Effect of Medical Education on Empathy in Osteopathic Medical Students

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Statement of the Problem

• Research has shown significant empathy decline
  – Occurs during year three
    • Mainly allopathic samples
• Third year is a critical
  – Physician-patient relationship
  – Health disparities

(Hojat, 2007; Bombecka et al., 2011; Kimmelman et al., 2012; Halpern, 2007; Marcus et al., 2012)
Purpose of the Study

• Gather data on DO student samples

Questions

1. Is there any pattern in DO students’ development of empathy during first to third year of medical school?
   - Does empathy decline during third year?

2. Do standardized patient (SP) perceptions of DO students’ empathy relate with DO’s own self-perception of empathy?

3. Is there a relationship among DO students’ self-perceived empathy rating and their gender, age, race/ethnicity, and religion?

4. Does DO student self-rated empathy predict choice of specialty?
Methods

• Measures
  – Jefferson Scale of Empathy (JSE) (Hojat et al., 2002a)
    • Validated and reliable
  – Jefferson Scale of Patient Perception of Physician Empathy (JSPPPE)
    (Kane, Gotto, Mangione, West, & Hojat et al., 2007)
    • Validated and reliable
  – Professionalism Assessment Ratings Scale (PARS) (Errichetti, Myers-Hill, & Boulet, 2000)
    • Limited research

• Setting
  – Philadelphia College of Osteopathic Medicine
  • Participants: Osteopathic medical students (years 1-3)
    – 2011-2012 academic year

Methods: Research Design

• Mixed-methods quantitative
  – Cross-sectional
  – Longitudinal

• Data
  – Archival
    • Multivariate analysis of variance (MANOVA)
    • Univariate analysis of variance (ANOVA)
    • Pearson correlations
    • T-tests
Results of Research Question One:
Is There Any Pattern in Student Empathy Development?

**Empathy By Year**

- **Cross-sectional** 383 women (53%) 334 men (47%)
- Year 1 (n=269)
- Year 2 (n=250)
- Year 3 (n=198)

**Longitudinal Analysis**

Year Three

- **Mean Empathy** respondents (N = 92)
Results of Research Question Two: Does Self-Rated Empathy Related to Perceived-Empathy?

- Pearson product correlation
  - Showed no significant correlation
- Perceived-Empathy and Perceived-Interpersonal Skills
  - Correlated across sample (r = 0.66)

Results of Research Question Three: Is There a Relationship Among Demographic Variables?

<table>
<thead>
<tr>
<th>Sex</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>104</td>
</tr>
<tr>
<td>Female</td>
<td>116</td>
</tr>
</tbody>
</table>

383 women (53%)
334 men (47%)
Results of Research Question Four: Does Self-Rated Empathy Predict Career Choice?

• No significant differences observed
  – Unlike allopathic findings

Discussion: Summary of Findings

• Empathy declines found
  – Similar to allopathic samples
    • Differ from osteopathic
  – Self-rated and perceived-empathy did not correlate
    • PARS and JSPPPE
  – Gender consistent
    – Specialty choice inconsistent

• Limitations
  – Study design
    • Participant bias

Limited external validity

(Kimmelman et al., 2012; Calabrese et al., 2013; Ellen, 2011; Hojat, 2007)
DO Student Cross-Sectional Comparisons

- Current Study
- Kimmelman et al., 2012
- Calabrese et al., 2013
- Ellen, 2012

*Kimmelman N = 320  
University of Med and Dentistry of NJ

*Calabrese N = 304  
Ohio University Heritage College

*Ellen N = 384  
British School of Osteopathy

*Used with permission from the authors

Future Research Directions

- Add to literature
  - Examine DO inconsistencies
- Examine DO attitude on collaboration
  - Identify areas of support
- Continued comparison of DO and MD
- Investigate SP sessions while using computers
  - Cross-cultural factors
Questions

THANK YOU

American Osteopathic Association

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