

# **Empathy and Osteopathic Medical Education**

**Leonard Calabrese, D.O.**

**Mohammadreza Hojat, Ph.D.**

**David Massello, B.A.**

**Joseph Bianco, Ph.D.**

**Douglas Mann, Ph.D.**

**Ohio University Heritage College of Osteopathic Medicine**

**The Cleveland Clinic**

**Jefferson Medical College**

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# Empathy as a Myth

Empathy may not even exist in reality after all (Lane, 1986).

Empathy should be eliminated and replaced by a less ambiguous term (Levy, 1997).

Empathy is difficult to define and hard to measure (Kestenbaum et al., 1989).

# Empathy as a Reality

A concept that can be operationally defined and measured cannot be a myth.

# Definition of Empathy in the Context of Patient Care

Empathy is a predominantly cognitive (rather than emotional) 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.

# Measurement of Empathy in Medical Education and Patient Care

## *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 43 languages so far, and been used in over 60 countries.

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

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

# 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.”*

# Selected Highlights of Research Findings

## *Empathy and Academic Performance*

- Empathy scores are significantly correlated with global ratings of clinical competence in medical school.
- Empathy scores are not correlated with performance on objective examination of knowledge in both basic and clinical sciences.

Hojat, et al., 2002, *Med Educ*, 36, 522-527.

## *Physician empathy and gender:*

**Women in medical school, nursing school, dental school, and in medical practice tend to obtain higher empathy scores than men.**

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

Hojat, et al., 2002, *Med Educ*, 36, 522-527.

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

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

Ward, et al, 2009, *J Nursing Measurement*, 17, 73-88.

Sherman & Cramer, 2005, *J Dental Educ*, 69, 338-344.



## *Physician empathy and specialty:*

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.

# **Physician Empathy and Patient Outcomes**

**Two key studies In the U.S. and Italy**

# Physicians' Empathy and Clinical Outcomes for Diabetic Patients

**Mohammadreza Hojat, PhD; Daniel Z. Louis, MS; Fred W. Markham, MD; Richard Wender, MD; Carol Rabinowitz; Joseph S. Gonnella, MD**

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

## Purpose of the study

To test the hypothesis that physicians' empathy is associated with positive clinical outcomes for diabetic patients.

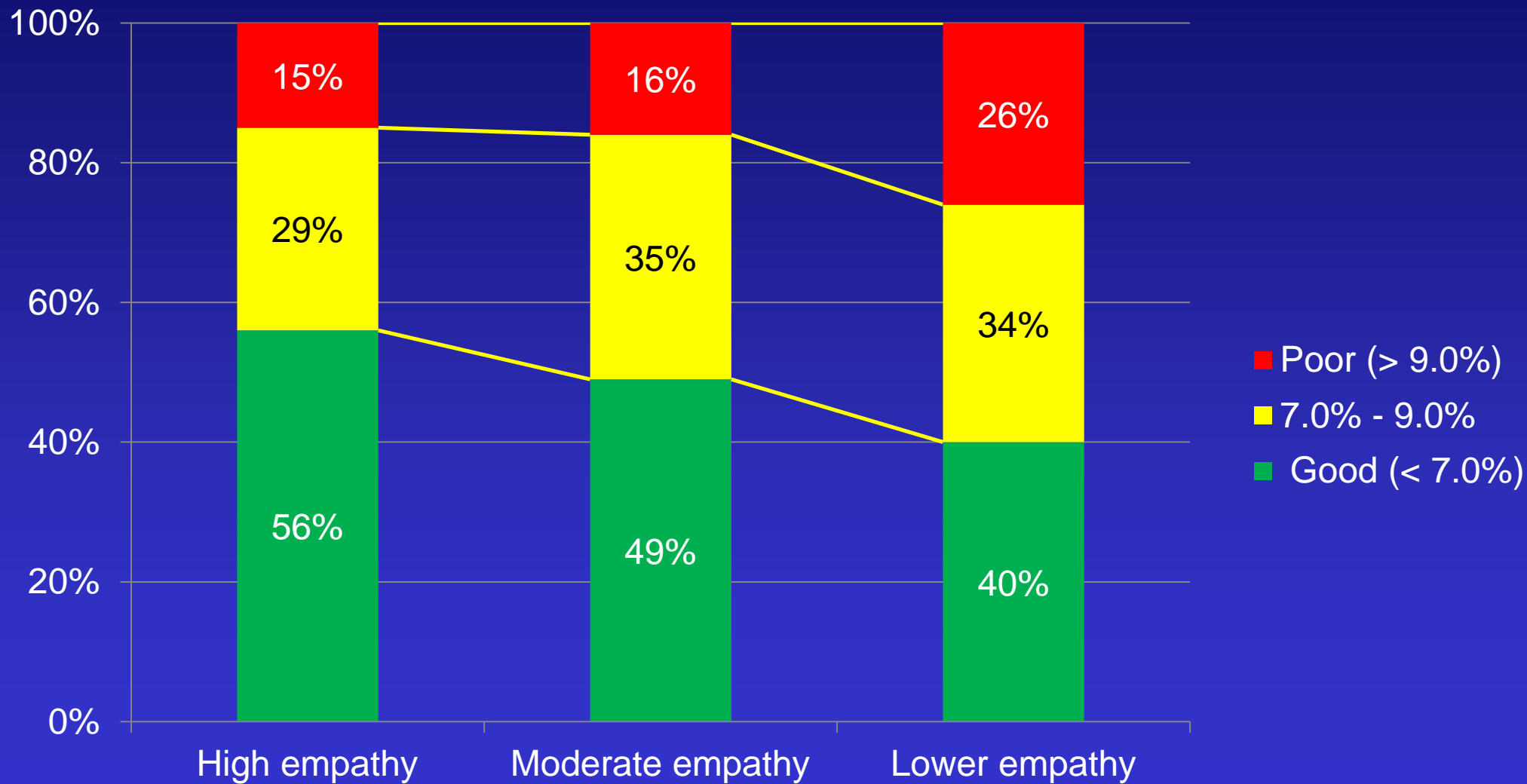
## Data and methods:

