

Finding the Why, Changing the How: Improving the Mental Health of Medical Students, Residents, and Physicians

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Abstract

The poor mental health of residents, characterized by high rates of burnout, depression, and suicidal ideation, is a growing concern in graduate medical education. Research is needed to gain a deeper understanding of the sources of distress as well as the sources of sustenance in residency training. The study by Mata and colleagues contributes significantly to this understanding. In addition to this line of research, however, studies are needed that assess the impact of interventions to

help residents deal more effectively with the stress of training and find meaning in their work. Given the stresses of residency training, this approach may not make a dramatic difference in mental health outcomes. Efforts directed at changing the educational and clinical environments are also needed to reduce unnecessary stressors and create more positive settings for learning and clinical care. Since 2011, Saint Louis University School of Medicine has been pursuing a multipronged strategy to address

these issues in the preclinical years. These efforts have led to dramatic decreases in depression and anxiety symptoms in students. An essential component of these interventions is the ongoing measurement of mental health outcomes across all four years of the curriculum. Leaders of residency programs, medical schools, and hospitals need to have the courage to measure these kinds of outcomes to spur change and track the efficacy of programs.

Editor's Note: This is a Commentary on Mata DA, Ramos MA, Kim MM, Guille C, Sen S. In their own words: An analysis of the experiences of medical interns participating in a prospective cohort study of depression. Acad Med. 2016;91:1244–1250.

Recognition of a crisis in graduate medical education is growing. The deaths by suicide of two first-year residents in a four-day span at a hospital in New York City drew attention to the poor mental health of medical residents. This problem has been documented in a number of studies that have found high burnout, depression, and suicidal ideation rates in residents across specialties.^{1–3} Research is needed to gain an understanding of the sources of distress as well as the sources of sustenance in residency to help inform interventions that could improve resident well-being.

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Dr. Mata and his colleagues have taken an important step toward this goal with their study published in this issue of *Academic Medicine* in which they examine the experiences of interns with and without symptoms of depression.⁴ Interns who screened positive for depression were more likely to report cynicism, exhaustion, and stress, while those who did not reported positive, life-changing experiences related to interactions with patients and colleagues through which they grew personally and professionally.

These findings raise some intriguing questions. Did residents who were depressed become more cynical, or were those who found meaning in their work protected in some way from depression? Did both occur? Are there other traits, psychological constructs, and mind-sets, such as perfectionism, explanatory style, and resilience, that correlate with depression, burnout, or positive mental health? And perhaps most important, can we identify ways to help residents (and for that matter, medical students and practicing physicians) find meaning in their work to improve their mental health or at least to stem its deterioration?

Viktor Frankl, the noted psychiatrist, neurologist, and author, would answer this last question affirmatively. Frankl was born in Austria in 1905 and was living in Vienna practicing psychiatry at the beginning

of World War II. He was able to obtain a visa to immigrate to the United States in 1941 but decided to remain in Austria with his aging parents. He subsequently spent three years in four concentration camps. After the liberation of the camps, Frankl wrote his seminal work *Man's Search for Meaning*,⁵ in which he argued that meaning in life could sustain one in even the most difficult circumstances. This belief formed the basis of his new approach to psychotherapy: logotherapy. "There is nothing in the world, I venture to say, that would so effectively help one to survive even the worst conditions as the knowledge that there is a meaning in one's life. There is much wisdom in the words of Nietzsche: 'He who has a why to live for can bear almost any how.'"⁵ An important question follows from Frankl's beliefs: Can we design educational interventions to help residents find the why, to feel the why, to be sustained by the why? Efforts like Healer's Art courses and Schwartz Rounds are wonderful examples of interventions that attempt to do this, but we need more of these interventions and we need to do more to evaluate their efficacy.

And while we search for ways to help with the why, we also need to recognize that, unlike in the concentration camps, we have the opportunity, and in many ways the moral obligation, to change the how. Although we need to pursue methods to help individuals manage the stress

inherent in residency, we also need to recognize that these efforts are unlikely to be sufficient. Thus, in addition, we need to seek interventions that help individuals by changing the educational and clinical environment.

