

# Study finds high rate of depression, suicidal ideation among medical students

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A review and analysis of nearly 200 studies involving 129,000 medical students in 47 countries found that the prevalence of depression or depressive symptoms was 27 percent, that 11 percent reported suicidal ideation during medical school, and only about 16 percent of students who screened positive for depression reportedly sought treatment, according to a study appearing in the December 6 issue of *JAMA*, a medical education theme issue.

Studies have suggested that medical students experience high rates of [depression](#) and suicidal ideation; however, prevalence estimates vary across studies. Reliable estimates of depression and suicidal ideation prevalence during medical training are important for informing efforts to prevent, treat, and identify causes of emotional distress among medical students, especially in light of recent work revealing a high prevalence of depression in resident physicians.

Douglas A. Mata, M.D., M.P.H., of Brigham and Women's Hospital and Harvard Medical School, Boston, and colleagues conducted a systematic review and meta-analysis of published studies of depression, depressive symptoms, and suicidal ideation in undergraduate medical trainees. The researchers identified 195 studies that met criteria for inclusion in the analysis.

Depression or depressive symptom prevalence data were extracted from 167 cross-sectional studies (n = 116,628) and 16 longitudinal studies (n = 5,728) from 43 countries. The overall pooled crude prevalence of

depression or depressive symptoms was 27 percent (37,933/122,356 individuals). Summary prevalence estimates ranged across assessment methods from 9 percent to 56 percent. Depressive symptom prevalence remained relatively constant over the period studied (baseline survey year range of 1982-2015). In the 9 longitudinal studies that assessed [depressive symptoms](#) before and during medical school, the median absolute increase in symptoms was 14 percent. Prevalence estimates did not significantly differ between studies of only preclinical students and studies of only clinical students (23.7 percent vs 22.4 percent). The percentage of medical students screening positive for depression who sought psychiatric treatment was 16 percent (110/954 individuals).

Suicidal ideation prevalence data were extracted from 24 cross-sectional studies ( $n = 21,002$ ) from 15 countries. The overall pooled crude prevalence of [suicidal ideation](#) was 11 percent (2,043/21,002 individuals). Summary prevalence estimates ranged across assessment methods from 7 percent to 24 percent.

"The present analysis builds on recent work demonstrating a high prevalence of depression among resident physicians, and the concordance between the summary prevalence estimates (27.2 percent in students vs 28.8 percent in residents) suggests that depression is a problem affecting all levels of medical training. Taken together, these data suggest that depressive and suicidal symptoms in medical trainees may adversely affect the long-term health of physicians as well as the quality of care delivered in academic medical centers," the authors write.

"Possible causes of depressive and suicidal symptomatology in medical students likely include stress and anxiety secondary to the competitiveness of medical school. Restructuring medical school curricula and student evaluations might ameliorate these stresses. Future research should also determine how strongly depression in [medical school](#) predicts depression during residency and whether interventions

that reduce depression in [medical students](#) carry over in their effectiveness when those students transition to residency. Furthermore, efforts are continually needed to reduce barriers to mental health services, including addressing the stigma of depression."

"Further research is needed to identify strategies for preventing and treating these disorders in this population," the researchers conclude.

**More information:** *JAMA*, [DOI: 10.1001/jama.2016.17324](https://doi.org/10.1001/jama.2016.17324)

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