- 891 patients with diabetes mellitus treated by 29 physicians from Jefferson Department of Family and Community Medicine
- 100% response rate among the physicians in completing the Jefferson Scale of Empathy
- Physicians were categorized into 3 groups: high, moderate, and low empathy scorers

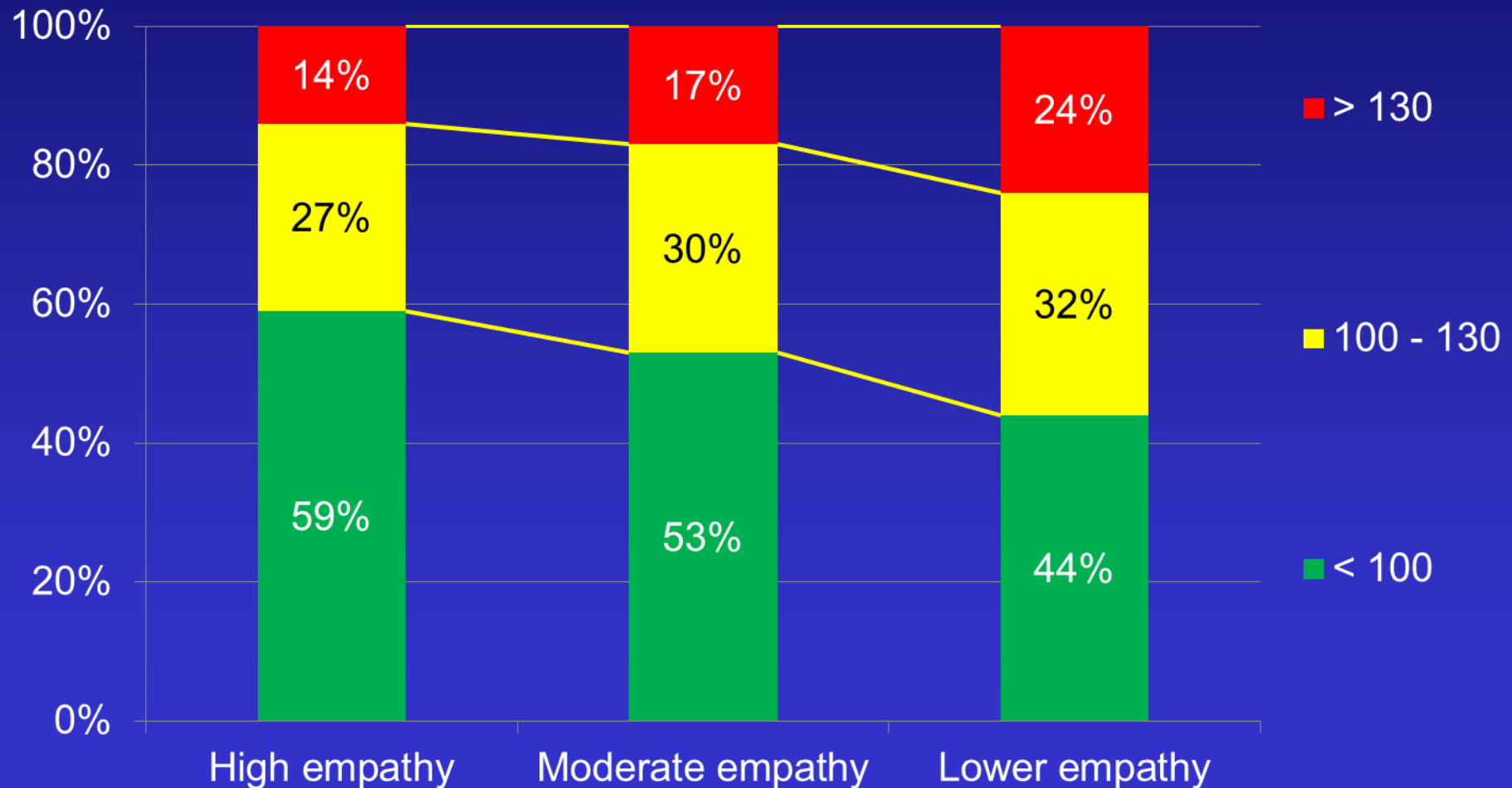
## Patient outcomes:

