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Improving Empathy and Relational Skills in Otolaryngology Residents: A Pilot Study

Helen Riess, MD1, John M. Kelley, PhD1,2, Robert Bailey1, Paul M. Konowitz, MD3, and Stacey Tutt Gray, MD3

Abstract
Physician empathy and relational skills are critical factors predicting quality of care, patient safety, patient satisfaction, and decreasing malpractice claims. Studies indicate that physician empathy declines throughout medical training, yet little is published about methods to enhance empathy, especially in surgical residency training. The Accreditation Council for Graduate Medical Education requires competencies in 6 areas, including interpersonal and communication skills, which are defined as effective teaming with patients, families, and other health professionals. In addition to mandating interpersonal skills training, the ACGME also mandates evaluation and assessment of these skills. To address this need, the first author developed a novel empathy training protocol based on the neurobiological and physiological mechanisms and interpersonal processes that improve empathy.

Methods
Eleven otolaryngology residents (43% female; mean age, 31) completed three 90-minute empathy and relational skills training modules, presented at 0, 4, and 6 weeks. On the basis of recent mirror neuron research, the first author developed an innovative empathy-relational skills training protocol focusing on the underlying neurobiological mechanisms of empathy and the interpersonal processes that positively affect the patient-doctor relationship. The authors tested the effectiveness of this protocol in a pilot study with 11 otolaryngology residents. Results showed that a brief series of 3 empathy training sessions can significantly improve physicians’ knowledge of the neurobiology and physiology of empathy, as well as their self-reported capacity to empathize with patients. A trend toward increased patient satisfaction was observed.

Keywords
patient-doctor relationship, empathy, relational skills, patient-doctor communication, otolaryngology

Background
Empathy and relational skills are critical factors in predicting quality of care, patient safety, patient satisfaction, and decreasing malpractice claims.1 Physician empathy has been shown to significantly improve health care outcomes, and physicians who express empathy receive higher patient satisfaction ratings. Despite its importance, physician empathy declines throughout medical training. The Accreditation Council for Graduate Medical Education (ACGME) mandates competency in 6 areas, including interpersonal and communication skills, which are defined as effective teaming with patients, families, and other health professionals. In addition to mandating interpersonal skills training, the ACGME also mandates evaluation and assessment of these skills. To address this need, the first author developed a novel empathy training protocol based on the neurobiological and physiological mechanisms and interpersonal processes that improve empathy.

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specific physiological and ameliorative effects on autonomic nervous system activity produced by empathic skills.

At baseline and at study completion, residents completed 5 self-report measures: (1) the Balanced Emotional Empathy Scale (BEES); (2) the Jefferson Scale of Physician Empathy; (3) the Neurobiology of Emotions Assessment (developed by our team) to assess knowledge of the neurobiology and physiology of emotions; (4) the Ekman Facial Decoding Test, assessing accuracy in identifying emotions revealed by subtle facial cues; and (5) the Consultation and Relational Empathy (CARE) measure. In addition, patients rated the physicians on the CARE measure at baseline and training completion. In addition to statistical tests, we also computed standardized effect sizes (d), which are computed by dividing the difference between 2 group means by the pooled standard deviation. Conventional benchmarks for effect sizes are small (d = .2), medium (d = .5), and large (d = .8). The research protocol was approved by the Partners Institutional Review Board. Detailed information about our measures and a description of the empathy training protocol are available online.

Results
Pre-post changes on all self-report measures were in the predicted direction, and even with the small sample size, paired t tests indicated that 2 of the changes were statistically significant. Figure 1 and Supplemental Figure S1 (online) show statistically significant improvements in residents' knowledge of the neurobiology and physiology of empathy (P = .008) and in self-reported empathy with patients (P = .01). Standardized effect sizes for these differences were small to medium (d = .35) for physician-rated empathy for patients (CARE) and very large (d = 1.38) for knowledge of the neurobiology and physiology of empathy. For example, there was an increase in endorsement of specific items on the CARE measure, such as “I am interested in my patients as whole people” and “I fully understand my patients’ concerns.” Table 1 shows that residents’ ability to decode subtle facial expressions of emotion (Ekman Test), their self-reported ability to empathize with their patients (Jefferson scale), and with other people (BEES), and patients’ ratings of physician empathy (CARE) all increased in the predicted direction, but none of these effects achieved statistical significance. As shown in Table 1, observed effect sizes were small for the BEES and the patient-rated CARE, medium for the Jefferson scale, and large for the Ekman facial decoding test.

After the training was completed, residents reported agreement with the following statements: (1) I found this training to be interesting (83%), (2) I found this training to be helpful (100%), (3) I will be able to apply the concepts and skills I learned to clinical practice (100%), and (4) I am motivated to try some of the techniques I learned (83%).

Discussion and Conclusions
This pilot study showed that our empathy training protocol significantly improved surgeons’ knowledge of the neurobiology and physiology of empathy, as well as their self-reported capacity to empathize with patients. The residents also showed nonsignificant improvements in their ability to use subtle facial cues to identify emotions and to empathize with others in general. Although not significant, patient ratings of residents’ empathy were also in the predicted direction.

This empathy training program was incorporated into a newly implemented educational curriculum in the Harvard
Otolaryngology Residency Program, entitled Quality, Humanism and Professionalism. The evaluative component of this program could be used in the future as a reliable measure to assess residents’ competence in the ACGME requirements.

The small sample size and lack of a control group limit generalizability. Nevertheless, this pilot study strongly suggests that empathic and relational skills can be taught to resident physicians. We are currently conducting a randomized controlled trial at Massachusetts General Hospital of the training protocol with a larger sample size and adequate controls. If this larger trial is successful, it will demonstrate that physicians can be trained to improve their empathic and relational skills. We expect that such improvements would increase patient satisfaction, decrease malpractice claims, and improve medical outcomes. Future research could address each of these questions.

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Author Contributions
Helen Riess, conception and design, implementation of intervention, acquisition of data, analysis and interpretation of data, drafting and revising the manuscript for important intellectual content, final approval of the version to be published; John M. Kelley, conception and design, analysis and interpretation of data, drafting and revising the manuscript for important intellectual content, final approval of the version to be published; Robert Bailey, acquisition of data, revising the manuscript for important intellectual content, final approval of the version to be published; Paul M. Konowitz, acquisition of data, revising the manuscript for important intellectual content, final approval of the version to be published; Stacey Tutt Gray, acquisition of data, revising the manuscript for important intellectual content, final approval of the version to be published.

Disclosures
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Supplemental Material
Additional supporting information may be found at http://oto.sagepub.com/content/by/supplemental-data

References