

Researchers explore medical students' low-achievement mind set

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Eight in 10 medical students frequently feel a low sense of personal accomplishment, according to a January 2020 study of osteopathic medical students across all four years of medical school.

The study, “Burnout, Perceived Stress, Sleep Quality, and Smartphone Use: A Survey of Osteopathic Medical Students,” was published in *The Journal of the American Osteopathic Association* and reports survey results from students at medical schools in Ohio. It aims to assess burnout using the three subscales used to measure burnout with the Maslach Burnout Inventory: emotional exhaustion, depersonalization or cynicism, and a low sense of personal accomplishment.

Of the 385 study participants, 310 reported a high level of low personal accomplishment. That number was a stark contrast to the other subscales, with only nine students reporting high emotional exhaustion and 67 reporting high levels of depersonalization. The study’s authors—Jennifer R. Brubaker and Elizabeth A. Beverly, PhD, of Ohio University—offered “several possible explanations” for the results.

“Whereas medical school and board examinations provide a temporary end point, medical students often continue studying for subsequent examinations; this behavior may limit opportunities to develop a sense” of personal accomplishment, they wrote. Another potential factor, experts say, is that medical students still in the thick of training often see their college classmates excelling in their chosen careers.

Among the study’s limitations is that it was conducted among less than 400 osteopathic medical students in one state, and medical students’ experience may differ by region, medical school setting or other factors.

Learn more with the AMA about what medical students can do to avoid distress in medical school and

how the AMA Medical Student Section gives voice to, and advocates for, issues that affect medical students.

Personal accomplishment low across board

When examining personal accomplishment across points in training, the study found that a low sense of personal accomplishment was likely to decrease throughout medical school. Among first-year students, 84.3% felt a low sense of personal accomplishment. That number diminishes with time, however.

Second-year students were at 82.6%, third-year students were at 74.2%, and M4s were least likely to report low personal accomplishment, with 73.7% of them doing so.

The study's authors posited this may be the result of the fact that "medical students cannot autonomously provide direct patient care, which may limit perceptions of achievement and accomplishment, particularly in preclinical years." Looking at the trends of high levels of depersonalization by year, it was less common in first-year medical students, with 11.8% reporting low levels of depersonalization. Among other classes: 19.6% of second-year students registered low levels of depersonalization; 25.8% of M3s registered low levels of depersonalization; and the number went back to 14% among M4 respondents. The percentage of students reporting emotional exhaustion was below 6.5% in all four years.

Learn more with the AMA STEPS Forward™ module "Medical Student Well-Being: Minimize Burnout and Improve Mental Health Among Medical Students," which explains how medical students and faculty can work together to develop a framework to improve well-being.

Smartphone use, sleep quality

The study's aim was to assess how three factors contributed to burnout—perceived stress, sleep quality and smartphone use. The study found that each of those contributed to the subscales of burnout in different ways.

Perceived stress. Defined as a person's daily demands and their ability to complete them, a little less than 10% of respondents had high perceived stress scores. In each domain of burnout, higher perceived stress scores were likely to contribute to high levels of emotional exhaustion and depersonalization as well as a low sense of personal achievement.

Sleep quality. Two-thirds of respondents reported poor sleep quality, according to the Pittsburgh

Sleep Quality Assessment. Poor sleep quality made respondents more likely to have high levels of depersonalization and emotional exhaustion, but it did not correlate more strongly than other factors with a low sense of personal accomplishment. **Smartphone use.** Almost one-quarter of the respondents met the criteria for smartphone addiction, according to the smartphone addiction scale short version. Smartphone addiction was associated with poor sleep quality and higher levels of emotional exhaustion but not with a low sense of personal accomplishment.