- Hemoglobin A1c categorized as good control (<7.0%); poor control (>9.0%)
- LDL-C categorized as good control (<100); poor control (>130)

# 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



# **The Relationship Between Physician Empathy and Disease Complications: An Empirical Study of Primary Care Physicians and Their Diabetic Patients in Parma, Italy**

**Stefano Del Canale, MD, PhD; Daniel Z. Louis, MS; Vittorio Maio, PharmD, MS, MSPH; Xiaohong Wang, MS; Giuseppina Rossi, MD; Mohammadreza Hojat, PhD; Joseph S. Gonnella, MD**

*(Academic Medicine, 2012, 87, 1243-1249).*

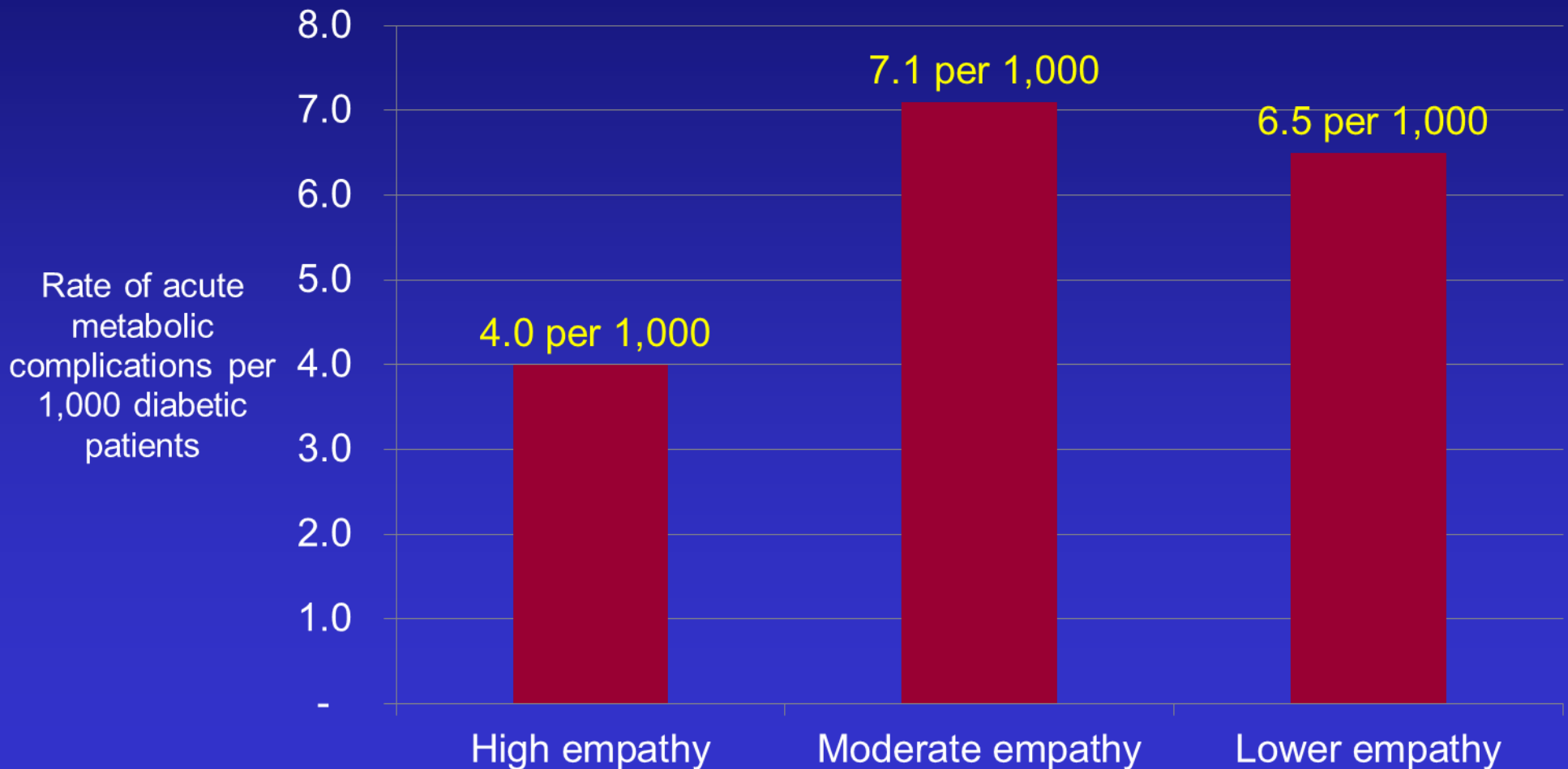
## **Purpose of the Study**

**To test the hypothesis that scores of a validated measure of physician empathy are associated with tangible clinical outcomes for patients with diabetes mellitus.**

- 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.
- 80% response rate.
- **Patient Outcome:** Occurrence of acute metabolic complications (diabetic ketoacidosis, hyperosmolar state, coma) in diabetes patients hospitalized in 2009



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



## *Erosion of Empathy in Allopathic Medical Schools*

Empathy scores of students in allopathic medical schools decline significantly during clinical phase of medical education (third year).

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

