

Physician Empathy and Diabetes Outcomes

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Chaitoff et al.¹ in an attempt to replicate our 2011 study² found no association between physician empathy and patient outcomes. Their failure to reproduce our findings could be attributed to the following issues:

1. *Technical Dissimilarities:* In our study, based on the distribution of the Jefferson Scale of Empathy (JSE) scores in our sample, we divided our physicians into three groups of top, middle, and bottom thirds. Statistical testing showed significant differences in JSE scores among the three groups. However, Chaitoff et al. used our cutoff scores to divide their physicians into three groups of unequal sample sizes (20%, 43%, and 37% in low, moderate, and high empathy scoring groups), rather than determining new cutoffs based on JSE score distribution of their own physicians.
2. *Incomparability in Physician Samples:* Physicians in our study were all Family Medicine doctors, while only 35% in the replicated study were board certified in Family Medicine (65% were board certified in Internal Medicine). In addition, physicians in our study had a higher JSE mean score ($M = 122.4$) than those in the replicated study ($M = 118.4$).
3. *Differences in the Case Mix of Patients:* Patients in our study had more abnormal laboratory test results than those in the replicated study (20% vs 8.5% with A1C > 9%; and 19% vs 9.6% with LDL-C > 130). In addition, patients in our study were more likely to come from disadvantaged populations (12% vs 2.2% with Medicaid insurance). Gender composition also differed (60% women in our study, 47.1% in replicated study).
4. *Confounding Institutional Factors:* The Cleveland Clinic is reputed for offering mandatory communication training to physicians which can alter physician-patient relationships.

A combination of the aforementioned disparities can exert limits on the findings' internal validity (relationships among variables) and external validity (generalization of the

findings), thus misleading conclusions and inappropriate implications.

Chaitoff et al. cited another study³ from our team (a large sample of diabetic patients treated by general practitioners in Italy) and inserted the following remark: "That both studies were conducted by members of the same study team underscores the need for further exploration of this association by independent study teams." We question the logic of this out-of-context remark and implicit accusation of bias without providing supporting evidence. Such an error in judgment, plus the aforementioned shortcomings, could be sufficient reason for linking any electronic copy of the article to this letter for readers' information. We welcome additional, well-designed research to better understand the importance of empathy in patient care.

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Compliance with Ethical Standards:

Conflict of Interest: Dr. Hojat created the Jefferson Scale of Empathy (JSE) for which his university holds the copyright and generates revenue from other's use of this instrument. However, Dr. Hojat derives no direct financial benefit.

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