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Do students lose empathy in medical school?

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“There but for the grace of God, go I.”

—John Bradford (circa 1510–1555)
referring to prisoners facing execution

Empathy, defined as “the vicarious awareness of the experiences or emotions of another,” is a desirable quality for physicians as “empathic communication skills promote patient satisfaction and adherence to treatment plans while decreasing the likelihood of malpractice suits.”¹ Yet, in their article “Vanquishing Virtue: The Impact of Medical Education,”² John Coulehan (ΑΩΑ, University of Pittsburgh, 1969) and Paul Williams (ΑΩΑ, Stanford University School of Medicine, 1973) quote a fourth-year medical student before graduation:

“When I arrived in medical school...I was excited about addressing important issues because, as medical students, I was sure that we would have some clout and certainly a commitment to the well-being of others....However, medical school is an utter drain....And then during the clinical

years, life is brutal. People are rude, the hours are long... physicians must regain their humanity after completing their training. For my part, I tried not to lose it, or at least to hold onto it as long as possible....Furthermore, I’ve become numb...I just try to get through school in the hope that I will move on to bigger and better things when I have more control over my circumstances.”²

The authors then ask, “How does professional socialization alter the student’s beliefs and value system so that a ‘commitment to the well-being of others’ either withers or turns into something barely recognizable?”²

That medical students lose empathy, most prominently during the clinical training of the third year, seems to be an accepted conclusion by most experts.^{1,3–6} Changes in teaching, particularly addressing what has been termed the “hidden curriculum,”⁷ have been promulgated to respond to this issue. However, what is the evidence that empathy is really diminished during medical school?

Various attempts to quantitatively measure empathy in medical students have generally confirmed a decline in empathy during medical school. This was noted in nine of 11 studies, including eight from the United States, and reported in a recent review covering studies from 1990 to 2010.⁴ The authors found similar declines in empathy in seven studies during residencies in the U.S. However, in three studies from the United Kingdom, empathy was either unchanged or increased significantly by the final year.^{4,8} And, in other countries, longitudinal results of

The Jefferson Scale of Physician Empathy Student Version

1. Physicians' understanding of their patients' feelings and the feelings of their patients' families does not influence medical or surgical treatment.
2. Patients feel better when their physicians understand their feelings.
3. It is difficult for a physician to view things from patients' perspectives.
4. Understanding body language is as important as verbal communication in physician-patient relationships.
5. A physician's sense of humor contributes to a better clinical outcome.
6. Because people are different, it is difficult to see things from patients' perspectives.
7. Attention to patients' emotions is not important in the history taking.
8. Attentiveness to patients' personal experiences does not influence treatment outcomes.
9. Physicians should try to stand in their patients' shoes when providing care to them.
10. Patients value a physician's understanding of their feelings which is therapeutic in its own right.
11. Patients' illnesses can be cured only by medical or surgical treatment; therefore, physicians' emotional ties with their patients do not have a significant influence in medical or surgical treatment.
12. Asking patients about what is happening in their personal lives is not helpful in understanding their physical complaints.
13. Physicians should try to understand what is going on in their patients' minds by paying attention to their nonverbal cues and body language.
14. I believe that emotion has no place in the treatment of medical illness.
15. Empathy is a therapeutic skill without which the physician's success is limited.
16. Physicians' understanding of the emotional status of their patients, as well as that of their families, is one important component of the physician-patient relationship.
17. Physicians should try to think like their patients in order to render better care.
18. Physicians should not allow themselves to be influenced by strong personal bonds between their patients and their family members.
19. I do not enjoy reading nonmedical literature or the arts.
20. I believe that empathy is an important therapeutic factor in the medical treatment.

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medical students have reported empathy to be increased, as in Portugal⁹ and Ethiopia,¹⁰ or decreased, as in Canada¹¹ and Poland.⁴

Since empathy seems difficult to assess objectively, what is the validity of tests measuring its decline in medical students? In a study of 50 relevant papers utilizing 36 different instruments to measure empathy—20 in medical students alone—only eight demonstrated reliability and validity, and none had “sufficient evidence of predictive validity for use as selection measures for medical school.”¹² Similar results of low, or only marginal, predictive reliability and validity have been found by others.¹³

The most commonly cited measure of empathy has been the Jefferson Scale of Physician Empathy.^{14,15} This tool has found higher empathy scores in women, and cognitive specialties—psychiatry and internal medicine—when

compared to technical specialties—anesthesia, radiology, and surgical specialties.^{3,8,14,16} When a longitudinal study done yearly using the Jefferson Scale³ showed a significant decline of scores after the third year, the authors concluded that empathy erodes in the clinical years of medical school. The questions of the Jefferson Scale student version are shown for readers to assess for themselves whether this scale will yield an accurate measure of student empathy, or may be assessing sensitivity and even beliefs, as well.

