004). Comparisons of Nurses and Physicians on an Operational Measure of Empathy. *Evaluation & the Health Professions*, 27(1), 80–94. doi:10.1177/0163278703261206
166. Fields, S. K., Mahan, P., Tillman, P., Harris, J., Maxwell, K., & Hojat, M. (2011). Measuring empathy in healthcare profession students using the Jefferson Scale of Physician Empathy: Health provider – student version. *Journal of Interprofessional Care*, 25(4), 287–293. doi:10.3109/13561820.2011.566648
167. Fjortoft, N., Van Winkle, L. J., & Hojat, M. (2011). Measuring Empathy in Pharmacy Students. *American Journal of Pharmaceutical Education*, 75(6). Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3175671/>
168. Foreback, Jami, Halina Kusz, Brenda Lovegrove Lepisto, and Barbara Pawlaczyk. “Empathy in Internal Medicine Residents at Community-Based Hospitals: A Cross-Sectional Study.” *Journal of Medical Education and Curricular Development* 5 (January 1, 2018): 2382120518771352. <https://doi.org/10.1177/2382120518771352>.
169. Fraiman, Yarden S., Christine Cheston, Catherine D. Michelson, and Colin M. Sox. “Pilot of a Novel Facilitator-Friendly Six-Month Mindfulness Curriculum for Interns (Research Abstract).” *Academic Pediatrics* 17, no. 5 (July 1, 2017): e45. doi:10.1016/j.acap.2017.04.129.
170. Friedrich, B., Evans-Lacko, S., London, J., Rhydderch, D., Henderson, C., & Thornicroft, G. (2013). Anti-stigma training for medical students: the Education Not Discrimination project. *The British Journal of Psychiatry*, 202(s55), s89–s94. doi:10.1192/bjp.bp.112.114017
171. Håkansson Eklund, Jakob, Inger K. Holmström, Anna Ollén Lindqvist, Annelie J. Sundler, Jacek Hochwälder, and Lena Marmstål Hammar. “Empathy Levels among Nursing Students: A Comparative Cross-Sectional Study.” *Nursing Open* 6, no. 3 (July 2019):

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- 983–89. <https://doi.org/10.1002/nop2.280>
172. Harz Fresno, Dominique Marie. “The Art of Teaching Empathy: Feasibility and Impact of Online Art-Based Education on Interns’ Empathy. A Pilot Quasi-Experimental Mixed Methods Study.” Harvard Medical School, 2021. <https://dash.harvard.edu/handle/1/37368639>.
173. Fuertes, J. N., Boylan, L. S., & Fontanella, J. A. (2009). Behavioral indices in medical care outcome: the working alliance, adherence, and related factors. *Journal of General Internal Medicine*, 24(1), 80–85. doi:10.1007/s11606-008-0841-4
174. Gabard, D. L., Lowe, D. L., Deusinger, S. S., Stelzner, D. M., & Crandall, S. J. (2013). Analysis of Empathy in Doctor of Physical Therapy Students: A Multi-site Study. *Journal of Allied Health*, 42(1), 10–16.
175. Gajewski, Ellen M. “Effects of Weight Bias Training on Student Nurse Empathy: A Quasiexperimental Study.” *Nurse Education in Practice*, Article 103538, 66 (January 2023). <https://doi.org/10.1016/j.nepr.2022.103538>.
176. Galam, Eric, Camille Vauloup Soupault, Lucie Bunge, Céline Buffel du Vaure, Emilie Boujut, and Philippe Jaury. “‘Intern Life’: A Longitudinal Study of Burnout, Empathy, and Coping Strategies Used by French GPs in Training.” *BJGP Open*, June 13, 2017, bjgpopen17X100773. <https://doi.org/10.3399/bjgpopen17X100773>.
177. Gallagher, Peter, Helen Moriarty, Mark Huthwaite, and Bee Lim. “Challenging Some Assumptions about Empathy.” *The Clinical Teacher*, January 1, 2017, n/a-n/a. doi:10.1111/tct.12607.
178. Garza, A. A., Hojat, M., Herrera, S. E. T., Guerrero, J. F. G., & Lara, F. J. R. (2005). Validación de la Escala de Empatía Médica de Jefferson en estudiantes de medicina mexicanos. *Salud Mental*, 28(5), 57–63.
179. George, Jessa, Manoj Kumar L, and Libina Babu. “Empathy Among Nursing Students and Its Socio Demographic Correlates: A Descriptive Study.” *International Journal of Scientific Research* 5, no. 8 (August 31, 2016). <http://worldwidejournals.in/ojs/index.php/ijsr/article/view/11110>.
180. Ghetti, C., Chang, J., & Gosman, G. (2009). Burnout, Psychological Skills, and Empathy: Balint Training in Obstetrics and Gynecology Residents. *Journal of Graduate Medical Education*, 1(2), 231–235. doi:10.4300/JGME-D-09-00049.1
181. Gholamzadeh, Sakineh, Maryam Khastavaneh, Zahra Khademian, and Soraya Ghadakpour. “The Effects of Empathy Skills Training on Nursing Students’ Empathy and Attitudes toward Elderly People.” *BMC Medical Education* 18, no. 1 (August 15, 2018): 198. <https://doi.org/10.1186/s12909-018-1297-9>.
182. Giménez-Espert, María del Carmen, and Vicente Javier Prado-Gascó. “Adaptation of the Jefferson Scale of Empathy (JSE) for Nursing Students to Nurses.” *Contemporary Nurse* 0, no. ja (August 21, 2020): 1–22. <https://doi.org/10.1080/10376178.2020.1813046>.
183. Giménez-Espert, María del Carmen, Selene Valero-Moreno, and Vicente Javier Prado-Gascó. “Evaluation of Emotional Skills in Nursing Using Regression and QCA Models: A Transversal Study.” *Nurse Education Today* 74 (March 1, 2019): 31–37. <https://doi.org/10.1016/j.nedt.2018.11.019>.
184. Giménez-Espert, María Del Carmen, and Vicente-Javier Prado-Gascó. “The Moderator Effect of Sex on Attitude toward Communication, Emotional Intelligence, and Empathy



## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- in the Nursing Field.” *Revista Latino-Americana De Enfermagem* 25 (December 11, 2017): e2969. <https://doi.org/10.1590/1518-8345.2018.2969>.
185. Gonça lves-Pereira, M., Trancas, B., Loureiro, J., Papoila, A., & Caldas-De-Almeida, J. M. (2013). Empathy as related to motivations for medicine in a sample of first-year medical students. *Psychological Reports*, 112(1), 73–88. doi:10.2466/17.13.PR0.112.1.73-88
186. Gonullu, I., & Oztuna, D. (2012). A Turkish Adaptation Of The Student Version Of Jefferson Scale Of Physician Empathy. *Marmara Medical Journal*, 25, 87–92. doi:10.5472/MMJ.2012.02272.1
187. Gonzalez, Amanda I., Joost T. P. Kortlever, Léon Rijk, David Ring, Laura E. Brown, and Lee M. Reichel. “Is There a Correlation between the Patient-Doctor Relationship Questionnaire and Other Patient-Reported Experience Measures?” *Patient Experience Journal* 7, no. 1 (April 28, 2020): 44–50. <https://doi.org/10.35680/2372-0247.1399>.
188. González-Díaz, Eugenia Smirna, María Guadalupe Silva-Vetri, Patricia Díaz-Calzadilla, Aracelis Calzadilla-Núñez, Alejandro Reyes-Reyes, and Víctor Patricio Díaz-Narváez. “Decline in Empathy Levels and Sex Differences in Medical Students from the Caribbean.” *Rev. Fac. Med.* 69, no. 4 (2021): e86227. <https://doi.org/10.15446/revfacmed.v69n4.86227>.
189. González-Martínez, Farith, Lesbia Tirado-Amador, Josvir Bueno-Hernández, Braulio Chica-Duque, and Víctor Patricio Díaz-Narváez. “Changes in Empathy Levels on Dentistry’s Students of Public University in Cartagena City, Colombia.” *Pesquisa Brasileira Em Odontopediatria e Clínica Integrada* 18, no. 1 (2018): e3989. <http://dx.doi.org/10.4034/PBOCI.2018.181.44>.
190. Gonzalez-Santos, Diana M., Hussey M. Paredes-Olave, Maria del P. Espinosa-Bejarano, Mauricio Pérez-Florez, and Lisa F. Gil-Palacio. “Empathy in the Doctor-Patient Relationship in Medical Students at a University in Cali.” *Health Science Journal* 16, no. S6 (March 31, 2022): 919–28.
191. Goodarzi, N., Azma, K., Tavakolian, E., & Peyvand, P. (2015). Association of Nurses’ Self-Reported Empathy and Mu Suppression with Patients’ Satisfaction. *Journal of Caring Sciences*, 4(3), 197–205. <http://doi.org/10.15171/jcs.2015.020>
192. Gosselin, E., Bourgault, P., & Lavoie, S. (2015). Association between job strain, mental health and empathy among intensive care nurses. *Nursing in Critical Care*, n/a–n/a. <http://doi.org/10.1111/nicc.12064>
193. Gosselin, Emilie, Emilie Paul-Savoie, Stephan Lavoie, and Patricia Bourgault. “Evaluation of Nurse Empathy Perceived by the Standardized Patient in Simulation: A French Validation of the Jefferson Scale of Patient Perceptions of Physician Empathy.” *Journal of Nursing Measurement* 25, no. 2 (August 1, 2017): 152–61. doi:10.1891/1061-3749.25.2.E152.
194. Gouveia, L., Lelorain, S., Brédart, A., Dolbeault, S., Bonnaud-Antignac, A., Cousson-Gélie, F., & Sultan, S. (2015). Oncologists’ perception of depressive symptoms in patients with advanced cancer: accuracy and relational correlates. *BMC Psychology*, 3(1), 6. <http://doi.org/10.1186/s40359-015-0063-6>
195. Gradiski, Ivan P., Ana Borovecki, Marko Ćurković, Montserrat San-Martín, Roberto C. Delgado Bolton, and Luis Vivanco. “Burnout in International Medical Students: Characterization of Professionalism and Loneliness as Predictive Factors of Burnout.” *Int. J. Environ. Res. Public Health* 19 (2022): 1385–99.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- <https://doi.org/10.3390/ijerph19031385>
196. Graham, Jeremy, Lauren M. Benson, Judy Swanson, Darryl Potyk, Kenn Daratha, and Ken Roberts. "Medical Humanities Coursework Is Associated with Greater Measured Empathy in Medical Students." *The American Journal of Medicine*, August 24, 2016. doi:10.1016/j.amjmed.2016.08.005.
  197. Graham, K. L., Green, S., Kurlan, R., & Pelosi, J. S. (2014). A Patient-Led Educational Program on Tourette Syndrome: Impact and Implications for Patient-Centered Medical Education. *Teaching and Learning in Medicine*, 26(1), 34–39. doi:10.1080/10401334.2013.857339
  198. Gräske, J., Meyer, S., & Wolf-Ostermann, K. (2014). Quality of life ratings in dementia care – a cross-sectional study to identify factors associated with proxy-ratings. *Health and Quality of Life Outcomes*, 12(1), 1–11. doi:10.1186/s12955-014-0177-1
  199. Gross, N., Nicolas, M., Neigher, S., McPartland, S., Heyes, M., Wrigley, S., & Kurlan, R. (2014). Planning a Patient-Centered Parkinson's Disease Support Program: Insights from Narrative Medicine. *Advances in Parkinson's Disease*, 03(04), 35–39. doi:10.4236/apd.2014.34006
  200. Grosseman, S., Hojat, M., Duke, P., Mennin, S., Rosenzweig, S., & Novack, D. (2014). Empathy, Self-Reflection, and Curriculum Choice. *Interdisciplinary Journal of Problem-Based Learning*, 8(2). doi:10.7771/1541-5015.1429
  201. Grosseman, S., Novack, D. H., Duke, P., Mennin, S., Rosenzweig, S., Davis, T. J., & Hojat, M. (n.d.). Residents' and standardized patients' perspectives on empathy: Issues of agreement. *Patient Education and Counseling*. doi:10.1016/j.pec.2014.04.007
  202. Gruppen, Larry D., and R. Brent Stansfield. "Individual and Institutional Components of the Medical School Educational Environment." *Academic Medicine* 91, no. 11 (November 2016). doi:10.1097/ACM.0000000000001361.
  203. Guihard, Gilles. "Measurement Invariance Analysis of Two Empathy Scales in a Sample of French First Year Students Registered in Health Formation." *Current Psychology*, June 20, 2021. <https://doi.org/10.1007/s12144-021-01936-9>.
  204. Guilera, Teresa, Iolanda Batalla, Carles Forné, and Jorge Soler-González. "Empathy and Big Five Personality Model in Medical Students and Its Relationship to Gender and Specialty Preference: A Cross-Sectional Study." *BMC Medical Education* 19, no. 1 (February 14, 2019): 57. <https://doi.org/10.1186/s12909-019-1485-2>.
  205. Guilera, Teresa, Iolanda Batalla, and Jorge Soler-González. "Empathy and Specialty Preference in Medical Students. Follow-up Study and Feedback." *Educación Médica*. Accessed December 26, 2017. <https://doi.org/10.1016/j.edumed.2017.07.017>.
  206. Gupta, Anushka, and Nagesh Lakshminarayan. "Empathy and Emotional Intelligence in Dental Practitioners of Bareilly City – A Cross Sectional Study." <http://www.scopemed.org/?mno=241500>, July 2016. <http://imsear.hellis.org/handle/123456789/177374>.
  207. Haddad, YG, L Sturzu, Michaël Bisch, K Yasukawa, and Alexandre Baudet. "Empathy of Dental Students and Educators in French Hospitals: A Cross-Sectional Study." *Nursing & Health Sciences*, April 12, 2023. <https://doi.org/10.1111/nhs.13017>.
  208. Hajibabae, Fatemeh, Mansoureh A Farahani, Zahra Ameri, Tahmineh Salehi, and Fatemeh Hosseini. "The Relationship between Empathy and Emotional Intelligence among Iranian Nursing Students." *International Journal of Medical Education* 9

