

Empathy in Medicine: What Do We Know?

Mohammadreza Hojat, Ph.D.

Sidney Kimmel Medical College
Thomas Jefferson University

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What Have We Learned So Far:

1. **Conceptualization and definition of empathy.**
2. **Measurement of empathy.**
3. **Empathy and gender.**
4. **Empathy and specialty interest.**
5. **Empathy and Personal qualities.**

What Have We Learned So Far (continued):

- 6. Empathy and clinical competence.**
- 7. Empathy and patient outcomes.**
- 8. Changes of empathy during medical education.**
- 9. Teaching to enhance empathy.**
- 10. Lasting effects/sustaining of the enhanced empathy.**

A Brief History of the Jefferson Physician Empathy Project

1- Conceptualization and Definition

Empathy is a predominantly cognitive (rather than affective) attribute which involves an understanding (rather than feeling) of experiences, concerns, and perspective of the patient, combined with a capacity *to communicate* this understanding, and an intention to help.”

Hojat, et al., (2002). *Am J Psychiatry*, 159, 1563-1569.

Hojat, (2007). *Empathy in Patient Care*, p. 80.

Hojat, et al., (2009). *Academic Medicine*, 84, 1182-1191.

Hojat, (2016). *Empathy in Health Professions Education and Patient Care*, 2016, p. 74.

2- Measurement

The Jefferson Scale of Empathy

(S-Version, HP-Version, and HPS-Version)

- **Contains 20 Likert-type items (7-point scale).**
- **Data support its *validity* (construct, criterion-related, convergent, and discriminant), and *reliability* (internal consistency: coefficient alpha; and score stability: test-retest).**

The JSE has been translated into 54 languages, and has been used in more than 80 countries.

Hojat, et al., (2001). *Educ & Psych Measurement*, 61, 349-365.

Hojat, et al., (2002). *Am J Psychiatry*, 159, 1563-1569.

Hojat, (2016). *Empathy in Health Professions Education and Patient Care*, pp. 83-128.

Sample Items

From the S-Version:

“It is difficult for a physician to view things from patients’ perspectives.”

From the HP-Version:

“It is difficult for me to view things from my patients’ perspectives.”

From the HPS-Version:

“It is difficult for a health care provider to view things from patients’ perspectives.”

3- Gender Difference

- In almost all of our studies with health professions students, and practicing clinicians we found women scored higher than men on the JSE.
- In most of studies in the United States and abroad with health professions students and health care providers, women obtained a higher mean score than men on the JSE.

For a recent review see: Hojat (2016). *Empathy in Health Professions Education and Patient Care*. New York: Springer International, pp. 169-187.

4- Specialty Interest

Physicians in “people-oriented” specialties (e.g., psychiatry, family medicine, internal medicine, pediatrics, obstetrics and gynecology, emergency medicine, and medical subspecialties) obtained higher empathy scores than their counterparts in “technology/procedure-oriented” specialties (e.g., anesthesiology, pathology, radiology, surgery and surgical subspecialties).

Hojat, et al., 2001, *Acad Med*, 76, 669.

Hojat, et al., 2002, *Acad Med*, 77, s58-s60.

Hojat, et al., 2002, *Am J Psychiatry*, 159, 1563-1569.

5- Personal Qualities

Research showed that high scorers on the JSE were more likely to display personal qualities that are conducive to relationship building (e.g., popularity, sociability, positive influence, emotional intelligence, conscientiousness, etc.).

Conversely, low scorers on the JSE were more likely to possess personal qualities that are detrimental to human relationship (e.g., aggression & hostility, emotional exhaustion, burnout, etc.).

For a recent review see: Hojat (2016). *Empathy in Health Professions Education and Patient Care*. Springer, pp. 151-167.

6- Clinical Competence

Medical Students' empathy is associated with faculty's ratings of clinical competence in 6 core clerkships in 3rd year of medical school.