At Saint Louis University School of Medicine, we have pursued this strategy in the preclinical curriculum with significant success. Building on changes to the curriculum that we have described previously,⁶ new interventions continue to lead to decreases in depression and anxiety symptoms in our medical students. These changes have included the following:

2009: Change to pass/fail grading in the first two years, 10% reduction of required curricular time, efforts to reduce amount of detail taught, institution of longitudinal electives, and development of theme-based learning communities

2010: Implementation of a three-hour resilience and mindfulness curriculum

2011: Changes to reduce the adverse effects of the human anatomy course

2012: Change to “true” pass/fail grading (course ranks are not used to determine Alpha Omega Alpha Honor Society eligibility and are not shared in the Medical School Performance Evaluation)

2013: Change to shorten the preclinical curriculum by two and a half months to allow early entry to and exit from the third-year core clerkships (designed to reduce stress at the end of the third and beginning of the fourth year)

2014: Implementation of a confidential option for tracking depression and anxiety, in which students who screen positive for moderate to severe symptoms of depression or severe symptoms of anxiety are contacted by a mental health provider

The effects of these interventions are provided in Table 1. We have found a marked reduction in the rates of moderate to severe symptoms of depression and anxiety in first-year students. These changes also have helped more students than just those with poor mental health. As Figure 1 demonstrates, we are now seeing many more students with very low depression scores; students are not just avoiding depression, many more now appear to be flourishing. This perception is supported by our results from the 2015 Year Two Questionnaire administered by the Association of American Medical Colleges. Second-year students were asked whether they agreed or disagreed with the following statement: “My medical school has done a good job fostering and nurturing my development as a person.” At Saint Louis University, 92.3% of students strongly agreed or agreed with this statement, compared with 70.2% of students nationally.

Of some concern, though, are the rates of depression and anxiety symptoms for second-year students, which have not fallen as far as those for first-year students and, in recent years, have risen somewhat. This trend appears to be related to a stressor

that we are unable to change—Step 1 of the United States Medical Licensing Examination. The distress caused by this exam is not likely confined to students at Saint Louis University. As the competition for residency rises, the pressure on students across the country to do well on the Step 1 exam is likely also increasing.

Interventions directed at third-year students at Saint Louis University have been less successful than our preclinical changes. A new course, Applied Clinical Skills 3, was introduced in 2013. The course meets once every eight weeks across the clerkship year. Students have a one-hour lecture which is followed by small-group discussions led by fourth-year students during which stressors and coping strategies are discussed. Students then are given the remainder of the day off to meet with advisors or mentors, get business done, study, or simply relax. They just cannot return to their clerkships. Despite this intervention, depression and anxiety rates have not clearly declined.

Three major reasons appear to be responsible for this lack of change. First, changing the learning environment is much more difficult when students are rotating through multiple hospitals and interacting with hundreds of residents and faculty. Poor mental health among residents and physicians appears to be undermining the experience of the medical students; thus, it seems likely that we will not see improvements in the mental health of students until we improve the mental health of the residents and faculty with whom they work. Second, the tools available to reduce stress in the preclinical curriculum are more difficult to use in the third year. For example, changing to pass/fail grading in the clerkship year appears to be too great a risk to the competitiveness of our students when they enter the Match. Clinical grades, understandably, are important to residency directors. A third challenge and source of stress in the third year is the rising competition and stress of applying for residency. In a recent informal survey of the Group on Student Affairs listserv, 31 of 31 respondents agreed with the statement that the stress of applying to residency has increased in the last three years.

The resilience training that we offer in the first year of medical school and continue

Table 1
Trends in Depression and Anxiety Symptoms in Students in Prechange Classes (2011–2012) and in Students in Postchange Classes (2013–2018), Saint Louis University School of Medicine

| Class | No. (%) of students with moderate to severe depression symptoms | | | No. (%) of students with moderate to severe anxiety symptoms | | |
|---------|---|---------------|---------------|--|---------------|---------------|
| | Orientation | End of Year 1 | End of Year 2 | Orientation | End of Year 1 | End of Year 2 |
| 2011 | 11 (6) | 37 (27) | 41 (29) | 58 (33) | 78 (57) | 83 (59) |
| 2012 | 9 (5) | 38 (28) | 40 (36) | 45 (27) | 74 (54) | 67 (61) |
| 2013 | 6 (4) | 21 (21) | 20 (17) | 45 (26) | 45 (45) | 72 (61) |
| 2014 | 10 (6) | 27 (18) | 22 (18) | 49 (28) | 46 (31) | 47 (39) |
| 2015 | 8 (5) | 18 (11) | 27 (16) | 39 (22) | 50 (31) | 78 (46) |
| 2016 | 8 (5) | 18 (14) | 23 (17) | 49 (28) | 55 (42) | 60 (45) |
| 2017 | 8 (5) | 11 (8) | 37 (22) | 43 (24) | 34 (23) | 81 (47) |
| 2018 | 8 (5) | 7 (4) | — | 38 (21) | 25 (14) | — |
| P value | .96 | < .001 | < .001 | .28 | < .001 | < .001 |