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- (September 19, 2018): 239–43. <https://doi.org/10.5116/ijme.5b83.e2a5>.
209. Håkansson Eklund, Jakob, Inger K. Holmström, Anna Ollén Lindqvist, Annelie J. Sundler, Jacek Hochwälder, and Lena Marmstål Hammar. “Empathy Levels among Nursing Students: A Comparative Cross-Sectional Study.” *Nursing Open* 6, no. 3 (July 2019): 983–89. <https://doi.org/10.1002/nop2.280>.
210. Haley, Brandy, Seongkum Heo, Patricia Wright, Claudia Barone, Mallikarjuna Rao Rettiganti, and Michael Anders. “Relationships among Active Listening, Self-Awareness, Empathy, and Patient-Centered Care in Associate and Baccalaureate Degree Nursing Students.” *NursingPlus Open* 3, no. Supplement C (January 1, 2017): 11–16. doi:10.1016/j.npls.2017.05.001.
211. Hall, M., Hanna, L.-A., Hanna, A., & McDevitt, C. (2015). Empathy in UK pharmacy students: assessing differences by gender, level in the degree programme, part-time employment and medical status. *Pharmacy Education*, 15(1), 241 – 247.
212. Hasan, S., Al-Sharqawi, N., Dashti, F., AbdulAziz, M., Abdullah, A., Shukkur, M., ... Thalib, L. (2013). Level of Empathy among Medical Students in Kuwait University, Kuwait. *Medical Principles and Practice*. doi:10.1159/000348300
213. Hasan, S. S., Chan, Kheng Kai, Babar, Muneer, Ahmed, Syed Imran, & Mitha, Shahid. (2013). An assessment of pharmacy students’ empathy levels in Malaysia. *Journal of Advanced Pharmacy Education & Research*, 3(4), 531–540.
214. Hegazi, I., & Wilson, I. (2013). Maintaining empathy in medical school: It is possible. *Medical Teacher*, 1–7. doi:10.3109/0142159X.2013.802296
215. Hegazi, Iman, Annemarie Hennessy and Ian Wilson (2017). Empathy Levels in Medical Students: Do They Really Change Over Time?, Empathy - An Evidence-based Interdisciplinary Perspective, Dr. Makiko Kondo (Ed.), InTech, DOI: 10.5772/intechopen.69625. Available from: <https://www.intechopen.com/books/empathy-an-evidence-based-interdisciplinary-perspective/empathy-levels-in-medical-students-do-they-really-change-over-time>
216. Higuchi, Yuji, Masatoshi Inagaki, Toshihiro Koyama, Yoshihisa Kitamura, Toshiaki Sendo, Maiko Fujimori, Hitomi Kataoka, Chinatsu Hayashibara, Yosuke Uchitomi, and Norihito Yamada. “Emotional Intelligence and Its Effect on Pharmacists and Pharmacy Students with Autistic-like Traits.” *American Journal of Pharmaceutical Education* 81, no. 4 (May 2017). <https://doi.org/10.5688/ajpe81474>.
217. Higuchi, Y., Uchitomi, Y., Fujimori, M., Koyama, T., Kataoka, H., Kitamura, Y., ... Inagaki, M. (2015). Exploring autistic-like traits relating to empathic attitude and psychological distress in hospital pharmacists. *International Journal of Clinical Pharmacy*, 1–9. <http://doi.org/10.1007/s11096-015-0204-2>
218. Hogan, Rosemarie, Chris Rossiter, and Christine Catling. “Cultural Empathy in Midwifery Students: Assessment of an Education Program.” *Nurse Education Today*, August 23, 2018. <https://doi.org/10.1016/j.nedt.2018.08.023>.
219. Högländer, J, IK Holmström, and T Gustafsson. “Implementing A Person-Centred COMMUNICATIION (ACTION) Educational Intervention for in-Home Nursing Assistants – a Study Protocol.” *BMC Geriatrics*, Article 112, 23 (2023). <https://doi.org/10.1186/s12877-023-03831-3>.
220. Holmes, Mary Beth, and Julie Ann Starr. “A Comparison of Doctor of Physical Therapy Students’ Self-Reported Empathy With Standardized Patients Perceptions of Empathy

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- During a Simulated Telehealth Encounter.” *Journal of Patient Experience* 9 (2022): 1–5. <https://doi.org/10.1177/23743735221112226>.
221. Holmes, Mary Beth, Laura Driscoll, Elizabeth Murphy, and Julie A. Starr. “A Cross-Sectional Study of Empathy Among Students at Two Doctor of Physical Therapy Programs in Boston.” *Journal of Allied Health* 48, no. 3 (2019): 181–87.
222. Hong, M., Bahn, G. H., Lee, W. H., & Moon, S. J. (2011). Empathy in Korean psychiatric residents. *Asia-Pacific Psychiatry*, 3(2), 83–90. doi:10.1111/j.1758-5872.2011.00123.x
223. Hong, M., Lee, W. H., Park, J. H., Yoon, T. Y., Moon, D. S., Lee, S. M., & Bahn, G. H. (2012). Changes of empathy in medical college and medical school students: 1-year follow up study. *BMC Medical Education*, 12(1), 122.
224. Horton, K., & Arber, A. (2012, December). Afresh- a study on fostering empathy between students and older people - A practical approach. University of Surrey.
225. Howard Mora, M., Navarro Rodríguez, S., Rivera Ugalde, I., Zamorano Arancibia, A., & Díaz Narváez, V. P. (2014). Measuring the level of empathic orientation in the student of the Faculty of Dentistry, University of Costa Rica. *Odovtos; Οδοντος (Odontos): Número 15*. Retrieved from <http://www.kerwa.ucr.ac.cr/handle/10669/10149>
226. Howell, Sherri. “Empathy & Its Role in Quality Care.” *Osteopathic Family Physician* 8, no. 4 (July/August 2016): 20–23.
227. Hsiao, C.-Y., Lu, H.-L., & Tsai, Y.-F. (2015). Factors influencing mental health nurses’ attitudes towards people with mental illness. *International Journal of Mental Health Nursing*, 24(3), 272–280. <http://doi.org/10.1111/inm.12129>
228. Hsiao, C.-Y., & Tsai, Y.-F. (2015). Factors Associated With the Perception of Family Nursing Practice Among Mental Health Nurses in Taiwan. *Journal of Family Nursing*, 1074840715606543. <http://doi.org/10.1177/1074840715606543>
229. Hsiao, C.-Y., Tsai, Y.-F., & Kao, Y.-C. (2012). Psychometric properties of a Chinese version of the Jefferson Scale of Empathy-Health Profession Students. *Journal of Psychiatric and Mental Health Nursing*. doi: 10.1111/jpm.12024
230. Hsieh, N. K., Herzig, K., Gansky, S. A., Danley, D., & Gerbert, B. (2006). Changing dentists’ knowledge, attitudes and behavior regarding domestic violence through an interactive multimedia tutorial. *The Journal of the American Dental Association*, 137(5), 596–603.
231. Hu, Shijia, and Bien Wen Pui Lai. “Increasing Empathy for Children in Dental Students Using Virtual Reality.” *International Journal of Paediatric Dentistry*, February 10, 2022, 1–19.
232. Hvidt, Elisabeth Assing, Jens Søndergaard, Sonja Wehberg, Niels Christian Hvidt, and Christina Maar Andersen. “A Cross-sectional Study of Student Empathy across Four Medical Schools in Denmark— Associations between Empathy Level and Age, Sex, Specialty Preferences and Motivation.” *BMC Medical Education* 22 (March 3, 2022): 1–12. <https://doi.org/10.1186/s12909-022-03532-2>.
233. Igde, Fusun Artiran, and Mustafa Kursat Sahin. “Changes in Empathy during Medical Education: An Example from Turkey.” *Pakistan Journal of Medical Sciences* 33, no. 5 (2017): 1177–81. <https://doi.org/10.12669/pjms.335.13074>.
234. Iglesias, Losa, Marta Elena, Jiménez Fernández, Corral Liria, Pino Casado, Rodriguez Vazquez, Gomez Caballero, Jose Luis, Alameda Cuesta, and Becerro de Bengoa Vallejo. “Geriatric Simulation to Increase Empathy in Nursing Students: A Pre-

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Post-Test Study.,” 2020, 10.
235. Jacoby, Jeanne L., Amy B. Smith, D. J. DeWaay, R. D. Barraco, M. R. Greenberg, B. G. Kane, J. E. Macfarlan, K. R. Weaver, and J. F. Quinn. “Developing Emotional Intelligence Through a Longitudinal Leadership Curriculum in UME: Combating the Decline in Medical Student Empathy.” *Medical Science Educator* 31 (2021): 29–35.
236. Javed, Muhammad Qasim. “The Evaluation Of Empathy Level Of Undergraduate Dental Students In Pakistan: A Cross-Sectional Study.” *Journal of Ayub Medical College, Abbottabad: JAMC* 31, no. 3 (September 2019): 402–6.
237. Jazi, G. A., Eftekhar, M., Mobasher, P., Tehrani, S. S., Ahmadi, K., & Fahim, M. R. (2016). Surveying the attitudes of transsexual patients referring to Tehran Institute of Psychiatry toward doctors’ empathy, Iran, 2011-2012. *Journal of Medical Ethics and History of Medicine*, 8(0). Retrieved from <http://jmehm.tums.ac.ir/index.php/jmehm/article/view/139>
238. Jiří Kožený, & Lýdie Tišanská. (2013). The structure of the Jefferson Scale of Physician Empathy in Czech physicians. *Československá psychologie*, 57(6), 521–532.
239. Jordan, Kevin D., and Penni Smith Foster. “Medical Student Empathy: Interpersonal Distinctions and Correlates.” *Advances in Health Sciences Education: Theory and Practice*, March 12, 2016. doi:10.1007/s10459-016-9675-8.
240. Jumroonrojana, K., & Zartrungpak, S. (2013). Development of the Jefferson Scale of Physician Empathy-Student Version (Thai Version). *Journal of the Psychiatric Association of Thailand*, 57(2), 213–224.
241. Kane, G. M., Snowden, A., & Martin, C. R. (2013). Empathy in mental health nursing: learned, acquired or lost? *British Journal of Mental Health Nursing*, 2(1), 28–36.
242. Kagawa, Yumi, Hirono Ishikawa, Daisuke Son, Tsuyoshi Okuhara, Hiroko Okada, Haruka Ueno, Eiko Goto, Aiko Tsunozumi, and Takahiro Kiuchi. “Using Patient Storytelling to Improve Medical Students’ Empathy in Japan: A Pre-post Study.” *BMC Medical Education*, Article: 67, 23 (2023): 1–8. <https://doi.org/10.1186/s12909-023-04054-1>.
243. Karani Rajiv, Jefferson Francis, Vernez Simone, Xie Lillian, Patel Roshan M., Osann Kathryn, Tapiero Shlomi, Stephany Heidi, Landman Jaime, and Clayman Ralph V. “Mp34-14 Assessment of Surgical Skills of Urology Resident Applicants: Four-Year Experience.” *Journal of Urology* 203, no. Supplement 4 (April 1, 2020): e508–e508. <https://doi.org/10.1097/JU.0000000000000878.014>.
244. Karimi, Fatemeh Zahra, and Mahbubeh Abdollahi. “Factors Affecting Empathy with Patient among Healthcare Provider Students: A Structural Equation Modeling Study.” *Indian Journal of Critical Care Medicine : Peer-Reviewed, Official Publication of Indian Society of Critical Care Medicine* 23, no. 9 (September 2019): 396–99. <https://doi.org/10.5005/jp-journals-10071-23232>.
245. Kataoka, H. U., Koide, N., Hojat, M., & Gonnella, J. S. (2012). Measurement and correlates of empathy among female Japanese physicians. *BMC Medical Education*, 12(1), 48. doi:10.1186/1472-6920-12-48
246. Kataoka, H. U., Koide, N., Ochi, K., Hojat, M., & Gonnella, J. S. (2009). Measurement of empathy among Japanese medical students: Psychometrics and score differences by gender and level of medical education. *Academic Medicine*, 84(9), 1192. doi:10.1097/ACM.0b013e3181b180d4
247. Kataoka, Hitomi U., Akiko Tokinobu, Chikako Fujii, Mayu Watanabe, and Mikako Obika.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- “Eleven Years of Data on the Jefferson Scale of Empathy – Medical Student Version: Japanese Norm Data and Tentative Cutoff Scores.” *BMC Medical Education*, Article 81, 23 (2023). <https://doi.org/10.1186/s12909-022-03977-5>.
248. Kazanowski, M., Perrin, K., Potter, M., & Sheehan, C. (2007). The Silence of Suffering. *Journal of Holistic Nursing*, 25(3), 195–203. doi:10.1177/0898010107305501
249. Kelly, Cavanaugh P. “Improving Empathy of Occupational Therapy Students Through Reading Literary Narratives.” *Journal of Occupational Therapy Education* 6, no. 4 (2022). <https://encompass.eku.edu/jote/vol6/iss4/4>.
250. Kerr, J. L., Stahnke, A. M., & Behnen, E. M. (2015). Assessing Empathy and Self-Efficacy Levels of Pharmacy Students in an Elective Diabetes Management Course. *American Journal of Pharmaceutical Education*, 79(3). <http://doi.org/10.5688/ajpe79342>
251. Kerr, Noël, and Ashley M. Tegge. “Levels of Empathy in Undergraduate Health-Care-Professions Students.” *International Journal for Human Caring* 21, no. 1 (January 1, 2017): 41–45. <https://doi.org/10.20467/1091-5710-21.1.41>.
252. Kesbakh, Sedaghati, Maryam, Jamileh Mohtashami, and Malihe Nasiri. “Validity and Reliability of the Jefferson Scale of Empathy, Nursing Student Version R in a Sample of Iranian Oncology Nurses.” *Nursing and Midwifery Studies* 6, no. 2 (November 1, 2016). <https://doi.org/10.5812/nmsjournal.39505>.
253. Kesbakh, Sedaghati, Camelia Rohani, Maryam, Mohtashami, Jamileh and Nasiri, Malihe. “Empathy from the Perspective of Oncology Nurses.” *Journal of Compassionate Health Care* 4 (July 3, 2017): 7. doi:10.1186/s40639-017-0036-0.
254. Khademalhosseini, M., Khademalhosseini, Z., & Mahmoodian, F. (2014). Comparison of empathy score among medical students in both basic and clinical levels. *Journal of Advances in Medical Education & Professionalism*, 2(2), 88–91.
255. Khajavi, M. N., Tabesh, S., Afghah, S., & Astaneh, A. N. (2015). Investigating the effect of years of the psychiatry residency on the developing physician-patient empathy. *International Journal of Biology, Pharmacy and Allied Sciences*, 4(4), 2128–2139.
256. Kiersma, M. E., Chen, A. M. H., Yehle, K. S., & Plake, K. S. (2013). Validation of an Empathy Scale in Pharmacy and Nursing Students. *American Journal of Pharmaceutical Education*, 77(5). doi:10.5688/ajpe77594
257. Kimmelman, M., Giacobbe, J., Faden, J., Kumar, G., Pinckney, C. C., & Steer, R. (2012). Empathy in Osteopathic Medical Students: A Cross-Sectional Analysis. *JAOA: Journal of the American Osteopathic Association*, 112(6), 347–355.
258. King, S., & Holosko, M. J. (2012). The Development and Initial Validation of the Empathy Scale for Social Workers. *Research on Social Work Practice*, 22(2), 174–185. doi:10.1177/1049731511417136
259. Kiosses, Vasileios, Konstantina Symeonidou, Carolina Alexiou, Athina Tatsioni, Thomas Hyphantis, and Ioannis Dimoliatis. “How Medical Students Experience Empathy Training? An Interpretative Phenomenological Analysis. Results from the ‘Empathize with Me, Doctor!’ Project.” *MedEdPublish* 6 (June 22, 2017). doi:mep.2017.000111.
260. Kiosses, Vassilios N., Vassilios T. Karathanos, and Athina Tatsioni. “Empathy Promoting Interventions for Health Professionals: A Systematic Review of RCTs.” *Journal of Compassionate Health Care* 3 (2016): 7. doi:10.1186/s40639-016-0024-9.
261. Klein, M. B. (2014, December). *An examination of the moderating effects of perceived quality of life on the relationship between empathy, motivation, and specialty choice*