Hojat, et al. (2002). *Medical Education*, 36, 522-527.

7- Patient Outcomes

Physicians' empathy is associated with tangible patient outcomes.

Hojat, et al. (2011). *Academic Medicine* ,86, 359-364.

Del Canale, et al. (2012). *Academic Medicine*, 87, 1243-1249.

1st Study in the U.S.

891 patients with diabetes mellitus treated by 29 physicians from Jefferson Department of Family and Community Medicine

Physicians were categorized into 3 groups:
high, moderate, and low empathy scorers

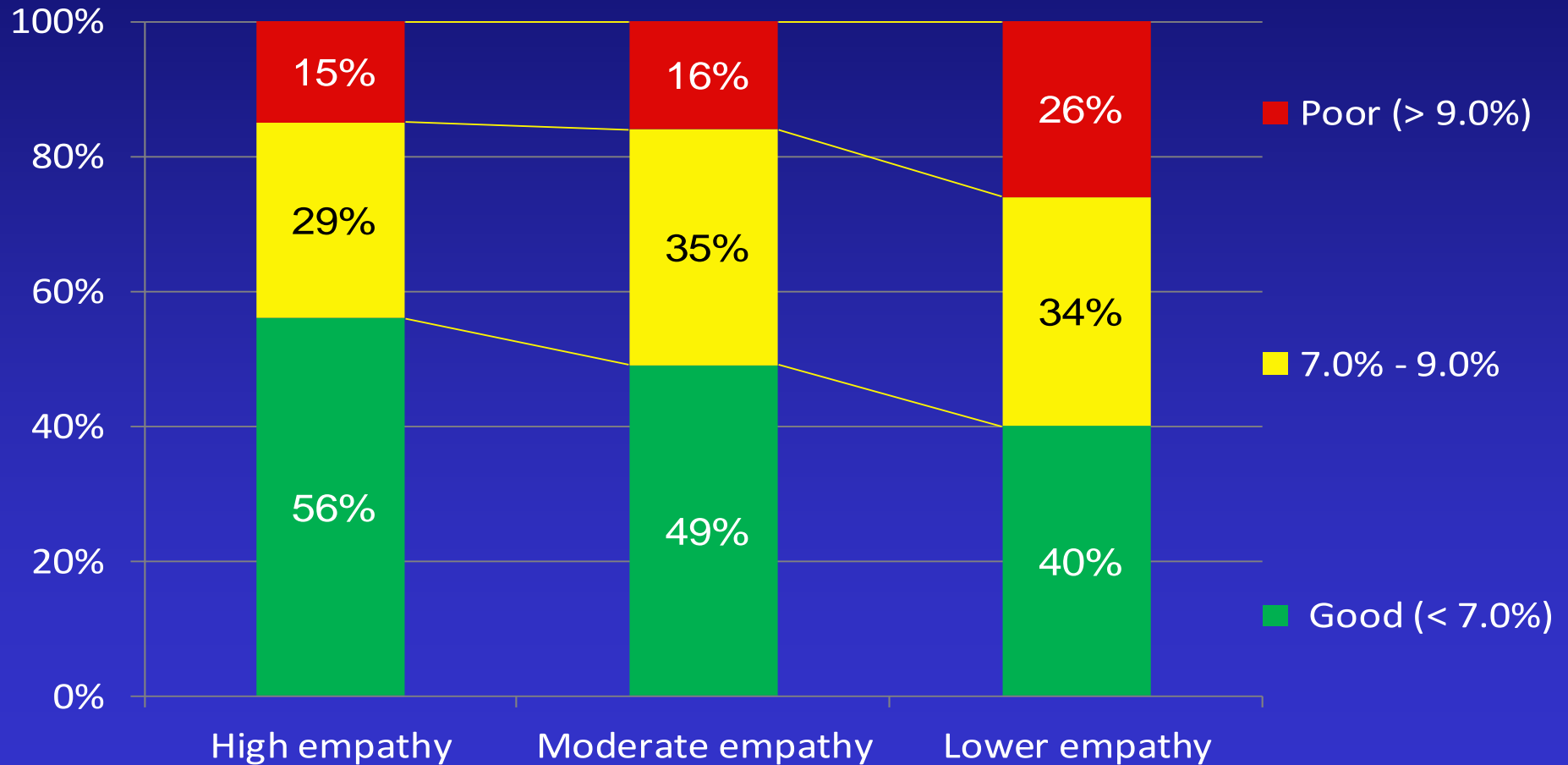
Patient outcomes:

Hemoglobin A1c categorized as good control (<7.0%); poor control (>9.0%)

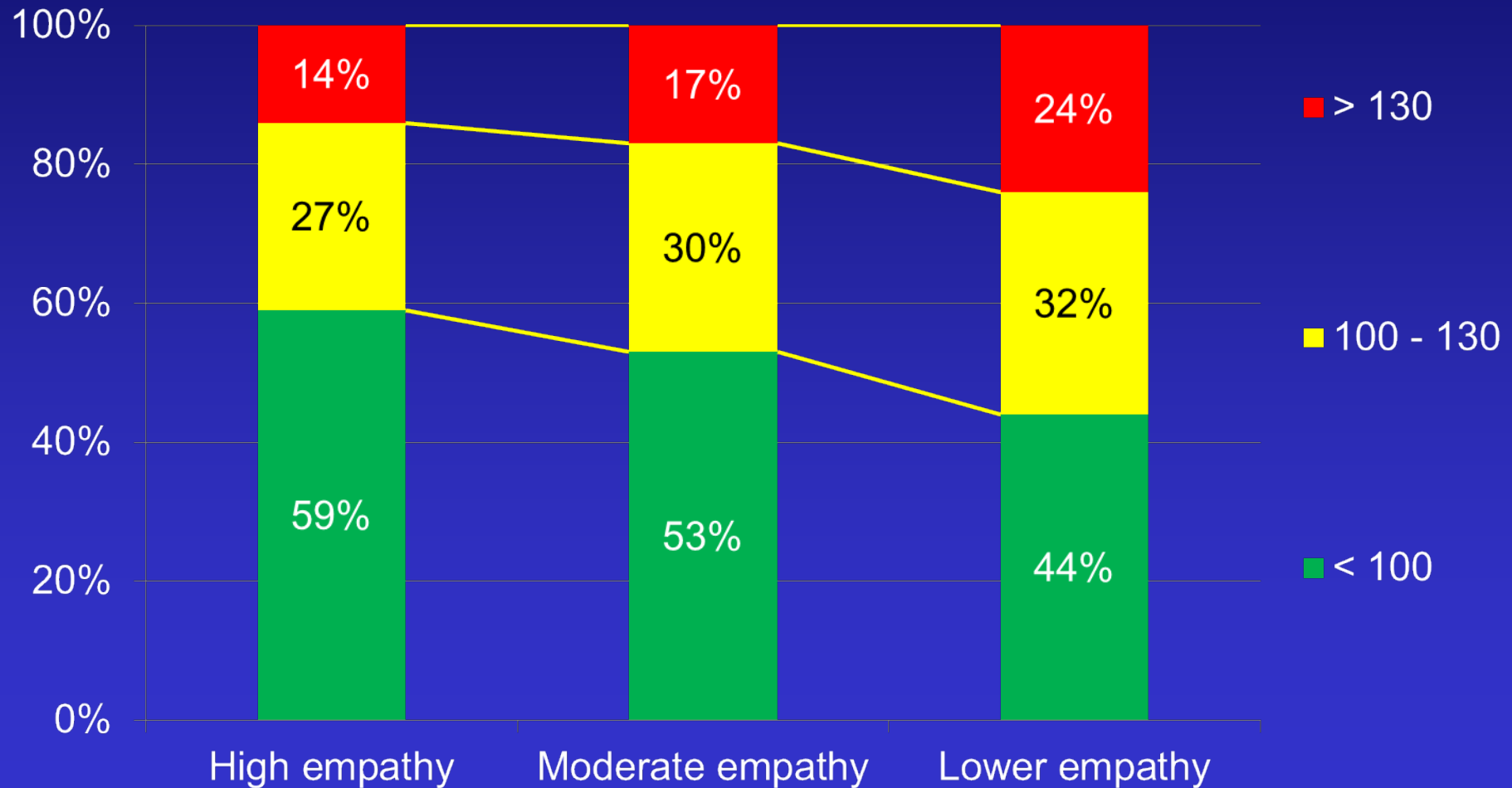
Low density lipoprotein cholesterol (LDL-C) categorized as good control (<100); poor control (>130)