Some studies have shown a disparity between lower test scores of empathy and self-reported empathy,¹⁶ or have reported an increase in empathy by observed behavior despite a decrease by the Jefferson Scale after the third year.¹⁷

Another study using a similar survey tool, the Balanced Emotional Empathy Scale,¹ also found that medical students appear to lose empathy after the first year and third

year. The impression that there is at least a blunting of students' empathy during medical school seems apparent, even if the evidence is less than compelling.

This loss of empathy, noted concomitantly with the initiation to clinical medicine in the third year, is surprising. In individuals motivated to learn the healing arts, we would suspect that exposure to patients who are ill or incapacitated would provoke exactly the opposite response. And, if readers think back to the first few patients that they saw in medical school, a memorable sense of empathy persists to this day.

Hence, rather than exposure to patients at the bedside, much of the blame for loss of empathy has fallen on shortcomings in teaching, and the effect of the hidden curriculum, described by Hafferty and Franks, as:

...what students learn about core values of medicine and medical work takes place not so much in the content of formal lectures (i.e., the curriculum-formal)...but via its more insidious and evil twin, "the corridor" (i.e., the curriculum-hidden).⁷

The experiences of students that take place in the hospital halls or conference rooms may counteract the formal teaching of medical ethics and humanism in the classroom. The stress of training that leads to student and resident distress is generally accepted to thwart professionalism and facilitate the hidden curriculum,^{4,18,19} fostering expressions, attitudes, and jargon disrespectful of patients and antithetical to ethical behavior. However, the medical humor and slang that develops under stress, euphemistically called "gallows humor," appears to serve a useful purpose,²⁰ and moreover, it appears that medical students recognize quite well its inappropriate and derogatory perspective.^{21,22}

In a moving article,⁵ Neal Chatterjee writes that as a third-year medical student:

I have seen entirely too many people naked. I have seen 350 pounds of flesh, dead: dried red blood streaked across nude adipose, gauze, and useless EKG paper strips. I have met someone for the second time and seen them anesthetized, splayed, and filleted across an OR table within 10 minutes...I have sawed off a man's leg and dropped it into a metal bucket. I have seen three patients die from cancer in one night.⁵

How can anyone go through such experiences without a desensitization process? Who cannot, in a sense, "become

numb?" There isn't enough empathy in one physician to go around for all the sadness we experience. Desensitization is an essential occurrence in medical school, whether good or bad. If loss of sensitivity is construed as loss of empathy too, those characteristics are replaced with experiential objectivity, required knowledge for any good physician. Even recognizing that the evaluation of empathy is a subjective area, the evidence supporting a general loss of empathy by medical students is weak at best. And, to extrapolate that data to conclude that we are graduating physicians with diminished humanistic motivation seems unfair to medical schools and their faculties.

Vicarious empathy may not be exactly what the physician needs to retain. Smajdor, et al., argue "that 'empathy,' as it is commonly understood, is neither necessary nor sufficient to guarantee good medical or ethical practice."²³ So what is necessary? Compassion, "the awareness and acknowledgement of the suffering of another and the desire to relieve it" is the quality we must strive to inculcate or maintain in our medical students.²⁴

If empathy has withered in medical school, has compassion diminished as well? The anecdotal data supporting such a conclusion actually suggests the opposite. Neither of the medical students quoted above have lost their compassion, or their empathy. Both have experienced the desensitizing effects of observing illness and death, but their concern for patients, and their distaste for poor ethical behaviors, confirm that their emotional compassion remains intact. And, I'm sure that neither medical student would suggest that their classmates have less compassion than they do.

A review of the literature yielded no controlled studies evaluating compassion among medical students, but an essay study of 52 graduating fourth-year medical students (46 percent of the class) at Northeastern Ohio University College of Medicine indicated that their compassion remained intact, nurtured by their role models and self-reflection.²⁵

As a physician attending on the medical service with medical students, interns, and residents each year for more than 50 years, I can attest that the current professionals in training care for their patients as deeply as my contemporaries did in the past, likely more so. Perhaps the formal teaching of humanism and interpersonal communication skills²⁵⁻²⁷ has helped students deal with the intrinsic desensitizing process of medical school. Either way, in the end, they appear to have converted some vicarious empathy to real compassion, and that's what we really want!

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