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- among medical students* (Dissertation). Philadelphia College of Osteopathic Medicine, Philadelphia, PA. Retrieved from [http://digitalcommons.pcom.edu/cgi/viewcontent.cgi?article=1319&context=psychology\\_dissertations](http://digitalcommons.pcom.edu/cgi/viewcontent.cgi?article=1319&context=psychology_dissertations)
262. Kliszcz, J., Nowicka-Sauer, K., Trzeciak, B., Nowak, P., & Sadowska, A. (2006). Empathy in health care providers—validation study of the Polish version of the Jefferson Scale of Empathy. *Advances in Medical Sciences, 51*.
263. Koehl-Hackert, N., Schultz, J.-H., Nikendei, C., Möltner, A., Gedrose, B., van den Bussche, H., & Jünger, J. (2012). [German] Burdened into the job -- final-year students' empathy and burnout. *Zeitschrift Für Evidenz, Fortbildung Und Qualität Im Gesundheitswesen, 106*(2), 116–124.
264. Kobayashi, Masaki, Miyuki Iwamoto, Saki Une, Ryo Kurazume, Atsushi Nakazawa, and Miwako Honda. “Simulated Communication Skills Training Program Effects Using Augmented Reality with Real-Time Feedback: A Randomized Control Study.” *Alzheimer’s & Dementia* 18 (December 20, 2022). <https://doi.org/10.1002/alz.062055>.
265. Koekemoer, Eileen, Jan Alewyn Nel, and Audine du Toit. “The Exploratory and Confirmatory Factor Analyses of Two Subjective Career Success Instruments.” *Journal of Psychology in Africa* 26, no. 1 (February 29, 2016): 49–55. doi:10.1080/14330237.2015.1124612.
266. Kommalage, M. (2011). Using videos to introduce clinical material: effects on empathy. *Medical Education, 45*(5), 514–515.
267. Kötter, Thomas, Leevke Kiehn, Katrin Ulrike Obst, and Edgar Voltmer. “The Development of Empathy and Associated Factors during Medical Education: A Longitudinal Study.” *Journal of Medical Education and Curricular Development* 8 (n.d.): 1–7. <https://journals.sagepub.com/doi/10.1177/23821205211030176>.
268. Krasner, M. S., Epstein, R. M., Beckman, H., Suchman, A. L., Chapman, B., Mooney, C. J., & Quill, T. E. (2009). Association of an educational program in mindful communication with burnout, empathy, and attitudes among primary care physicians. *JAMA: The Journal of the American Medical Association, 302*(12), 1284–1293.
269. Kristensen, Troels, Charlotte Ejersted, Peder Ahnfeldt-Møllerup, Jens Søndergaard, and Justin Charles. “Profiles of GPs with High and Low Physician Empathy: Personal, Professional, and Antibiotic Prescribing Characteristics.” Research Square, May 12, 2022, 1–16. <https://doi.org/10.21203/rs.3.rs-1624965/v1>.
270. Kusz, Halina, Jami Foreback, and Anne Dohrenwend. “Empathy among Internal Medicine Residents in a Community-Based Training Program: A Pilot Study.” *MedEdPublish* 6 (April 26, 2017). doi:mep.2017.000077.
271. Lal, A., A. Tharyan, and P. Tharyan. “The Prevalence, Determinants and the Role of Empathy and Religious or Spiritual Beliefs on Job Stress, Job Satisfaction, Coping, Burnout, and Mental Health in Medical and Surgical Faculty of a Teaching Hospital: A Cross-Sectional Survey.” *La Revue De Medecine Interne*, January 7, 2020. <https://doi.org/10.1016/j.revmed.2019.12.005>.
272. Lamothe, M., Boujut, E., Zenasni, F., & Sultan, S. (2014). To be or not to be empathic: the combined role of empathic concern and perspective taking in understanding burnout in general practice. *BMC Family Practice, 15*(1), 15. doi:10.1186/1471-2296-15-15
273. Lases, S. S. L., Arah, O. A., Pierik, E. G. J. M. R., Heineman, E., & Lombarts, M. J. M. H.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- K. (2014). Residents' Engagement and Empathy Associated with Their Perception of Faculty's Teaching Performance. *World Journal of Surgery*, 38(11), 2753–2760. doi:10.1007/s00268-014-2687-8
274. Layegh, Hoda, Hadi Bahrami, Farid Abolhasan, and Sharifi Sanjani. "Factors Influencing Treatment Dropout among Patients in Community Health Centers of Tehran City, Iran." *Journal of Fundamentals of Mental Health* 20, no. 3 (April 2018): 194–201.
275. Lee, B. K., Bahn, G. H., Lee, W. H., Park, J. H., Yoon, T. Y., & Baek, S. B. (2009). The Relationship between Empathy and Medical Education System, Grades, and Personality in Medical College Students and Medical School Students. *Korean Journal of Medical Education*, 21(2), 117. doi:10.1177/1049731511417136
276. Lee, Phong Teck, Julian Loh, Gerald Sng, Joshua Tung, and Khung Keong Yeo. "Empathy and Burnout: A Study on Residents from a Singapore Institution." *Singapore Medical Journal* 59, no. 1 (January 2018): 50–54. <https://doi.org/10.11622/smedj.2017096>.
277. Lelorain, S., Brédart, A., Dolbeault, S., Cano, A., Bonnaud-Antignac, A., Cousson-Gélie, F., & Sultan, S. (n.d.). How can we explain physician accuracy in assessing patient distress? A multilevel analysis in patients with advanced cancer. *Patient Education and Counseling*. doi:10.1016/j.pec.2013.10.029
278. Lelorain, S., Brédart, A., Dolbeault, S., Cano, A., Bonnaud-Antignac, A., Cousson-Gélie, F., & Sultan, S. (2015). How does a physician's accurate understanding of a cancer patient's unmet needs contribute to patient perception of physician empathy? *Patient Education and Counseling*, 98(6), 734–741. <http://doi.org/10.1016/j.pec.2015.03.002>
279. Lelorain, S., Sultan, S., Zenasni, F., Catu-Pinault, A., Jaury, P., Boujut, E., & Rigal, L. (2012). Empathic concern and professional characteristics associated with clinical empathy in French general practitioners. *European Journal of General Practice*, 1–6. doi:10.3109/13814788.2012.709842
280. Lemogne, Cédric, Céline Buffel du Vaure, Nicolas Hoertel, Annie Catu-Pinault, Frédéric Limosin, Christian Ghasarossian, Claire Le Jeunne, and Philippe Jaury. "Balint Groups and Narrative Medicine Compared to a Control Condition in Promoting Students' Empathy." *BMC Med Educ.* 20, no. 1 (November 9, 2020): 412. <https://doi.org/10.1186/s12909-020-02316-w>.
281. Leombruni, P., Lillo, M. D., Miniotti, M., Picardi, A., Alessandri, G., Sica, C., ... Torta, R. (2014). Measurement properties and confirmatory factor analysis of the Jefferson Scale of Empathy in Italian medical students. *Perspectives on Medical Education*, 1–12. doi:10.1007/s40037-014-0137-9
282. Li, Chao-Qun, Qian Ma, Yu-Ying Liu, and Kun-Juan Jing. "Are Parental Rearing Patterns and Learning Burnout Correlated with Empathy amongst Undergraduate Nursing Students?" *International Journal of Nursing Sciences*, July 11, 2018. <https://doi.org/10.1016/j.ijnss.2018.07.005>.
283. Li, Dongju, Huiming Xu, Mingyi Kang, and Shulan Ma. "Empathy in Chinese Eight-Year Medical Program Students: Differences by School Year, Educational Stage, and Future Career Preference." *BMC Medical Education* 18, no. 1 (October 22, 2018): 241. <https://doi.org/10.1186/s12909-018-1348-2>.
284. Li, L., Wang, J., Hu, X., Hu, X., & Xu, C. (2015). Empathy In Chinese Pharmacy Undergraduates: Implication for Integrating Humanities Into Professional Pharmacy Education. *Indian Journal of Pharmaceutical Education and Research*, 49(1), 31–39.



## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- <http://doi.org/10.5530/ijper.49.1.5>
285. Libert, Yves, Delphine Canivet, Catherine Ménard, Laëtitia Van Achte, Christine Farvacques, Isabelle Merckaert, Aurore Liénard, et al. “Predictors of Physicians’ Communication Performance in a Decision-Making Encounter with a Simulated Advanced-Stage Cancer Patient: A Longitudinal Study.” *Patient Education and Counseling*, March 4, 2017. doi:10.1016/j.pec.2017.02.025.
286. Lim, B. T., Moriarty, H., & Huthwaite, M. (2011). Being-in-role: A teaching innovation to enhance empathic communication skills in medical students. *Medical Teacher*, 33(12), e663–e669. doi:10.3109/0142159X.2011.611193
287. Lim, B. T., Moriarty, H., Huthwaite, M., Gray, L., Pullon, S., & Gallagher, P. (2012). How well do medical students rate and communicate clinical empathy? *Medical Teacher*, e1–e6. doi:10.3109/0142159X.2012.715783
288. Lin, C., Li, L., Wan, D., Wu, Z., & Yan, Z. (2012). Empathy and avoidance in treating patients living with HIV/AIDS (PLWHA) among service providers in China. *AIDS Care*, 0(0), 1–8.
289. Lindeke, L. L., & Sieckert, A. M. (2005). Nurse-physician workplace collaboration. *Online Journal of Issues in Nursing*, 10(1), 5.
290. Linley, P. A., & Joseph, S. (2007). Therapy work and therapists’ positive and negative well-being. *Journal of Social and Clinical Psychology*, 26(3), 385–403. doi:10.1521/jscp.2007.26.3.385
291. Listiyandini, Ratih, Dani Sulaiman, Elida Hayati Sidik, Isabel Larasati, Rahayu Priatni, and Syarah Meysarani. “Empathy among Indonesian Medical Students: A Cross Sectional Study.” *In Proceedings of International Conference: The 1st South East Asia Regional Conference of Psychology*, Vol. 1. Hanoi, Vietnam, 2017.
292. Liu, Qinghua, Jing Tao, Lianlian Gao, Xifei He, Yuping Wang, Wenlin Xia, and Lihong Huang. “Attitudes of Front-Line Nurses Toward Hospice Care During the COVID-19 Pandemic.” *The American Journal of Hospice & Palliative Care*, October 22, 2020, 1049909120968533. <https://doi.org/10.1177/1049909120968533>
293. Logan, Alexandra, Elisa Yule, Julie Hughes, Dave Peters, Melanie Hadley, Brodie Betts, Lee Jones, and Elspeth Froude. “The Impact of Face-to-Face Mental Health Consumer-Led Teaching on Occupational Therapy Student Empathy Levels: Two Group Comparison Design.” *Australian Occupational Therapy Journal*, August 10, 2022. <https://doi.org/10.1111/1440-1630.12833>
294. Looi, J. C. L. (2008). Empathy and competence. *Med J Aust*, 188(7), 414–416.
295. Lorenzo, Rosaria Di, Giulia Venturelli, Giulia Spiga, and Paola Ferri. “Emotional Intelligence, Empathy and Alexithymia: A Cross-Sectional Survey on Emotional Competence in a Group of Nursing Students.” *Acta Bio Medica Atenei Parmensis* 90, no. 4-S (March 28, 2019): 32–43. <https://doi.org/10.23750/abm.v90i4-S.8273>.
296. Lourinho, I., & Severo, M. (2013). Are personality traits really weak/moderate predictors of empathy? [Letter to the Editor]. *Medical Teacher*, 1–1. doi:10.3109/0142159X.2013.786169
297. Lown, B. A., & Manning, C. F. (2010). The Schwartz Center Rounds: Evaluation of an interdisciplinary approach to enhancing patient-centered communication, teamwork, and provider support. *Academic Medicine*, 85(6), 1073. doi:10.1097/ACM.0b013e3181dbf741

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

298. Lund, F., Schultz, J.-H., Maatouk, I., Krautter, M., Möltner, A., Werner, A., ... Nikendei, C. (2012). Effectiveness of IV Cannulation Skills Laboratory Training and Its Transfer into Clinical Practice: A Randomized, Controlled Trial. *PLoS ONE*, 7(3), e32831. doi:10.1371/journal.pone.0032831
299. Lusilla-Palacios, P., Castellano-Tejedor, C., Lusilla-Palacios, P., & Castellano-Tejedor, C. (2015). Training a Spinal Cord Injury Rehabilitation Team in Motivational Interviewing, Training a Spinal Cord Injury Rehabilitation Team in Motivational Interviewing. *Rehabilitation Research and Practice, Rehabilitation Research and Practice*, 2015, 2015, e358151. <http://doi.org/10.1155/2015/358151>, 10.1155/2015/358151
300. Lwow, Michal, Laura Canetti, and Mordechai Muszkat. "Gender Differences in the Effect of Medical Humanities Program on Medical Students' Empathy: A Prospective Longitudinal Study." *BMC Medical Education*, October 3, 2019. <https://doi.org/10.21203/rs.2.15503/v1>
301. Lynch, Julie, Jason Last, Philip Dodd, Daniela Stancila, and Christine Linehan. "“Understanding Disability”: Evaluating a Contact-Based Approach to Enhancing Attitudes and Disability Literacy of Medical Students." *Disability and Health Journal*, July 25, 2018.
302. MacLean, Heather, Emelie Braschi, Douglas Archibald, Millaray Sanchez-Campos, Danusha Jebanesan, Diana Koszycki, and Carol Gonsalves. "A Pilot Study of a Longitudinal Mindfulness Curriculum in Undergraduate Medical Education." *Canadian Medical Education Journal*, 2019. <https://doi.org/10.36834/cmej.56726>.
303. Magalhães, E., Costa, P., & Costa, M. J. (2012). Empathy of medical students and personality: Evidence from the Five-Factor Model. *Medical Teacher*, 1–6. doi:10.3109/0142159X.2012.70224
304. Magalhães, E., Salgueira, A., Costa, P., & Costa, M. (2011). Empathy in senior year and first year medical students: a cross-sectional study. *BMC Medical Education*, 11(1), 52. doi:10.1186/1472-6920-11-52
305. Mahan, P. L., & Fields, S. K. (2011, October 17). *The Relationship of Empathy in Baccalaureate Nursing Students and Their Clinical Mentors*. Presentation presented at the 22nd International Nursing Research Congress. Retrieved from <http://www.nursinglibrary.org/vhl/handle/10755/154861>
306. Mahfoz, Turki M. Bin. "Clinical Empathy among Medical Students at Al-Imam University, Saudi Arabia, by Using the Jefferson Scale of Empathy." *Majmaah Journal of Health Sciences* 10, no. 4 (October 2022): 59–69. <https://doi.org/dx.doi.org/10.5455/mjhs.2022.04.006>.
307. Mahoney, Sarah, Ruth M. Sladek, and Tim Neild. "A Longitudinal Study of Empathy in Pre-Clinical and Clinical Medical Students and Clinical Supervisors." *BMC Medical Education* 16 (2016): 270. doi:10.1186/s12909-016-0777-z.
308. Mandel, Ellen D., & Schweinle, William E. (2012). A Study of Empathy Decline in Physician Assistant Students at Completion of First Didactic Year. *Journal of Physician Assistant Education*, 23(4), 16–24.
309. Mandel, Ellen, & Schweinle, William E. (2012). *Empathy Change During PA Education*. Presentation Poster presented at the American Association of Physicians Assistants IMPACT 2012! poster session.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