Hojat, et al, *Acad Med*. 2009, 84, 1182-1191.

# Our Empirical Study of Change in Empathy in Osteopathic Medical Students

- Supported by a grant from the American Osteopathic Association (AOA).
- Conducted at Ohio University, Heritage College of Osteopathic Medicine (in 2011-2012 academic year).
- Research participants included 373 medical students.
- Manuscript on major findings is under review by the *Journal of American Osteopathic Association (JAOA)*

# Research Instruments

1. **Jefferson Scale of Empathy (20 items).**
2. **Jefferson Scale of Attitudes Toward Physician-Nurse Collaboration (15 items) .**
3. **Integrative Care Attitude Scale (10 items).**
4. **A survey on osteopathic experiences prior to medical school.**

## Study Participants by Year of Medical School in 2011-2012 Academic Year

	<b>n</b>	<b>% women</b>
Year 1	109	47%
Year 2	94	57%
Year 3	101	56%
Year 4	69	51%
Total	373	53%

# Osteopathic-Related Experiences Prior to Medical School

- **98% volunteered for medical or community services.**
- **93% had observed patient care rendered by osteopathic physicians.**
- **53% of students or their family members received medical care from a D.O.**
- **12% had a D.O. in their family.**
- **12% had received OMT.**

# Correlations Among Scales

	<b>JSE</b>	<b>JSAPNC</b>	<b>ICAS</b>
JSE <sup>1</sup>	1.0	.42**	.55**
JSAPNC <sup>2</sup>		1.0	.36**
ICAS <sup>3</sup>			1.0