Hojat, et al., (2011). Physician empathy and clinical outcomes in diabetic patients. *Academic Medicine*, 86, 359-364.

Primary care physician empathy scores and Hemoglobin A1c for patients with diabetes mellitus



Primary care physician empathy scores and low-density-lipoprotein cholesterol (LDL-C) for patients with diabetes mellitus



2nd Study in Italy

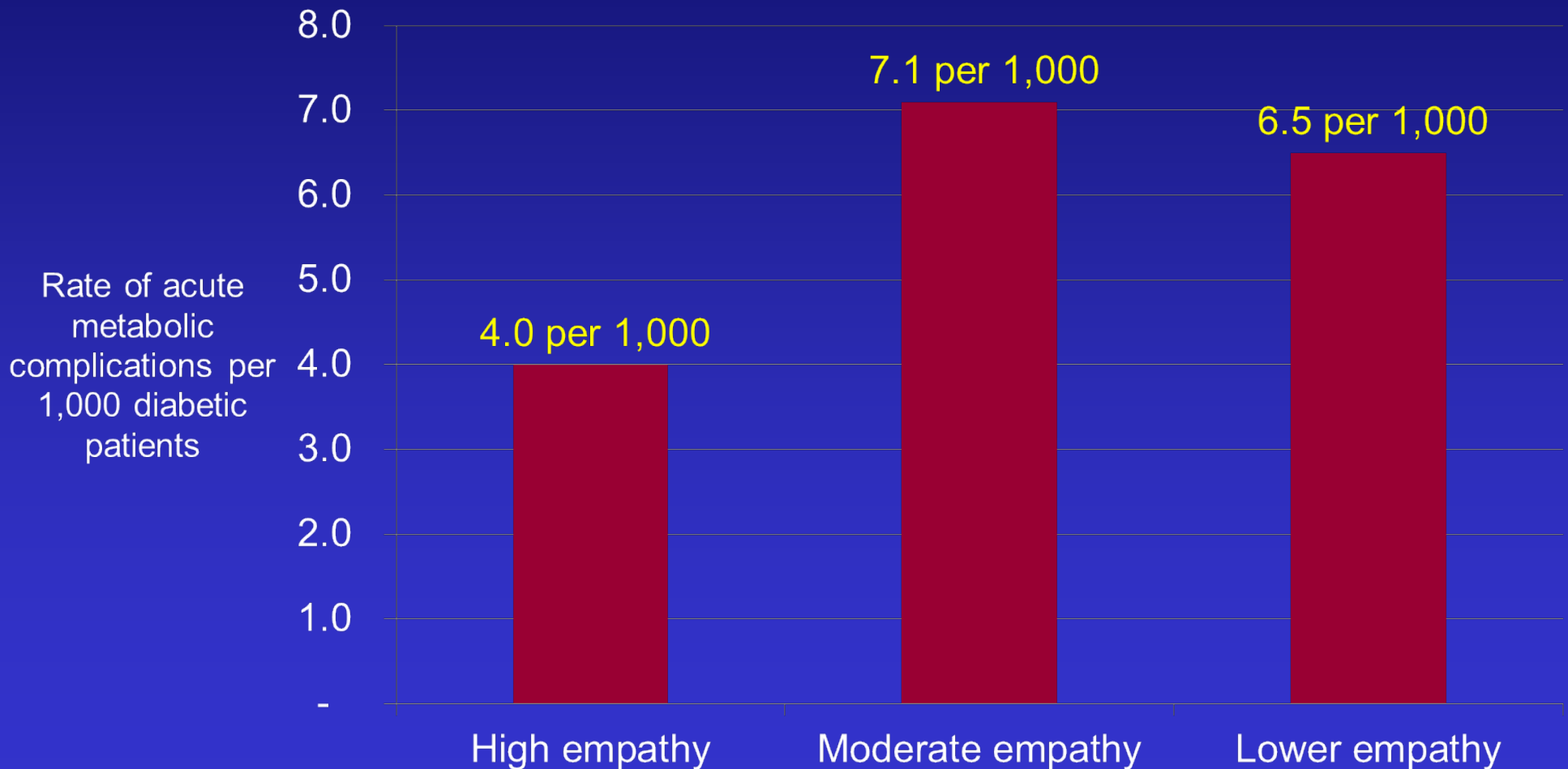
20,961 patients with type 1 or type 2 diabetes mellitus, enrolled with one of 242 primary care physicians for the entire year of 2009.