310. Martín Asuero, A., Rodríguez Blanco, T., Pujol-Ribera, E., Berenguera, A., & Moix Queraltó, J. (2013). Effectiveness of a mindfulness program in primary care professionals. *Gaceta Sanitaria*. doi:10.1016/j.gaceta.2013.04.007
311. Martinez, William, Sigall K. Bell, Jason M. Etchegaray, and Lisa Soleymani Lehmann. "Measuring Moral Courage for Interns and Residents: Scale Development and Initial Psychometrics." *Academic Medicine: Journal of the Association of American Medical Colleges* 91, no. 10 (October 2016): 1431–38. doi:10.1097/ACM.0000000000001288.
312. Maryam Maddi Neshat, Hossein Lashkardoost, & Mahbubeh Tabatabaiechehr. (2014). Evaluating the Use of Role-Playing Scenarios on Mood Change and Empathy in Undergraduate Psychiatric Nursing Students. *Journal of Strides Development Medical Education*, 10(4), 431–438.
313. Massey, Scott, Johnna Yealy, Rajat Chadha, and David Beck. "The Relationship Between Physician Assistant School Admissions Exam (PA-CAT) and Undergraduate Performance Measured by Science GPA and Cumulative GPA"." *Internet Journal of Allied Health Sciences and Practice* 18, no. 2 (March 17, 2020). <https://nsuworks.nova.edu/ijahsp/vol18/iss2/9>.
314. Mathad, Monali Devaraj, Balaram Pradhan, and Rajesh K. Sasidharan. "Effect of Yoga on Psychological Functioning of Nursing Students: A Randomized Wait List Control Trial." *Journal of Clinical and Diagnostic Research: JCDR* 11, no. 5 (May 2017): KC01-KC05. doi:10.7860/JCDR/2017/26517.9833.
315. May, W., Stansfield, R. B., & Souder, D. (2013). Empathy Predicting Ratings by Standardized Patients on the Patient-Physician Interaction from Self-Reported Empathy By Medical Students. In *Transforming Health Professions Education through Innovation* (p. 92). Keck School of Medicine of USC. Retrieved from [http://keck.usc.edu/en/Education/Department\\_of\\_Medical\\_Education/Conference/~/media/KSOM/Education/Division%20of%20Medical%20Education/IME%202013%20Conference%20Proceedings.pdf](http://keck.usc.edu/en/Education/Department_of_Medical_Education/Conference/~/media/KSOM/Education/Division%20of%20Medical%20Education/IME%202013%20Conference%20Proceedings.pdf)
316. McCarthy, S. (2014, December). *Investigating the correlations between patient-centered qualities of primary-care providers and patient-health outcomes* (Dissertation). Sofia University, Palo Alto, California. Retrieved from [http://media.proquest.com/media/pq/classic/doc/3539897721/fmt/ai/rep/NPDF?\\_s=HBdaOhd3UP4%2BrPu7vm9BQCw7ACA%3D](http://media.proquest.com/media/pq/classic/doc/3539897721/fmt/ai/rep/NPDF?_s=HBdaOhd3UP4%2BrPu7vm9BQCw7ACA%3D)
317. McGeehan, J., English, R., Shenberger, K., Tracy, G., & Smego, R., Jr. (2013). A community continuity programme: volunteer faculty mentors and continuity learning. *The Clinical Teacher*, 10(1), 15–20. doi:10.1111/j.1743-498X.2012.00602.x
318. McKenna, L., Boyle, M., Brown, T., Williams, B., Molloy, A., Lewis, B., & Molloy, L. (2011). Levels of empathy in undergraduate midwifery students: an Australian cross-sectional study. *Women and Birth: Journal of the Australian College of Midwives*, 24(2), 80–84. doi:10.1016/j.wombi.2011.02.003
319. McKenna, L., Boyle, M., Brown, T., Williams, B., Molloy, A., Lewis, B., & Molloy, L. (2012). Levels of empathy in undergraduate nursing students. *International Journal of Nursing Practice*, 18(3), 246–251. doi:10.1111/j.1440-172X.2012.02035.x
320. McManus, Sorcha, David Killeen, Yvonne Hartnett, Gearoid Fitzgerald, and Kieran C. Murphy. "Establishing and Evaluating a Balint Group for Fourth-Year Medical Students at an Irish University." *Irish Journal of Psychological Medicine*, undefined/ed,

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- 1–7. <https://doi.org/10.1017/ipm.2019.28>.
321. McMillan, L. R., & Shannon, D. M. (2011). Psychometric Analysis of the JSPE Nursing Student Version R: Comparison of Senior BSN Students and Medical Students Attitudes toward Empathy in Patient Care. *ISRN Nursing, 2011*. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3169335/>. doi:10.5402/2011/726063
322. McTighe, A. J. (2014, July). *Effect of Medical Education on Empathy in Osteopathic Medical Students* (Dissertation). Philadelphia College of Osteopathic Medicine, Philadelphia, PA.
323. McTighe, Adam J., Robert A. DiTomasso, Stephanie Felgoise, and Mohammadreza Hojat. “Correlation Between Standardize Patients’ Perceptions of Osteopathic Medical Students and Students’ Self-Rated Empathy.” *The Journal of the American Osteopathic Association* 116, no. 10 (October 1, 2016): 640–46. doi:10.7556/jaoa.2016.127.
324. Mehta, Ankit, Nell Adams, Mary Fredrickson, Wojciech Kraszkiwicz, Jerome Siy, Lydia Hamel, and Brett Hendel-Paterson. “Craving Empathy: Studying the Sustained Impact of Empathy Training on Clinician.” *Journal of Patient Experience* 8 (2021): 1–8. <https://doi.org/DOI: 10.1177/23743735211043383>.
325. Melnick, Edward R., Elizabeth G. J. O’Brien, Olga Kovalerchik, William Fleischman, Arjun K. Venkatesh, and R. Andrew Taylor. “The Association between Physician Empathy and Variation in Imaging Use.” *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine* 23, no. 8 (August 2016): 895–904. doi:10.1111/acem.13017.
326. Metz, Alexia, and Allison Christoff. “Empathy and Regard: Perspectives Held by Graduate Students of Rehabilitation Sciences.” *Internet Journal of Allied Health Sciences and Practice and Practice* 18, no. 1 (January 10, 2020): 10.
327. Mennenga, H. A., Bassett, S. D., & Pasquariello, L. (2015, November). *Empathy Development through Case Study and Simulation*. Oral presentation and poster presented at the Sigma Theta Tau International 43rd Biennial Convention, Las Vegas. Retrieved from <https://stti.confex.com/stti/bc43/webprogram/Paper76922.html>
328. Meirovich, Adaya, Rosalie Ber, Michael Moore, and Avi Rotschild. “Student-Centered Tutoring as a Model for Patient-Centeredness and Empathy.” *Advances in Medical Education and Practice* 7 (2016): 423–28. doi:10.2147/AMEP.S107115.
329. Meirovich, Adaya, Rosalie Ber, Michael Moore, and Avi Rotschild. “Student-Centered Tutoring as a Model for Patient-Centeredness and Empathy.” *Advances in Medical Education and Practice* 7 (2016): 423–28. doi:10.2147/AMEP.S107115
330. Michalec, B. (2010). An assessment of medical school stressors on preclinical students’ levels of clinical empathy. *Current Psychology, 29*(3), 210–221. doi:10.1007/s12144-010-9081-y
331. Mikaeili, Niloofar, and Mozaffar Ghaffari. “The Relationship between Personal Intelligence and Empathy in Nurses and Their Moral Sensitivity.” *Iranian Journal of Medical Ethics and History of Medicine* 8, no. 6 (March 15, 2016): 45–56.
332. Marco Miniotti (2020) Empathy for patient care in medical students: new evidence on the importance of self-transcendence, Psychology, *Health & Medicine*, DOI: [10.1080/13548506.2020.1842897](https://doi.org/10.1080/13548506.2020.1842897)
333. Misra-Hebert, A.D., Isaacson, J. H., Kohn, M., Hull, A. L., Hojat, M., Papp, K. K., & Calabrese, L. (2012). Improving empathy of physicians through guided reflective

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- writing. *International Journal of Medical Education*, 3, 71–77.  
doi:10.5116/ijme.4f7e.e332.
334. Mizobe, Michiko, Hitomi Kataoka, Hiroshi Yamagami, Chikao Ito, Yasuaki Koyama, Erika Yawata, and Takashi Shiga. “A Night on Call or an Overnight Shift Does Not Reduce Residents’ Empathy: A Randomized Crossover Multicenter Survey.” *BMC Medical Education* 19, no. 1 (October 26, 2019): 391.  
<https://doi.org/10.1186/s12909-019-1822-5>.
335. Mocny-Pachonska, Katarzyna, Patrycja Lanowy, Agata Trzcionka, Dariusz Skaba, and Marta Tanasiewicz. “Gender Related Changes of Empathy Level among Polish Dental Students over the Course of Training.” *Medicine* 99, no. 1 (January 2020): e18470.  
<https://doi.org/10.1097/MD.00000000000018470>.
336. Mohammadi, Ali, and Kamali Korosh. “Physician Empathy towards Patients: A Survey in Iranian Teaching Hospitals.” *International Journal of Hospital Research* 5, no. 2 (Spring 2016). [http://ijhr.iuums.ac.ir/article\\_17286\\_3272.html](http://ijhr.iuums.ac.ir/article_17286_3272.html)
337. Montanari, Paola. (2012). *Psychometric analysis of the Jefferson Scale of Empathy (JSE) Health professional students (HPS) version: an Italian validation study with undergraduate nursing students* (Dissertation). University of L’Aquila, L’Aquila, Italy.
338. Morais, Rita, Sónia F. Bernardes, and Petra Verdonk. “Gender Awareness in Medicine: Adaptation and Validation of the Nijmegen Gender Awareness in Medicine Scale to the Portuguese Population (N-GAMS).” *Advances in Health Sciences Education*, October 25, 2019. <https://doi.org/10.1007/s10459-019-09936-y>
339. Moret, G., González-Blasco, P., Pessini, L., & Craice-de Benedetto, M. A. (2013). Empathy Erosion of Medical Students: Report of a Study Conducted in one Medical School in São Paulo, Brazil - medigraphic.com. *Atención Familiar*, 21(1), 16–19.
340. Moreto, Graziela, Itamar S. Santos, Pablo González Blasco, Leocir Pessini, and Paulo A. Lotufo. “Assessing Empathy among Medical Students: A Comparative Analysis Using Two Different Scales in a Brazilian Medical School.” *Educación Médica*. Accessed December 26, 2017. <https://doi.org/10.1016/j.edumed.2017.07.019>.
341. Mostafa, A., Hoque, R., Mostafa, M., Rana, M. M., & Mostafa, F. (2014). Empathy in Undergraduate Medical Students of Bangladesh: Psychometric Analysis and Differences by Gender, Academic Year, and Specialty Preferences. *International Scholarly Research Notices*, 2014, e375439. doi:10.1155/2014/375439
342. Kim, Myoungsuk. “Effects of a Comprehensive Person-Centered Care Education Program for Nursing Students.” *Medicina* 59, no. 3 (2023): 463.  
<https://doi.org/10.3390/medicina59030463>.
343. Naguib, Ghada H., Amal M. Sindi, Moaz H. Attar, Ehab N. Alshouibi, and Mohamed T. Hamed. “A Cross-Sectional Study of Empathy Among Dental Students at King Abdulaziz University.” *Journal of Dental Education* 84, no. 1 (January 2020): 22–26.  
<https://doi.org/10.21815/JDE.019.160>.
344. Neumann, M., Scheffer, C., Tauschel, D., Lutz, G., Wirtz, M., & Edelhäuser, F. (2012). Physician empathy: Definition, outcome-relevance and its measurement in patient care and medical education. *GMS Zeitschrift Für Medizinische Ausbildung*, 29(1). Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3296095/>
345. Newton, Bruce W. “Insights on the Nationwide Project in Osteopathic Medical Education and Empathy (POMEE).” *The Journal of the American Osteopathic Association*, April