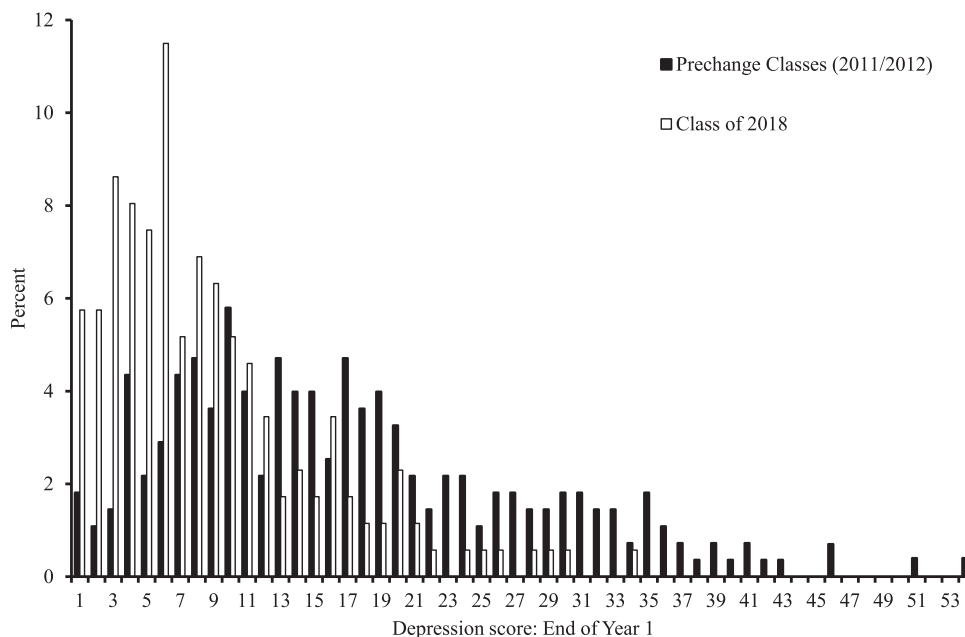


Figure 1 End of Year 1 depression scores in prechange classes (2011–2012) versus scores in the postchange Class of 2018, Saint Louis University School of Medicine.

to reinforce throughout the four-year curriculum does not appear to be sufficient to combat the clinical and academic stresses of the third year and the psychological stress of applying to residency in the fourth year. Until we are able to change the conditions at the institutional and national levels, we may not be able to significantly enhance the mental health of our students in the clinical years.

So how do we continue to move forward? Studies such as that by Mata and colleagues are essential. The more we understand the lived experience of our students and trainees, the more effective we are likely to be in designing interventions that help them. But we also need to see more studies examining the impact of interventions to help residents and students develop skills in coping with the stresses of residency and finding meaning in their work. However, that approach alone will likely be insufficient. We are unlikely to “resilience our way out” of this problem. Instead, multipronged interventions are needed that not only help individuals but also reduce the toxicity of the educational and clinical environments. We need to focus on the *why* and the *how*. Frankl⁵ wrote: “Is this to say that suffering is indispensable to the discovery of meaning? In no way. I only

insist that meaning is available in spite of—nay, even through—suffering, provided ... that the suffering is unavoidable. If it is avoidable, the meaningful thing to do is remove its cause, for unnecessary suffering is masochistic rather than heroic.”

Finally, we need to start routinely assessing and tracking the mental health of our students, residents, and faculty. At Saint Louis University, we track the mental health of our students across the medical school continuum. These outcomes are as important to us as our board scores and Match results. Without these data, we could not know whether well-intentioned wellness programs have any effect at all. Courage is needed in gathering data and uncovering the local realities in our own institutions, for without this information, it becomes too easy to ignore the problem or point to existing interventions with pride when they may have no efficacy at all. With data and a commitment to change, we can begin to move forward to create a new paradigm in medical education and health care that supports rather than diminishes and that inspires rather than disheartens.

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