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Empathy and Health Care Quality

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Empathic engagement in patient care leads to improved patient outcomes. This is what we found in 2 studies. In the first study¹ of 29 family physicians and their 891 patients with diabetes mellitus in the United States, we found that physicians' higher scores on the Jefferson Scale of Empathy (JSE) were significantly associated with indicators of diabetic control (hemoglobin A1c <7.0% and low-density lipoprotein cholesterol <100). In the second study,² with a much larger number of physicians and patients (242 general practitioners and 20 961 patients with diabetes mellitus) in Parma, Italy, the hypothesis of the association between higher physician empathy and a lower incidence of acute metabolic complications that required hospitalization was confirmed.

To the best of our knowledge, these are the only 2 empirical studies in which a validated instrument, specifically developed to measure physician empathy (JSE), was used to predict tangible outcomes of care while controlling for the possible confounding effects of a number of variables (ie, sex and age of patients and physicians, type of insurance, geographic area in which care was rendered). We were encouraged by the fact that similar results were obtained in the 2 studies despite differences in medical education curriculum, patient and physician populations, culture and beliefs, health care systems, and health insurance policies. An important feature of the second study is that the outcome measure (incidence of hospitalization) is free from laboratory test errors such as false positive or negative rates. The similarities in study results provide support for the generalization of the findings.

How Can the Link Between Physician Empathy and Quality Care Be Explained?

Empathy is defined as a predominantly cognitive (as opposed to an affective) attribute that involves understanding (rather than feeling) of a patient's concerns, experiences, pain, and suffering combined with a capacity to communicate this understanding and an intention to help.³ This definition makes a distinction between empathy (a cognitive attribute) and sympathy (an affective response). Such a distinction is important in the context of patient care because an overabundance of sympathy,

because of its affective nature, can be detrimental to patients as well as physicians (objectivity in clinical decisions, exhaustion, and burnout). However, empathy, because of its cognitive nature, even in excess, is always beneficial to patient care.⁴ This definition implies that an empathic engagement revolves around reciprocity and mutual understanding. Such an empathic relationship evokes "psycho-socio-bio-neurological" responses, providing plausible explanations for the observed relationship between physician empathy and patient outcomes.

At the psychosocial level, empathic engagement lays the foundation for a trusting relationship. Constraints in communication will diminish when a trusting relationship is formed. In the security of a trusting relationship, the patient begins to tell the tale of his or her illness without concealment. This in turn leads to a more accurate diagnosis and greater compliance, which ultimately will result in better quality care.

At the bioneurological level, empathic engagement is analogous to a synchronized dance between involved parties, which is orchestrated by bioneurological markers. For example, the interpersonal attunement in empathic engagement can activate some prosocial endogenous neuropeptides or hormonal changes (eg, oxytocin, vasopressin).⁵ In addition, a set of neurons, known as the mirror neuron system (MNS), is discharged when observing another person performing a goal-directed act, as if the observer is performing the act.^{6,7} In other words, the same set of neuron cells that are discharged in the acting person will be implicated in the person who observes the act without actually performing it. The MNS is believed to play an important role in understanding the experiences of others, which is the key ingredient of empathic communication.

Over a century ago, Theodore Lipps, who brought the concept of empathy (*emfühlung* in German language) into psychology, stated, "When I observe a circus performer walking on a tight rope, I feel I am inside him."⁸ He also proposed that seeing someone else's facial

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expression triggers the observer to automatically adopt a similar facial expression, known as facial mimicry. These behaviors can be explained by the perception-action model (PAM) formulated by Preston and de Waal.⁹ They suggested that perceptions of another person's cognitive, emotional, and somatosensory states automatically activate representations of those states in the observer, unless inhibited.⁹ Thus, both mechanisms of MNS and PAM contribute to better understanding of a patient's pain, suffering, experiences, and concerns, which are considered the key components of empathic relationships.

The link between the PAM, MNS, and empathy is supported by findings of subconscious mimicry in facial expression, postures, and mannerism; contagious yawning; affect contagion; synchronization in heart rate; mood; and galvanic skin response among interacting individuals, especially among those who are engaged in a goal-directed and meaningful interaction. These findings can help in understanding the mechanisms underlying the beneficial effects of empathic engagement in patient care. In summary, the combined effects of psycho-socio-bio-neurological mechanisms involved in empathic patient-physician interactions may pave the road to more optimal treatment outcomes.

Implications

What can we draw from all of this? We believe that an important implication is that empathy, because of its relevance to patient outcomes and quality care, must be considered an important component of physician competence. We strongly encourage that leaders in health care institutions and academic medical centers to go

further than just declaring the desirability of empathic engagement in patient care. They should implement and assess targeted educational programs to enhance empathy in physicians in training and in practice.

References

1. Hojat M, Louis DZ, Markham FW, Wender R, Rabinowitz C, Gonnella JS. Physician empathy and clinical outcomes for diabetic patients. *Acad Med.* 2011;86:359-364.
2. Del Canale S, Louis DZ, Maio V, et al. Physician empathy and disease complications: an empirical study of primary care physicians and their diabetic patients in Parma, Italy. *Acad Med.* 2012;87:1243-1249.
3. Hojat M. *Empathy in Patient Care: Antecedents, Development, Measurement, and Outcomes.* New York, NY: Springer; 2007.
4. Hojat M, Spandorfer J, Louis DZ, Gonnella JS. Empathic and sympathetic orientations toward patient care: conceptualization, measurement, and psychometrics. *Acad Med.* 2011;86:989-995.
5. Heinrichs M, Domes G. Neuropeptides and social behavior: effects of oxytocin and vasopressin in humans. *Prog Brain Res.* 2008;170:337-350.
6. Rizzolatti G, Fadiga L, Gallese V, Fogassi L. Premotor cortex and the recognition of motor action. *Cogn Brain Res.* 1996;3:131-141.
7. Gallese V. The "shared manifold" hypothesis: from mirror neurons to empathy. *J Conscious Studies.* 2001;8:33-50.
8. Carr L, Iacoboni M, Dubeaut MC, Mazziotta JC, Lenzi GL. Neural mechanism of empathy in humans: a relay from neural system for imitation to limbic areas. *Proc Natl Acad Sci U S A.* 2003;9:5497-5502.
9. Preston SD, de Waal FB. Empathy: its ultimate and proximate bases. *Behav Brain Sci.* 2002;25:1-20.