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- 30, 2018. <https://doi.org/10.7556/jaoa.2018.076>
346. Newton, B. W. (2013). Walking a fine line: Is it possible to remain an empathic physician and have a hardened heart? *Frontiers in Human Neuroscience*, 7:, 233. doi:10.3389/fnhum.2013.00233
347. Nguyen, Vanessa P., and Bruce W. Newton. "Anecdote or Reality: Are People From the South and/or Rural Areas of the USA More Empathetic?" *Medical Science Educator*, January 11, 2019. <https://doi.org/10.1007/s40670-019-00693-6>.
348. Nunes, P., Williams, S., Sa, B., & Stevenson, K. (2011). A study of empathy decline in students from five health disciplines during their first year of training. *International Journal of Medical Education*, 2, 12–17. doi:10.5116/ijme.4d47.ddb0
349. O’Sullivan, J., & Whelan, T. A. (2011). Adversarial growth in telephone counsellors: psychological and environmental influences. *British Journal of Guidance & Counselling*, 39(4), 307–323. doi:10.1080/03069885.2011.567326
350. O’Sullivan, Donnchadh M., Joseph Moran, Paul Corcoran, Siun O’Flynn, Colm O’Tuathaigh, and Aoife M. O’Sullivan. "Medical School Selection Criteria as Predictors of Medical Student Empathy: A Cross-Sectional Study of Medical Students, Ireland." *BMJ Open* 7, no. 7 (August 1, 2017): e016076. doi:10.1136/bmjopen-2017-016076.
351. Ogle, J., Bushnell, J., & Caputi, P. (2012a). Empathy is related to clinical competence in medical care. In *Graduate School of Medicine - Papers* (p. 148). New Zealand. Retrieved from <http://ro.uow.edu.au/medpapers/481>
352. Ogle, J., Bushnell, J., & Caputi, P. (2012b). Feeling it or faking it? An exploration of discrepant self-and observer-ratings of empathy among medical students. In *Graduate School of Medicine - Papers* (p. 149). New Zealand. Retrieved from <http://ro.uow.edu.au/medpapers/482>
353. Oliveira, Renato de, Erik Montagna, Victor Zaia, Bayardo Baptista Torres, and Caio Parente Barbosa. "The Development of Cognitive and Affective Skills Through a Sexual and Reproductive Health Medical Education Unit." *Sexual Medicine*, July 18, 2019. <https://doi.org/10.1016/j.esxm.2019.06.008>.
354. Olson, K., Kemper, K. J., & Mahan, J. D. (2015). What Factors Promote Resilience and Protect Against Burnout in First-Year Pediatric and Medicine-Pediatric Residents? *Journal of Evidence-Based Complementary & Alternative Medicine*, 2156587214568894. doi:10.1177/2156587214568894
355. Orr, Fiona. "Hearing voices that are distressing: simulation toolkit." Virtual Empathy Museum: University of Technology Sydney, NSW, Australia 2018.
356. Osim, Juliet Hodo, Emmanuel Aniekan Essien, Joseph Okegbe, and Owoidoho Udofia. "The Jefferson Scale of Physician Empathy: A Preliminary Study of Validity and Reliability among Physicians in Nigerian Tertiary Hospital." *Acta Medica International* 6, no. 1 (January 1, 2019): 22. [https://doi.org/10.4103/ami.ami\\_70\\_18](https://doi.org/10.4103/ami.ami_70_18).
357. Ouzouni, Christina, & Nakakis, Konstantinos. (2012). An exploratory study of student nurses’ empathy. *Health Science Journal*, 6(3), 534–552.
358. Ozcakir, Alis, Ediz, Bulent, and Bilgel, Nazan. "The Relationship between Subjective Well-Being and Empathy among Turkish Medical Students." *Ameed MedEdPublish* 5, no. 2 (2016): 31. doi:<http://dx.doi.org/10.15694/mep.2016.000059>.
359. Ozturk, Murat, and Hakan Demirci. "Turkish Validation of the Jefferson Scale of Empathy

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- for Nurses Seeking Kidney Donations in Intensive Care Units.” *The Aging Male: The Official Journal of the International Society for the Study of the Aging Male*, December 20, 2018, 1–7. <https://doi.org/10.1080/13685538.2018.1544238>.
360. Öztürk, Murat, and Hakan DEMİRCİ. “Importance of Empathy Level and Communication Skills of Intensive Care Unit Physicians in Kidney Transplantation.” *European Journal of Human Health*, March 2021, 1–23. <https://doi.org/10.29228/ejhh.50585>.
361. Padilla, Mariela, Robert Utsman, and Victor Díaz-Narváez. “Changes in the Decline on Empathy Levels of Dental Students in Costa Rica.” *Revista Portuguesa de Estomatologia, Medicina Dentária e Cirurgia Maxilofacial* 58, no. 1 (2017): 46–51.
362. Pai, Sudarshan, and H. N. Harsha Kumar. “A Study on Corporate Social Responsibility for the Health Care of the Elderly by Private Health Care Providers of Mangalore City: A Health Systems Research.” *International Journal of Medicine and Public Health* 5, no. 2 (June 2015): 157–60.
363. Palumbo, E. (2015). *The Influence of Positive and Negative Death Attitudes on Medical Students’ Empathy and Attitudes Toward End-of-Life Care* (Dissertation Paper 34). Philadelphia College of Osteopathic Medicine, Philadelphia, PA. [http://digitalcommons.pcom.edu/cgi/viewcontent.cgi?article=1341&context=psychology\\_dissertations](http://digitalcommons.pcom.edu/cgi/viewcontent.cgi?article=1341&context=psychology_dissertations)
364. Park, Chanmin, Yeon Jung Lee, Minha Hong, Chul-Ho Jung, Yeni Synn, Young-Sook Kwack, Jae-Sung Ryu, Tae Won Park, Seong Ae Lee, and Geon Ho Bahn. “A Multicenter Study Investigating Empathy and Burnout Characteristics in Medical Residents with Various Specialties.” *Journal of Korean Medical Science* 31, no. 4 (April 2016): 590–97. doi:10.3346/jkms.2016.31.4.590.
365. Park, K. H., Kim, D., Kim, S. K., Yi, Y. H., Jeong, J. H., Chae, J., ... Roh, H. (2015). The relationships between empathy, stress and social support among medical students. *International Journal of Medical Education*, 6, 103–108. <http://doi.org/10.5116/ijme.55e6.0d44>
366. Park, K. H., Roh, H., Suh, D. H., & Hojat, M. (2014). Empathy in Korean medical students: Findings from a nationwide survey. *Medical Teacher*, 1–6. doi:10.3109/0142159X.2014.956058
367. Paro, H. B., Daud-Gallotti, R. M., Pinto, R. M., Tiberio, I. F., & Martins, Mí. A. (2012). Brazilian version of the Jefferson Scale of Empathy: psychometric properties and factor analysis. *BMC Medical Education*, 12(1), 73. doi:10.1186/1472-6920-12-73
368. Paro, H. B. M. S., Silveira, P. S. P., Perotta, B., Gannam, S., Enns, S. C., Giaxa, R. R. B., ... Tempski, P. Z. (2014). Empathy among Medical Students: Is There a Relation with Quality of Life and Burnout? *PLoS ONE*, 9(4), e94133. doi:10.1371/journal.pone.0094133
369. Patel, Sundip, Alexis Pelletier-Bui, Stephanie Smith, Michael B. Roberts, Hope Kilgannon, Stephen Trzeciak, and Brian W. Roberts. “Curricula for Empathy and Compassion Training in Medical Education: A Systematic Review.” *PLoS ONE* 14, no. 8 (August 22, 2019). <https://doi.org/10.1371/journal.pone.0221412>.
370. Paul-Savoie, Emilie, Patricia Bourgault, Stéphane Potvin, Emilie Gosselin, and Sylvie Lafrenaye. “The Impact of Pain Invisibility on Patient-Centered Care and Empathetic Attitude in Chronic Pain Management.” Research article. *Pain Research and Management*, 2018. <https://doi.org/10.1155/2018/6375713>.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

371. Pearce, Reuben. “Exploring the experience and impact of forum theatre techniques for developing mental health nursing skills: a mixed methods research project.” University of West London, 2022.  
<http://repository.uwl.ac.uk/id/eprint/8987/1/Pearce%20-%20DNurs%20Final%20Thesis%20%28March%202022%29.pdf>
372. Pedersen, R. (2009). Empirical research on empathy in medicine—A critical review. *Patient Education and Counseling*, 76(3), 307–322. doi:10.1016/j.pec.2009.06.012
373. Petrucci, Cristina, Carmen La Cerra, Federica Aloisio, Paola Montanari, and Loreto Lancia. “Empathy in Health Professional Students: A Comparative Cross-Sectional Study.” *Nurse Education Today* 41 (June 1, 2016): 1–5.  
doi:10.1016/j.nedt.2016.03.022.
374. Petrucci, Cristina, Elona Gaxhja, Carmen La Cerra, Valeria Caponnetto, Vittorio Masotta, Angelo Dante, and Loreto Lancia. “Empathy Levels in Albanian Health Professional Students: An Explorative Analysis Using the Jefferson Scale of Empathy.” *SAGE Open*, no. July-September (July 15, 2021): 1–10.  
<https://journals.sagepub.com/doi/pdf/10.1177/21582440211032192>.
375. Piumatti, Giovanni, Milena Abbiati, Anne Baroffio, and Margaret W. Gerbase. “Associations between Motivational Factors for Studying Medicine, Learning Approaches and Empathy among Medical School Candidates.” *Advances in Health Sciences Education* 24 (2019): 287–300. <https://doi.org/10.1007/s10459-018-9866-6>.
376. Piumatti, Giovanni, Milena Abbiati, Anne Baroffio, and Margaret W. Gerbase. “Empathy Trajectories throughout Medical School: Relationships with Personality and Motives for Studying Medicine.” *Advances in Health Sciences Education*, February 24, 2020.  
<https://doi.org/10.1007/s10459-020-09965-y>.
377. Podhorecka, Marta, Anna Pyszora, Agnieszka Woźniewicz, Jakub Husejko, and Kornelia Kędziora-Kornatowska. “Empathy as a Factor Conditioning Attitudes towards the Elderly among Physiotherapists—Results from Poland.” *Poland. Int. J. Environ. Res. Public Health* 2022 (2022): 1–11. <https://doi.org/10.3390/ijerph19073994>.
378. Pohl, C. A., Hojat, M., & Arnold, L. (2011). Peer nominations as related to academic attainment, empathy, personality, and specialty interest. *Academic Medicine: Journal of the Association of American Medical Colleges*, 86(6), 747–751.  
<http://doi.org/10.1097/ACM.0b013e318217e464>
379. Pohontsch, N. J., A. Stark, M. Ehrhardt, T. Kötter, and M. Scherer. “Influences on Students’ Empathy in Medical Education: An Exploratory Interview Study with Medical Students in Their Third and Last Year.” *BMC Medical Education* 18, no. 1 (October 5, 2018): 231. <https://doi.org/10.1186/s12909-018-1335-7>.
380. Ponton, Yolanda Davila, Ximena Velez Calvo, Ambar Celleri Gomezcoello, Juan Aguilera Munoz, Victor Diaz-Narvaez, Aracelis Calzadilla-Nunez, Alejandro Reyes-Reyes, and Pilar Torres-Martinez. “Empathy and Family Functioning in Medical Students of the University of Azuay, Cuenca, Ecuador.” *Revista Salud Uninorte* 36, no. 3 (2020): 571–86. <http://dx.doi.org/10.14482/sun.36.3.152.41>.
381. Potash, J. S., Chen, J. Y., Lam, C. L., & Chau, V. T. (2014). Art-making in a family medicine clerkship: how does it affect medical student empathy? *BMC Medical Education*, 14(1), 247. doi:10.1186/s12909-014-0247-4
382. Preusche, I., & Wagner-Menghin, M. (2012). Rising to the challenge: cross-cultural



## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- adaptation and psychometric evaluation of the adapted German version of the Jefferson Scale of Physician Empathy for Students (JSPE-S). *Advances in Health Sciences Education*, 1–15. doi:10.1007/s10459-012-9393-9
383. Quail, M., Brundage, S. B., Spitalnick, J., Allen, P. J., & Beilby, J. (2016). Student self-reported communication skills, knowledge and confidence across standardised patient, virtual and traditional clinical learning environments. *BMC Medical Education*, 16(1), 73. <http://doi.org/10.1186/s12909-016-0577-5>
384. Quinn, Mariah A., Hasan Bazari, Jonathan Ripp, Lauren Block, Katherine C. Chretien, Ethan D. Fried, Richard E. Leiter, et al. “A Roadmap for Research on Resident Well-Being.” *Alliance for Academic Internal Medicine* 131, no. 3 (2018): 323–28. [https://www.amjmed.com/article/S0002-9343\(17\)31223-8/pdf](https://www.amjmed.com/article/S0002-9343(17)31223-8/pdf)
385. Quintas, Rui, Milda Cerniauskaite, Ambra Mara Giovannetti, Silvia Schiavolin, Alberto Raggi, Venusia Covelli, Flavio Villani, et al. “PARADISE 24 Instrument: An Observational Study on Psychosocial Difficulties, Quality of Life, and Disability Levels in Patients with Epilepsy.” *Epilepsy & Behavior: E&B* 64, no. Pt A (November 2016): 160–65. doi:10.1016/j.yebeh.2016.08.019.
386. Rafati, Shiva, Nahid Rejeh, Ali Davati, and Fatemeh Foroutani. “Empathic Attitudes in Medical Students: Using of the Jefferson Scale of Empathy.” *Medical Ethics Journal* 10, no. 36 (July 26, 2016): 25–34.
387. Rahimi-Madiseh, M., Tavakol, M., Dennick, R., & Nasiri, J. (2010). Empathy in Iranian medical students: a preliminary psychometric analysis and differences by gender and year of medical school. *Medical Teacher*, 32(11), 471–478. doi:10.3109/0142159X.2010.509419
388. Raja, Antonio Jude, Sriambika K, Ketki Khandhadiya, Chandra Sekara Guru, and Uma Mahajan. “Physician Empathy during Crisis: A Survey of Doctors in COVID-19 Pandemic (COPE Study).” *Medical Journal Armed Forces India*, October 4, 2022. <https://doi.org/10.1016/j.mjafi.2022.08.012>.
389. Reed, Brent N., Stuart T. Haines, and Erin R. Holmes. “Can Empathy Be Learned? An Exploratory Analysis at Two Schools of Pharmacy.” *American Journal of Pharmaceutical Education* 84, no. 10 (November 2020). <https://doi.org/10.5688/ajpe8083>.
390. Reed, Brent, Stuart T. Haines, and Erin R. Holmes. “The Impact of Two Longitudinal Professionalism Courses on Student Pharmacists’ Empathy.” *American Journal of Pharmaceutical Education* 85, no. 2 (March 2021): 123–30.
391. Remón-Torres, M. A., Remón-Torres, M. M., & Tataje-Lavanda, M. K. (2013). Características del nivel de empatía hacia el paciente en internos de medicina de dos hospitales nacionales. *Revista Médica Panacea*, 3(1), 2–5.
392. Ren, G. S., Min, J. T., Ping, Y., Shing, L., Win, M. T., Chuan, H., & Samarasekera, D. (2016). Complex and novel determinants of empathy change in medical students. *Korean Journal of Medical Education*, 28(1), 67–78.
393. Reyes-Reyes, Alejandro, Aracelis Calzadilla-Núñez, Pilar Torres-Martínez, Patricia Díaz-Calzadilla, Wilson Pastén-Hidalgo, Fanny Fanny Bracho-Milic, and Víctor Díaz-Narváez. “Psychometry: Cutting-Off Points and Standardization of the Jefferson Empathy Scale Adapted for Students of Kinesiology.” *Sage Open*, December 2021, 1–10. <https://doi.org/10.1177/21582440211056628>.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