Patient Outcome

Occurrence of acute metabolic complications (diabetic ketoacidosis, hyperosmolar state, coma) in diabetes patients hospitalized in 2009

Del Canale, et al., (2012). Physicians' empathy and Disease complications: An empirical study of primary care physicians and their diabetic patients in Parma, Italy. *Academic Medicine*, 87, 1243-1249.

Association Between Empathy Scores of Physician Participants (n = 242) and Disease Complications in Their Diabetic Patients (n = 20,961) Parma, Italy



8- Erosion of Empathy

Cross-sectional and longitudinal research showed that scores on the JSE tend to decline in medical school when curriculum shifts toward clinical phase of medical education.

Hojat et al., (2004). *Medical Education*, 38, 934-941.

Hojat et al., (2009). *Academic Medicine*, 84, 1182-1191.

For a recent review see: Hojat, (2016). *Empathy in Health Professions Education and Patient Care*. Springer, pp. 203-234.

9- Teaching Empathy

- **Rocking Chair Project** (Magee & Hojat, 2010, FM)
- **Shadowing Experiences** (Forstater, et al, 2011, AEM)
- **Aging Game** (Van Winkle, et al, 2012, AJPE)
- **Narrative Skills Training** (Misra-Hebert, et al., 2012, IJME)
- **Movie Clips Experiment** (Hojat, et al, 2013, MT)

10- Sustaining Empathy

Empathy enhanced by targeted educational programs can be sustained by additional educational reinforcements.

Hojat et al., (2013). *Medical Teacher*, 35, 990-1001.

Future Research Agenda

- 1. Exploring additional variables that are associated with empathy.**
- 2. Developing national/international norm tables to assess empathy scores.**
- 3. Providing cutoff scores to identify high/low empathic individuals.**
- 4. Using empathy as an additional criterion measure for admissions.**
- 5. Effective methods to teach empathy.**

Future Research Agenda

6. Exploring effective strategies to sustain empathy.
7. Exploring best approaches to maximize empathy.
8. Investigating different approaches to regulate sympathy.
9. Studying the best predictors of patient outcomes from clinician's self-reported empathy, peer-assessments, and patient's perceptions of clinician empathy.
10. Exploring neurological underpinnings of empathy (and sympathy).

Concluding Remarks

- Empathy in physicians-in-training and in-practice is associated with better assessments of clinical competence, with positive personal qualities, and with optimal patient outcomes.
- Therefore, empathy should be considered as a significant component of professional development and as an indicator of overall physician competence that must be assessed and enhanced during undergraduate and graduate medical education and the practice of medicine.