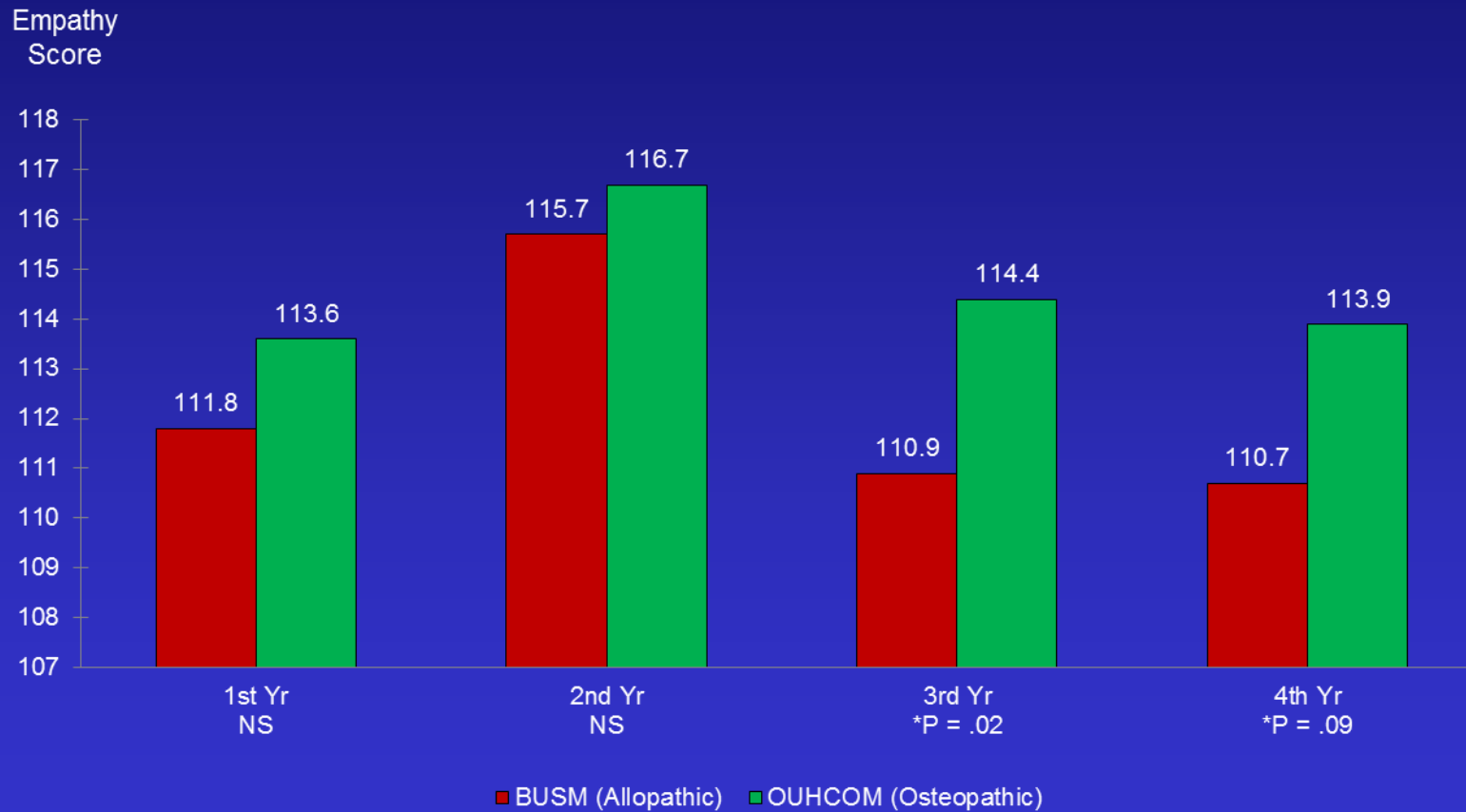
\*\* $p < .01$ .

<sup>1</sup> The Jefferson Scale of Empathy (JSE).

<sup>2</sup> The Jefferson Scale of Attitudes Toward Physician-Nurse Collaboration (JSAPNC).

<sup>3</sup> Integrative Care Attitude Scale (ICAS).

# Mean Scores of the Jefferson Scale of Empathy in Allopathic and Osteopathic Medical Schools (Cross-Sectional Studies)





## **Some Specific Features of Osteopathic Medical Education Which We Speculate Can Promote Empathic Engagement**

- **Holistic nature of osteopathic medical education?**
- **Osteopathic manipulative treatment (OMT)?**
- **Osteopathic apprentice learning model?**
- **Better role models among clinical faculty?**
- **Greater interest in primary care (people- oriented) specialties?**
- **Greater interest in serving underserved population?**
- **Less influences by the “hidden Curriculum?”**
- **Personal characteristics of those who choose osteopathic medical schools?**
- **Other factors?**

# **Ongoing Longitudinal Study of Changes in Empathy in Osteopathic Medical Students**

- We are currently undertaking a longitudinal study to examine changes in empathy, attitudes toward interprofessional collaboration, and attitudes toward integrative care.**
- A cohort of 78 students who matriculated at Ohio University Heritage College of Osteopathic Medicine in 2010 are participants of this longitudinal study.**
- We expect to complete this longitudinal study in 2014.**

# Future Research