394. Rezayat, Amir Akhavan, Najmeh Shahini, Hamid Toofani Asl, Lida Jarahi, Fatemeh Behdani, Seyed Reza Habibzadeh Shojaei, and Javad Sadeghi Allah Abadi. "Empathy Score among Medical Students in Mashhad, Iran: Study of the Jefferson Scale of Physician Empathy." *Electronic Physician* 10, no. 7 (July 25, 2018): 7101–6. <https://doi.org/10.19082/7101>.
395. Richards, H. L., Fortune, D. G., Weidmann, A., Sweeney, S. K. T., & Griffiths, C. E. M. (2004). Detection of psychological distress in patients with psoriasis: low consensus between dermatologist and patient. *British Journal of Dermatology*, 151(6), 1227–1233. doi:11/j.1365-2133.2004.06221.x
396. Riess, H., Kelley, J., Bailey, R., Dunn, E., & Phillips, M. (2012). Empathy Training for Resident Physicians: A Randomized Controlled Trial of a Neuroscience-Informed Curriculum. *Journal of General Internal Medicine*, 1–7. doi:10.1007/s11606-012-2063-z
397. Riess, H., Kelley, J. M., Bailey, R., Konowitz, P. M., & Gray, S. T. (2011). Improving Empathy and Relational Skills in Otolaryngology Residents. *Otolaryngology–Head and Neck Surgery*, 144(1), 120. doi:10.1177/0194599810390897
398. Robertson, Amy D., Mady Moore, Lara McFadden, Evan L. Steere, Jessica Barnes, and Sarah Shrader. "Implementation and Evaluation of Simulations in a Required Course to Improve Empathy of Pharmacy Students." *Currents in Pharmacy Teaching and Learning* 14, no. 11 (November 2022): 1404–10.
399. Roff, S. (2015). Reconsidering the "decline" of medical student empathy as reported in studies using the Jefferson Scale of Physician Empathy-Student version (JSPE-S). *Medical Teacher*, 1–4. doi:10.3109/0142159X.2015.1009022
400. Roh, M. S., Hahm, B. J., Lee, D. H., & Suh, D. H. (2010). Evaluation of empathy among Korean medical students: a cross-sectional study using the Korean Version of the Jefferson Scale of Physician Empathy. *Teaching and Learning in Medicine*, 22(3), 167–171. doi:10.1080/10401334.2010.488191
401. Rohrer, Jessica L. "Teaching Compassion Skills to Students of Behavior Analysis via Telehealth." Endicott College, ProQuest Dissertations Publishing, 2021. <https://www.proquest.com/openview/a925bd1ae480c5f84fc9503d9ee1acb1/1?cbl=18750&diss=y&pq-origsite=gscholar>.
402. Roling, Gudrun, Gabriele Lutz, Friedrich Edelhäuser, Marzellus Hofmann, Maria P. Valk-Draad, Caroline Wack, Aviad Haramati, Diethard Tauschel, and Christian Scheffer. "Empathy, Well-Being and Stressful Experiences in the Clinical Learning Environment." *Patient Education and Counseling*, April 28, 2020. <https://doi.org/10.1016/j.pec.2020.04.025>.
403. Rosenzweig, Julien, Alessandra Blaizot, Nancie Cougot, Estelle Pegon-Machat, Olivier Hamel, Nareg Apelian, Christophe Bedos, Maria-Teresa Munoz-Sastre, and Jean-Noel Vergnes. "Effect of a Person-Centered Course on the Empathic Ability of Dental Students." *Journal of Dental Education* 80, no. 11 (November 2016): 1337–48.
404. Rosenthal, S., Howard, B., Schluskel, Y. R., Herrigel, D., Smolarz, B. G., Gable, B., ... Kaufman, M. (2011). Humanism at heart: preserving empathy in third-year medical students. *Academic Medicine*, 86(3), 350. doi: 10.1097/ACM.0b013e318209897
405. Runyan, Christine, Judith A. Savageau, Stacy Potts, and Linda Weinreb. "Impact of a Family Medicine Resident Wellness Curriculum: A Feasibility Study." *Medical*

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Education Online* 21, no. 0 (June 8, 2016).  
<http://med-ed-online.net/index.php/meo/article/view/30648>.
406. Ruiz-Hernández, José Antonio, Cecilia López-García, Bartolomé Llor-Esteban, Inmaculada Galián-Muñoz, and Ana Pilar Benavente-Reche. "Evaluation of the Users Violence in Primary Health Care: Adaptation of an Instrument." *International Journal of Clinical and Health Psychology* 16, no. 3 (September 2016): 295–305. doi:10.1016/j.ijchp.2016.06.001.
407. Ryu, Hye Ran, and Kyung Sook Bang. "[A Validation Study of the Korean Version of the Jefferson Empathy Scale for Health Professionals for Korean Nurses]." *Journal of Korean Academy of Nursing* 46, no. 2 (April 2016): 207–14. doi:10.4040/jkan.2016.46.2.207.
408. Saeidi, Solmaz, Shadman Reza-Masouleh, Minoos Mitra Chehrzad, Kazem Nejad Leili, and Ehsan. "Empathy with Patients Compared between First and Final Year Nursing Students." *Journal of Holistic Nursing And Midwifery* 27, no. 1 (April 15, 2017): 79–85. doi:10.18869/acadpub.hnmj.27.1.79.
409. Sahin, S., Arioz Duzgun, A., Unsal, A. et al. Assessment of Compassion Fatigue and Empathy Levels in Nurses During the COVID-19 Outbreak: Turkey's Case. *J Relig Health* (2023). <https://doi.org/10.1007/s10943-023-01749-z>
410. Samuels, Aimee, Marion E. Broome, Timothy B. McDonald, Chii-Hui Peterson, and Julie A. Thompson. "Improving Self-Reported Empathy and Communication Skills Through Harm in Healthcare Response Training." *Journal of Patient Safety and Risk Management*, 2021. [https://doi.org/DOI: 10.1177/25160435211047643](https://doi.org/DOI:10.1177/25160435211047643).
411. San-Martín, Montserrat, Helena Roig-Carrera, Rosa M. Villalonga-Vadell, Carmen Benito-Sevillano, Miquel Torres-Salinas, Gemma Claret-Teruel, Bernabé Robles, Antonia Sans-Boix, Adelina Alcorta-Garza, and Luis Vivanco. "[Empathy, inter-professional collaboration, and lifelong medical learning in Spanish and Latin-American physicians-in-training who start their postgraduate training in hospitals in Spain. Preliminary outcomes]." *Atencion Primaria / Sociedad Espanola De Medicina De Familia Y Comunitaria*, April 29, 2016. doi:10.1016/j.aprim.2016.02.007.
412. San-Martín, Montserrat, Roberto Delgado-Bolton, and Luis Vivanco. "Professionalism and Occupational Well-Being: Similarities and Differences Among Latin American Health Professionals." *Frontiers in Psychology*, 8 (2017): 63. doi:10.3389/fpsyg.2017.00063.
413. Santiago, Luiz Miguel, Ana Teresa Sá Cachada Batptista, Katia Mauricio, and Sean Siytangco-Johnson. "Medical School Curriculum And The Level Of Compassion Of Portuguese Medical Students," Preprint. March 17, 2020. <https://doi.org/10.21203/rs.3.rs-17379/v1>.
414. Schuler, Monika S., and June Andrews Horowitz. "Nursing Students' Attitudes Toward and Empathy for Patients With Substance Use Disorder Following Mentorship." *Journal of Nursing Education*, 59, no. 3 (March 5, 2020): 149–53. <https://doi.org/10.3928/01484834-20200220-05>.
415. Schuller, Kristin A., Sherleena Buchman, and Cory E. Cronin. "Retention Matters: A Qualitative Understanding of Nursing Students' Motivations." *Int J Nurs Health Care Res*, an Open Access Journal ISSN: 2688-9501 Volume 2; Issue 11. *International Journal of Nursing and Health Care Research*, 12 (December 31, 2019): 7.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- <https://doi.org/10.29011/2688-9501.101137>.
416. Schwartz, B., & Bohay, R. (2012). Can Patients Help Teach Professionalism and Empathy to Dental Students? Adding Patient Videos to a Lecture Course. *Journal of Dental Education*, 76(2), 174–184.
417. Schwartz, Brian D., Alexis Horst, Jenifer A. Fisher, Nicole Michels, and Lon J. Van Winkle. “Fostering Empathy, Implicit Bias Mitigation, and Compassionate Behavior in a Medical Humanities Course.” *International Journal of Environmental Research and Public Health* 17, no. 7 (March 25, 2020). <https://doi.org/10.3390/ijerph17072169>.
418. Schweller, M., Costa, F. O., Antônio, M. Â. R. G. M., Amaral, E. M., & de Carvalho-Filho, M. A. (2014). The Impact of Simulated Medical Consultations on the Empathy Levels of Students at One Medical School: *Academic Medicine, Published Ahead-of-Print*, 1. doi:10.1097/ACM.0000000000000175
419. Seo, Hwo-Yeon, Dong-Wook Lee, Soohyun Nam, Sung-jun Cho, Je-Yeon Yoon, Yun-Chul Hong, and Nami Lee. “Burnout as a Mediator in the Relationship between Work-Life Balance and Empathy in Healthcare Professionals.” *Psychiatry Investigation* 17, no. 9 (September 17, 2020): 951–59. <https://doi.org/2020.17.9.951>.
420. Seo, Jung Woo, Kyung Hye Park, Ha Young Park, Kyung Hoon Sun, Song Yi Park, Tae Hoon Kim, HyeRin Roh, and Junho Cho. Empathy and Quality of Life in Korean Emergency Physicians. *Journal of the Korean Society of Emergency Medicine* 27, no. 2 (April 1, 2016): 150–56.
421. Shahini, Najmeh, Kambiz Akhavane Rezayat, Fatemeh Behdani, Seyed Shojaei, Amir Rezayat, and Maliheh Dadgarmoghaddam. “Empathy Score among Student Residence Assistants in Iran.” *Electronic Physician* 8, no. 12 (n.d.): 3357–62. doi:DOI: <http://dx.doi.org/10.19082/3357>.
422. Shanafelt, T. D., West, C., Zhao, X., Novotny, P., Kolars, J., Habermann, T., & Sloan, J. (2005). Relationship Between Increased Personal Well-Being and Enhanced Empathy Among Internal Medicine Residents. *Journal of General Internal Medicine*, 20(7), 559–564. doi: 10.1111/j.1525-1497.2005.0108.x
423. Shariat, S. V., Eshtad, E., & Ansari, S. (2010). Empathy and its correlates in Iranian physicians: A preliminary psychometric study of the Jefferson Scale of Physician Empathy. *Medical Teacher*, 32(10), 417–421.
424. Shariat, S. V., & Habibi, M. (2012). Empathy in Iranian medical students: Measurement model of the Jefferson Scale of Empathy. *Medical Teacher*. doi:10.3109/0142159X.2012.714881
425. Shariat, S. V., & Kaykhavoni, A. (2010). Empathy in Medical Residents at Iran University of Medical Sciences. *Iranian Journal of Psychiatry and Clinical Psychology*, 16(3), 248–256.
426. Sharp, Michelle, and Kristin M. Burkart. “Trainee Wellness: Why It Matters, and How to Promote It.” *Annals of the American Thoracic Society*, 14, no. 4 (February 6, 2017): 505–12. doi:10.1513/AnnalsATS.201612-1006PS.
427. Shashikumar, R., Chaudhary, R., Ryali, V. S. S. R., Bhat, P. S., Srivastava, K., Prakash, J., & Basannar, D. (2014). Cross sectional assessment of empathy among undergraduates from a medical college. *Medical Journal Armed Forces India*, 70(2), 179–185. doi:10.1016/j.mjafi.2014.02.005
428. Sheehan, Caryn A., Perrin, Kathleen O., Potter, Mertie L., Kazanowski, Mary K., &

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Bennett, Laurie A. (2013). Engendering Empathy in Baccalaureate Nursing Students. *International Journal of Caring Sciences*, 6(3), 456–464.
429. Sherman, J. J., & Cramer, A. (2005). Measurement of changes in empathy during dental school. *Journal of Dental Education*, 69(3), 338–345.
430. Sideras, S., McKenzie, G., Noone, J., Dieckmann, N., & Allen, T. L. (2015). Impact of a Simulation on Nursing Students' Attitudes Toward Schizophrenia. *Clinical Simulation in Nursing*, 11(2), 134–141. doi:10.1016/j.ecns.2014.11.005
431. Simko, Lynn Coletta, Ashwini Gumireddy, James Schreiber, and Madison Hawkins. "Effects of a Chronic Pain Simulation Empathy Training Kit on the Empathy of Interprofessional Healthcare Students for Chronic Pain Patients." *Clinical Simulation in Nursing* (May 17, 2021):15–22. In press <https://doi.org/10.1016/j.ecns.2021.04.003>.
432. Singh, Kirti, Mainak Bhattacharyya, Vikas Veerwal, and Arshi Singh. "Using Role-Plays as an Empathy Education Tool for Ophthalmology Postgraduate." *International Journal of Applied and Basic Medical Research*, 7, no. 5 (December 1, 2017): 62. [https://doi.org/10.4103/ijabmr.IJABMR\\_145\\_17](https://doi.org/10.4103/ijabmr.IJABMR_145_17).
433. Singh, S. (2005). Empathy: Lost or Found in Medical Education? *Medscape General Medicine*, 7(3), 74.
434. Singh, Shekhawat Kuldeep, Chauhan Arunima, Devi S Sakthi, and Kunjumon Simi. "Construct Validity and Reliability of Jefferson Scale of Empathy-Health Care Provider (Student Version) among Final Year, Interns and Post-Graduate Students of a Dental College in India." *Indian Journals.Com* 8, no. 4 (2017): 184–92. <https://doi.org/10.5958/0976-5506.2017.00337.0>.
435. Skogevall, Sofia, Inger K. Holmström, Elenor Kaminsky, and Jakob Håkansson Eklund. "Telephone Nurses' Perceived Stress, Self-Efficacy and Empathy in Their Work with Frequent Callers." *Nursing Open*, September 16, 2021, 1–8. <https://doi.org/10.1002/nop2.889>.
436. Smith, Karen E., Greg J. Norman, and Jean Decety. "The Complexity of Empathy during Medical School Training: Evidence for Positive Changes." *Medical Education*, 51, no. 11 (November 1, 2017): 1146–59. <https://doi.org/10.1111/medu.13398>.
437. Sobral, Dilermando, Margarida Figueiredo-Braga, and Marcy Rosenbaum. "Clinical Encounters in Primary Care: Patient-Centered or Computer-Centered?" *ResearchGate*, April 24, 2016. [https://www.researchgate.net/publication/301612155\\_Clinical\\_encounters\\_in\\_primary\\_care\\_patient-centered\\_or\\_computer-centered](https://www.researchgate.net/publication/301612155_Clinical_encounters_in_primary_care_patient-centered_or_computer-centered).
438. Sobral, Dilermando, and Margarida Figueiredo-Braga. "Family Physician Communication, Quality of Care and the Use of Computer in the Consultation – The Patient's Perspective." *Procedia Computer Science*, International Conference on ENTERprise Information Systems/International Conference on Project MANagement/International Conference on Health and Social Care Information Systems and Technologies, CENTERIS/ProjMAN / HCist 2016, 100 (2016): 594–601. doi:10.1016/j.procs.2016.09.200.
439. Soler-Gonzalez, Jorge, Montserrat San-Martín, Roberto Delgado-Bolton, and Luis Vivanco. "Human Connections and Their Roles in the Occupational Well-Being of Healthcare Professionals: A Study on Loneliness and Empathy." *Frontiers in Psychology* 8 (August 29, 2017). <https://doi.org/10.3389/fpsyg.2017.01475>.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

440. Soncini, F., Silvestrini, G., Poscia, A., Ciorba, V., Conti, A., Murru, C., ... Zucco, R. (2013). Public Health Physicians and Empathy. Are we really empathic? The Jefferson Scale applied to Italian resident doctors in Public Health Francesco Soncini. *The European Journal of Public Health*, 23(suppl 1), ckt124.068. doi:10.1093/eurpub/ckt124.068
441. Soohyun Jeon, & Eun Cho. (2015). Assessment of Korean Pharmacy Students' Empathy Using the Jefferson Scale of Empathy. *American Journal of Pharmaceutical Education*, 79(5), 1–10.
442. Souror, Yasser R., Dareen K. Aljehani, and Malath H. Alshaikh. "Empathy of Dental Students towards Children after Behaviour Guidance Lectures and Clinical Experience." *European Journal of Dental Education: Official Journal of the Association for Dental Education in Europe*, March 7, 2020. <https://doi.org/10.1111/eje.12523>.
443. Souza, Mirella Castelhana, Simone de Godoy, Sara Soares dos Santos, Maria Auxiliadora Trevizan, Renata Cristina de Campos Pereira Silveira, Isabel Amélia Costa Mendes, "How to Measure The Empathy Level of Undergraduate Nursing Students? An Integrative Review." *Texto Contexto - Enfermagem* 28 (2019). <https://doi.org/10.1590/1980-265x-tce-2018-0017>.
444. Spiro, H. (2009). Commentary: The Practice of Empathy. *Academic Medicine*, 84(9), 1177–1179.
445. Srivastava, Ashok, Kritika Tiwari, Shaili Vyas, Deep Shikha, Sunil D Kandpal, and Jayanti Semwal. "Walking a Mile in Patients' Moccasins: Measuring Empathy among Indian Medical Students." *National Journal of Medical Research*, 7, no. 1 (March 2017): 1–4.
446. Srivastava, Ashok K., Kritika Tiwari, Shaili Vyas, Jayanti Semwal, and Sunil Dutt Kandpal. "Teaching Clinical Empathy to Undergraduate Medical Students of Dehradun: A Quasi-Experimental Study." *Indian Journal of Community Health*, 29, no. 3 (September 30, 2017): 258–63.
447. Stansfield, R. B., Schwartz, A., O'Brien, C. L., Dekhtyar, M., Dunham, L., & Quirk, M. (2015). Development of a metacognitive effort construct of empathy during clinical training: a longitudinal study of the factor structure of the Jefferson Scale of Empathy. *Advances in Health Sciences Education : Theory and Practice*, 445. <http://doi.org/10.1007/s10459-015-9605-1>
448. Starr, Julie Ann, Mary Beth Holmes, Erin Riley, Brian McDonnell, Laura Driscoll, James Camarinos, Weronika Grabowska, and Allen G. Hargaug. "A Quantitative Measurement of Physical Therapists' Empathy and Exploration of the Relationship With Practice Setting and Work Engagement." *Evaluation & the Health Professions*, July 22, 2019, 0163278719864687. <https://doi.org/10.1177/0163278719864687>.
449. Stepien, K. A., & Baernstein, A. (2006). Educating for empathy. *Journal of General Internal Medicine*, 21(5), 524–530. doi:10.1111/j.1525-1497.2006.00443.x
450. Šter, M. P., Šter, B., Petek, D., & Gorup, E. C. (2013). Validation of Slovenian Version of Jefferson Scale of Empathy for Students. *Slovenian Journal of Public Health*, 0(0), 89–100.
451. Stern, D. T. (2005). *Measuring Medical Professionalism*. Oxford University Press.
452. Strohbehn, G.W., S.J.K. Hoffman, and M Tokaz. "Visual Arts in the Clinical Clerkship: A Pilot Cluster-Randomized, Controlled Trial." *BMC Med Educ.*, 20, no. 481 (November

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- 30, 2020). <https://doi.org/10.1186/s12909-020-02386-w>.
453. Suh, D. H., Hong, J. S., Lee, D. H., Gonnella, J. S., & Hojat, M. (2012). The Jefferson Scale of Physician Empathy: A preliminary psychometric study and group comparisons in Korean physicians. *Medical Teacher*, *34*(6), e464–e468. doi:10.3109/0142159X.2012.668632
454. Sukel, Kayt. (2012, September 16). The Power of Empathy. Retrieved from <http://bigthink.com/world-in-mind/the-power-of-empathy>
455. Sulzer, S. H., Feinstein, N. W., & Wendland, C. L. (2016). Assessing empathy development in medical education: a systematic review. *Medical Education*, *50*(3), 300–310. <http://doi.org/10.1111/medu.12806>
456. Sundling, Vibeke, Annelie J. Sundler, Inger K. Holmström, Dorte Vesterager Kristensen, and Hilde Eide. “Mindfulness Predicts Student Nurses’ Communication Self-Efficacy: A Cross-National Comparative Study.” *Patient Education and Counseling* *100*, no. 8 (August 2017): 1558–63. doi:10.1016/j.pec.2017.03.016.
457. Sundling, Vibeke, Sandra van Dulmen, and Hilde Eide. “Communication Self-Efficacy in Optometry: The Mediating Role of Mindfulness.” *Scandinavian Journal of Optometry and Visual Science* *9*, no. 2 (November 26, 2016): 8–12. doi:10.5384/sjovs.vol9i2p8-12.
458. Taff, Heather, Linda Gilkerson, Amanda Osta, Alisa Seo-Lee, Alan Schwartz, Zobia Chunara, and Michelle M. Barnes. “Strengthening Parent – Physician Communication: A Mixed Methods Study on Attuned Communication Training for Pediatric Residents.” *Teaching and Learning in Medicine*, August 10, 2022. <https://doi.org/10.1080/10401334.2022.2107528>.
459. Tamayo, Cassandra A., Mireille N. Rizkalla, and Kyle K. Henderson. “Cognitive, Behavioral and Emotional Empathy in Pharmacy Students: Targeting Programs for Curriculum Modification.” *Frontiers in Pharmacology* *7* (April 19, 2016). doi:10.3389/fphar.2016.00096.
460. Tariq, Nabia, Tariq Rasheed, and Mohsen Tavakol. “A Quantitative Study of Empathy in Pakistani Medical Students: A Multicentered Approach.” *Journal of Primary Care & Community Health*, June 23, 2017, 2150131917716233. doi:10.1177/2150131917716233.
461. Tavakol, S., Dennick, R., & Tavakol, M. (2011). Empathy in UK medical students: differences by gender, medical year and specialty interest. *Education for Primary Care*, *22*(5), 297–303.
462. Tavakol, S., Dennick, R., & Tavakol, M. (2011). Psychometric properties and confirmatory factor analysis of the Jefferson Scale of Physician Empathy. *BMC Medical Education*, *11*(1), 54. doi:10.1186/1472-6920-11-54
463. Tegge, Ashley M., "Levels of Empathy in Undergraduate Healthcare Professions Students" (2015). Honors Projects. Paper 47. [http://digitalcommons.iwu.edu/nursing\\_honproj/47/](http://digitalcommons.iwu.edu/nursing_honproj/47/)
464. Thai, Jessica, Xu-Dong Zhao, Lei Huang, Yuan Zhong, Hao Peng, and Jessica Koran. “The Positive Association Between Empathy and Self-Esteem in Chinese Medical Students: A Multi-Institutional Study.” *Frontiers in Psychology*, *10* (2019). <https://doi.org/10.3389/fpsyg.2019.01921>.
465. Thomas, Linta, Jose Paul, Johnson Prakash, Senny Thomas, Deepak Thomas, and Paul K. Binitta. “Empathy among Dental Students and Dentists towards Patients-an Institutional

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- Cross- Sectional Survey.” *Journal of Cochin Peridontists Society*, 3, no. 1 (2018): 3–8.
466. Thomas, M. R., Dyrbye, L. N., Huntington, J. L., Lawson, K. L., Novotny, P. J., Sloan, J. A., & Shanafelt, T. D. (2007). How do distress and well-being relate to medical student empathy? A multicenter study. *Journal of General Internal Medicine*, 22(2), 177–183. doi: 10.1007/s11606-006-0039-6
467. Tomy, Tim, Cosima Neumann, Joshua Vogensen, and Stella Major. “Immersive and Screen-Based Virtual Reality Simulations Enhance Empathy.” *International Journal of Healthcare Simulation*, 2023. <https://ijohs.com/article/doi/10.54531/GRKB7114>.
468. Torres-Martínez, Pilar Alejandra, Carolina Alejandra Barrios-Penna, Juan Fernando Fonseca-Molina, Víctor Patricio Díaz-Narváez, and Sebastián Alejandro González-Cruz. “Levels of Empathy in Dental Students at Universidad San Sebastián in Concepción, Chile.” *Rev. Fac. Med.* 65, no. 2 (2017): 219–25. <http://dx.doi.org/10.15446/revfacmed.v64n2.61444>.
469. Toto, R. L., Man, L., Blatt, B., Simmens, S. J., & Greenberg, L. (2014). Do empathy, perspective-taking, sense of power and personality differ across undergraduate education and are they inter-related? *Advances in Health Sciences Education*, 1–9. doi:10.1007/s10459-014-9502-z
470. Tsao, Pamela, and Catherine H. Yu. “‘There’s No Billing Code for Empathy’ - Animated Comics Remind Medical Students of Empathy: A Qualitative Study.” *BMC Medical Education* 16, no. 1 (August 12, 2016): 204. doi:10.1186/s12909-016-0724-z.
471. Tsiantou, D., Lazaridou, D., Coolidge, T., Arapostathis, K. N., & Kotsanos, N. (2013). Psychometric properties of the Greek version of the Toronto Composite Empathy Scale in Greek dental students. *European Journal of Dental Education*, n/a–n/a. doi:10.1111/eje.12037
472. Tuirán-Gutiérrez, Guillermo J., Montserrat San-Martín, Roberto Delgado-Bolton, Blanca Bartolome, and Luis Vivanco. “Improvement of Inter-Professional Collaborative Work Abilities in Mexican Medical and Nursing Students: A Longitudinal Study.” *Frontiers in Psychology* 10 (2019). <https://doi.org/10.3389/fpsyg.2019.00005>.
473. Valentín, María José Díaz, Margarita Garrido Abejar, Rosa María Fuentes Chacón, María Dolores Serrano Parra, María Elisa Larrañaga Rubio, and Santiago Yubero Jiménez. “Validation to the Spanish of the Jefferson Empathy Scale Health Professions Students Version and Its Psychometric Properties in Nursing Students.” *Nurse Education in Practice* 40 (October 1, 2019): 102629. <https://doi.org/10.1016/j.nepr.2019.102629>.
474. Vallabh, K. (2011). Psychometrics of the student version of the Jefferson Scale of Physician Empathy (JSPE-S) in final-year medical students in Johannesburg in 2008. *South African Journal of Bioethics and Law*, 4(2), 63.
475. Van Winkle, L. J., Bjork, B. C., Chandar, N., Cornell, S., Fjortoft, N., Green, J. M., ... Burdick, P. (2012). Interprofessional Workshop to Improve Mutual Understanding Between Pharmacy and Medical Students. *American Journal of Pharmaceutical Education*, 76(8). Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3475779/>
476. Van Winkle, L. J., Burdick, P., Bjork, B. C., Chandar, N., Green, J. M., Lynch, S. M., ... Robson, C. (2014). Critical Thinking and Reflection on Community Service for a Medical Biochemistry Course Raise Students’ Empathy, Patient-Centered Orientation, and Examination Scores. *Medical Science Educator*, 1–12.



## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- doi:10.1007/s40670-014-0049-7
477. Van Winkle, L. J., Fjortoft, N., & Hojat, M. (2012). Impact of a Workshop About Aging on the Empathy Scores of Pharmacy and Medical Students. *American Journal of Pharmaceutical Education*, 76(1). Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3298407/>
478. Van Winkle, L. J., La Salle, S., Richardson, L., Bjork, B. C., Burdick, P., Chandar, N., ... Viselli, S. M. (2013). Challenging Medical Students to Confront their Biases: A Case Study Simulation Approach. *International Association of Medical Science Educator*, 23(2), 217–224.
479. Verweij, H., Waumans, R. C., Smeijers, D., Lucassen, P. L., Donders, A. R. T., Horst, H. E. van der, & Speckens, A. E. (2016). Mindfulness-based stress reduction for GPs: results of a controlled mixed methods pilot study in Dutch primary care. *Br J Gen Pract*, 66(643), e99–e105. <http://doi.org/10.3399/bjgp16X683497>
480. Wahjudi, James Wiguna, Ardi Findyartini, and Fransiska Kaligis. “The Relationship between Empathy and Stress: A Cross-Sectional Study among Undergraduate Medical Students.” *Korean Journal of Medical Education*, 31, no. 3 (September 2019): 215–26. <https://doi.org/10.3946/kjme.2019.132>.
481. Waldrop, D., Nochajski, T., Davis, E. L., Fabiano, J., & Goldberg, L. (2014). Empathy in Dentistry: How Attitudes and Interaction with Older Adults Make a Difference. *Gerontology & Geriatrics Education*, 0(ja), null. doi:10.1080/02701960.2014.993065
482. Walker, Paul C., Vincent D. Marshall, Burgunda V. Sweet, and Sarah E. Vordenberg. “Longitudinal Measurement of Empathy in Student Pharmacists.” *American Journal of Pharmaceutical Education*, Vol. 85, no. 8 (September 1, 2021): 9 pages.
483. Wang, Cong, Qin Wu, Mei Feng, Qunfang Wan, and Xiaoling Wu. “International Nursing: Research on the Correlation Between Empathy and China’s Big Five Personality Theory: Implications for Nursing Leaders.” *Nursing Administration Quarterly* 41, no. 2 (June 2017): E1–10. doi:10.1097/NAQ.0000000000000219.
484. Weisse, Carol S., Kelly Melekis, and Bailey Hutchins. “Providing End-of-Life Care: Increased Empathy and Self-Efficacy Among Student Caregivers in Residential Homes for the Dying.” *The American Journal of Hospice & Palliative Care*, December 25, 2018, 1049909118820844. <https://doi.org/10.1177/1049909118820844>.
485. Wen, D., Ma, X., Li, H., Liu, Z., Xian, B., & Liu, Y. (2013). Empathy in Chinese medical students: psychometric characteristics and differences by gender and year of medical education. *BMC Medical Education*, 13(1), 130. doi:10.1186/1472-6920-13-130
486. Wen, D., Ma, X., Li, H., & Xian, B. (2013). Empathy in Chinese physicians: Preliminary psychometrics of the Jefferson Scale of Physician Empathy (JSPE). *Medical Teacher*, 35(7), 609–610. doi:10.3109/0142159X.2013.774338
487. Weng, H. C., Steed, J. F., Yu, S. W., Liu, Y. T., Hsu, C. C., Yu, T. J., & Chen, W. (2011). The effect of surgeon empathy and emotional intelligence on patient satisfaction. *Advances in Health Sciences Education*, 16(5), 591–600. doi:10.1007/s10459-011-9278-3
488. Wenger, Kelsey, Lauren Reist, Andrea Achenbach, Kimberly Dukes, Michelle Fravel, Laura Knockel, Francis Kuehnle, et al. “Empathy Levels among Health Professional Students at a Large Midwestern Public University - a Cross-Sectional Study.” *BMC Medical Education* 23, no. Article 123 (February 2023).

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- <https://doi.org/10.1186/s12909-023-04090-x>.
489. West CP, Dyrbye LN, Rabatin JT, & et al. (2014). Intervention to promote physician well-being, job satisfaction, and professionalism: A randomized clinical trial. *JAMA Internal Medicine*. doi:10.1001/jamainternmed.2013.14387
490. White, M., Holton, B., Stettner, E., Hemphill, R., Thurman, J., Hootman, D., & Santen, S. (2011). 321 Resident Empathy: Is There a Correlation Between the Jefferson Scale of Patient Perceptions of Physician Empathy and the Jefferson Scale of Physician Empathy? *Annals of Emergency Medicine*, 58(4, Supplement), S285–S286. doi:10.1016/j.annemergmed.2011.06.352
491. Williams, B., Boyle, M., Brightwell, R., Devenish, S., Hartley, P., McCall, M., ... Webb, V. (2012a). An assessment of undergraduate paramedic students' empathy levels. *International Journal of Medical Education*, 3, 98–102. doi:10.5116/ijme.4fba.9190
492. Williams, B., Boyle, M., Brightwell, R., Devenish, S., Hartley, P., McCall, M., ... Webb, V. (2012b). Paramedic empathy levels: results from seven Australian universities. *International Journal of Emergency Services*, 1(2), 111–121.
493. Williams, B., Boyle, M., & Earl, T. (2013). Measurement of Empathy Levels in Undergraduate Paramedic Students. *Prehospital and Disaster Medicine*, 1–5. doi:10.1017/S1049023X1300006X
494. Williams, B., Boyle, M., & Fielder, C. (2015). Empathetic attitudes of undergraduate paramedic and nursing students towards four medical conditions: A three-year longitudinal study. *Nurse Education Today*, 35(2), e14–e18. doi:10.1016/j.nedt.2014.12.007
495. Williams, B., Boyle, M., & Howard, S. (2015). Empathy Levels in Undergraduate Paramedic Students. *International Journal of Caring Sciences*, 8(1), 59–68.
496. Williams, B., Boyle, M., Tozer-Jones, J., Devenish, S., Hartley, P., McCall, M., ... O'Meara, P. (2014). Undergraduate paramedic students' empathy levels: A two-year longitudinal study. *Journal of Nursing Education and Practice*, 5. doi:10.5430/jnep.v5n1p58
497. Williams, Brett, and Bronwyn Beovich. "A Systematic Review of Psychometric Assessment of the Jefferson Scale of Empathy Using the COSMIN Risk of Bias Checklist." *J Eval Clin Pract*. 26 (2020): 1302–15.
498. Williams, B., Brown, T., Boyle, M., & Dousek, S. (2013). Psychometric testing of the Jefferson Scale of Empathy Health Profession Students' version with Australian paramedic students. *Nursing & Health Sciences*, n/a–n/a. doi:10.1111/j.1442-2018.2012.00719.x
499. Williams, B., Brown, T., McKenna, L., Boyle, M. J., Palermo, C., Nestel, D., ... Russo, V. (2014). Empathy levels among health professional students: a cross-sectional study at two universities in Australia. *Advances in Medical Education and Practice*, 5, 107–113. doi:10.2147/AMEP.S57569
500. Williams, Brett, Brown, Ted, McKenna, Lisa, Boyle, Malcolm, Palermo, Claire, Molloy, Elizabeth, ... Stagnitti, Karen. (2014). *Can DVD simulations be used to promote empathic behaviours and interprofessional collaboration among undergraduate healthcare students?* (Research paper). Sydney, Australia: Monash University. Retrieved from <http://www.med.monash.edu.au/cehpp/research/pages/alte-empathy.html>

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

501. Williams, B., Brown, T., McKenna, L., Palermo, C., Morgan, P., Nestel, D., ... Wright, C. (2015). Student empathy levels across 12 medical and health professions: an interventional study. *Journal of Compassionate Health Care*, 2(1), 4. <http://doi.org/10.1186/s40639-015-0013-4>
502. Williams, B., Sadasivan, S., Kadirvelu, A., & Olausson, A. (2014). Empathy levels among first year Malaysian medical students: an observational study. *Advances in Medical Education and Practice*, 149. doi:10.2147/AMEP.S58094
503. Williams, Brett, Adiva Sifris, and Marty Lynch. "A Psychometric Appraisal of the Jefferson Scale of Empathy Using Law Students." *Psychology Research and Behavior Management* 9 (2016): 171–78. doi:10.2147/PRBM.S108036.
504. Williams, Brett, and Bronwyn Beovich. "A Systematic Review of Psychometric Assessment of the Jefferson Scale of Empathy Using the COSMIN Risk of Bias Checklist." *Journal of Evaluation in Clinical Practice*. Accessed January 17, 2020. <https://doi.org/10.1111/jep.13293>.
505. Williams, Charlene R, Philip T Rodgers, Jacqueline E. McLaughlin, Thomas A Angelo, and Greene Shepherd. "Comparing Empathy Levels in Doctor of Pharmacy Students and Exemplary Pharmacist Preceptors." *American Journal of Pharmaceutical Education*, August 14, 2019, ajpe7497. <https://doi.org/10.5688/ajpe7497>.
506. Wilson, S. E., Prescott, J., & Becket, G. (2012). Empathy Levels in First- and Third-Year Students in Health and Non-Health Disciplines. *American Journal of Pharmaceutical Education*, 76(2). Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3305933/>
507. Worly, B. (2013). Professionalism education of OB/GYN resident physicians: What makes a difference? *Open Journal of Obstetrics and Gynecology*, 03(01), 137–141. doi:10.4236/ojog.2013.31A026
508. Yaghmaei, M., Monajemi, A., & Soltani-Arabshahi, K. (2014). The Effect of a Storytelling Course on Medical Students' Empathy toward Patients. *International Journal of Body, Mind and Culture*, 1(2). Retrieved from <http://www.ijbmc.org/index.php/ijbmc/article/view/12>
509. Yamada, Yu, Maiko Fujimori, Yuki Shirai, Hitomi Ninomiya, Takakazu Oka, and Yosuke Uchitomi. "Changes in Physicians' Intrapersonal Empathy After a Communication Skills Training in Japan." *Academic Medicine* Publish Ahead of Print (August 21, 2018). <https://doi.org/10.1097/ACM.0000000000002426>.
510. Yang, Ningxi, Han Xiao, Yingnan Cao, Shiyue Li, Hong Yan, and Yifang Wang. "Does Narrative Medicine Education Improve Nursing Students' Empathic Abilities and Academic Achievement? A Randomised Controlled Trial, *Journal of International Medical Research*, July 6, 2018, 0300060518781476. <https://doi.org/10.1177/0300060518781476>.
511. Yang, K.-T., & Yang, J.-H. (2013). A study of the effect of a visual arts-based program on the scores of Jefferson scale for physician empathy. *BMC Medical Education*, 13(1), 142. doi:10.1186/1472-6920-13-142
512. Yang, Yuran, and Qian Wang. "The Effect of Balint-Style Group on Empathy Ability and Interpersonal Communication Skills of Rehabilitation Students." *Advances in Social Science, Education and Humanities Research, Proceedings of the 2022 3rd International Conference on Mental Health, Education and Human Development*

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

- (MHEHD 2022), 670 (2022): 24–29.
513. Yarascavitch, C., Regehr, G., Hodges, B., & Haas, D. A. (2009). Changes in Dental Student Empathy During Training. *Journal of Dental Education*, 73(4), 509–517.
514. Yehle, K. S. (2012). Impact of the Geriatric Medication Game® on Nursing Students Empathy and Attitudes toward Older Adults. Presented at the Sigma Theta Tau International's 23rd International Nursing Research Congress, STTI. Retrieved from <https://stti.confex.com/stti/congrs12/webprogram/Paper50960.html>
515. Yeo, Sanghee. “Differences and Changes in the Empathy of Korean Medical Students According to Gender and Vocational Aptitude, before and after Clerkship.” *Korean Journal of Medical Education* 31, no. 4 (December 2019): 343–55. <https://doi.org/10.3946/kjme.2019.144>.
516. Yi, Kangqi, Mingyi Kang, Dongju Li, Zhipeng Wang, Jinsong Bai, Huiming Xu, and Shulan Ma. “A Multi-Institutional and Cross-Sectional Study on Empathy in Chinese Medical Students: Differences by Student Cadre or Not, Future Career Preference, and Father's Education Status.” *BMC Medical Education* 20, no. 1 (January 28, 2020): 24. <https://doi.org/10.1186/s12909-020-1935-x>.
517. Youssef, F. F., Nunes, P., Sa, B., & Williams, S. (2014). An exploration of changes in cognitive and emotional empathy among medical students in the Caribbean. *International Journal of Medical Education*, 5, 185–192. doi:10.5116/ijme.5412.e641
518. Yu, H., Jiang, A., & Shen, J. (2016). Prevalence and predictors of compassion fatigue, burnout and compassion satisfaction among oncology nurses: A cross-sectional survey. *International Journal of Nursing Studies*, 57, 28–38. <http://doi.org/10.1016/j.ijnurstu.2016.01.012>
519. Yu, Jihye, Sukyung Lee, Miran Kim, Kiyoung Lim, Kihong Chang, and Mijin Lee. “Relationships Between Perspective-Taking, Empathic Concern, and Self-Rating of Empathy as a Physician Among Medical Students.” *Academic Psychiatry: The Journal of the American Association of Directors of Psychiatric Residency Training and the Association for Academic Psychiatry*, December 23, 2019. <https://doi.org/10.1007/s40596-019-01114-x>.
520. Yu, Melody Hope L. Lee, Rafael Carlos C. Aniceto, Dave Ryan A. Dela Cruz, Mary Stephanie M. Dofitas, Kenneth Brian M. Fernando, and Joseph Anthony Lachica. “Physician Empathy in Public and Private Internal Medicine Residency Training Programs in Pasig City.” *The Philippine Journal of Internal Medicine* 58, no. Number 4 Oct – Dec (2020): 136–40.
521. Yucel, H., & Gonul, A. (2016). Levels of empathy among undergraduate physiotherapy students: A cross-sectional study at two universities in Istanbul. *Pakistan Journal of Medical Sciences*, 32(1), 85–90.
522. Yuen, Jacqueline K., Christopher See, Johnny T. K. Cheung, Chor Ming Lum, Jenny SW Lee, and Wai Tat Wong. “Can Teaching Serious Illness Communication Skills Foster Multidimensional Empathy? A Mixed-Methods Study.” *BMC Medical Education* 23 (Article number 2023). <https://doi.org/10.1186/s12909-023-04010-z>.
523. Yuguero, Oriol, Nuria Rius, Jorge Soler-González, and Montserrat Esquerda. “Increase of Burnout among Emergency Department Professionals Due to Emotional Exhaustion during the SARS-Cov2 Pandemic: Evolution from 2016 to 2021.” *Medicine* 101, no. 47 (November 2022). <https://doi.org/10.1097/MD.00000000000031887>.

## Jefferson Scale of Empathy

### Articles by National and International Researchers

---

524. Yuguero, Oriol, Carles Forné, Montserrat Esquerda, Josep Pifarré, María José Abadías, and Joan Viñas. “Empathy and Burnout of Emergency Professionals of a Health Region: A Cross-Sectional Study.” *Medicine* 96, no. 37 (September 2017): e8030. <https://doi.org/10.1097/MD.00000000000008030>.
525. Yuguero, Oriol, Josep Ramon Marsal, Montserrat Esquerda, Luis Vivanco, and Jorge Soler-González. “Association between Low Empathy and High Burnout among Primary Care Physicians and Nurses in Lleida, Spain.” *The European Journal of General Practice*, October 10, 2016, 1–7. doi:10.1080/13814788.2016.1233173.
526. Yuguero, Oriol, Josep Ramon Marsal, Montserrat Esquerda, and Jorge Soler-González. “Occupational Burnout and Empathy Influence Blood Pressure Control in Primary Care Physicians.” *BMC Family Practice* 18 (May 12, 2017): 63. doi:10.1186/s12875-017-0634-0.
527. Yuguero, Oriol, Edward R. Melnick, Josep R. Marsal, Montserrat Esquerda, and Jorge Soler-Gonzalez. “Cross-Sectional Study of the Association between Healthcare Professionals’ Empathy and Burnout and the Number of Annual Primary Care Visits per Patient under Their Care in Spain.” *BMJ Open* 8, no. 7 (July 30, 2018): e020949. <https://doi.org/10.1136/bmjopen-2017-020949>.
528. Zenasni, F., Boujut, E., du Vaure, B., Catu-Pinault, A., Tavani, J. L., Rigal, L., ... Sultan, S. (2012). Development of a French-language version of the Jefferson Scale of Physician Empathy and association with practice characteristics and burnout in a sample of General Practitioners. *International Journal of Person Centered Medicine*, 2(4), 759–766.