

Psychological distress is an important, easy-to-measure indicator of cardiovascular risk

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Screening for psychological distress can be an effective way to assess a patient's risk for cardiovascular disease, a new study shows. What's more, the researchers note, the screening process can be easy—even for

health care providers without significant psychology training—and efficient.

In a meta-analysis that included more than 600,000 patients across 28 studies, the researchers determined that psychological distress assessed with brief questionnaires was associated with nearly a 30% greater risk of cardiovascular disease. Their results were published on Monday, Nov. 7, in the *Journal of Cardiopulmonary Rehabilitation and Prevention*.

Study co-author Carly Goldstein, an assistant professor of psychiatry and human behavior (research) at Brown University's Warren Alpert Medical School, said the results indicate that clinicians can provide a brief mental health questionnaire to a patient during a visit and, based on the self-reported answers, get a better idea of not only that patient's mental health risks, but also their associated risk for cardiovascular disease.

The clinician can then choose to make recommendations to the patient around improving their mental health to help them improve their cardiovascular health, Goldstein said.

"This analysis shows that a patient's psychological distress is directly associated with their cardiovascular risk, providing opportunities for clinicians to help a patient manage their risks over time, for better overall health, right at the point of care," Goldstein said.

Ample evidence shows that psychological distress—including elevated symptoms of depression, [anxiety](#), [post-traumatic stress disorder](#) and psychosocial [stress](#)—is associated with cardiovascular disease risk. However, Goldstein said, there wasn't a practical application of this information for clinicians. Moreover, she added, it was unknown whether a brief screener of psychological distress was sufficient to predict cardiovascular disease risk.

Most research connecting psychological health and cardiovascular disease has focused on people who have already been diagnosed with cardiovascular disease, said study co-author Allison Gaffey, a clinical psychologist with the Department of Internal Medicine at Yale School of Medicine who completed her predoctoral internship at Brown's medical school.

"Certainly we know that psychological health is important within the scope of managing care," Gaffey said. Far fewer studies, she said, have been devoted to understanding how psychological health among those who have not yet received a diagnosis may portend cardiovascular risks over time.

To look for associations among the general public, the researchers searched three large databases for studies including adults without a past psychiatric diagnosis, who were screened for depression, anxiety, PTSD, stress or general mental health symptoms, and followed for more than six months to determine their risk for cardiovascular diseases. They only included research published in the last five years. The analysis included 658,331 participants, 58% of whom were women.

The meta-analysis determined that psychological distress assessed with brief screeners was indeed associated with cardiovascular disease: The researchers found that participants reporting high psychological distress showed a 28% greater risk of cardiovascular disease compared to those with low or no distress.

The screeners in the analyzed studies were brief and well-known and could therefore be administered with confidence by any clinical provider, Gaffey said.

"We believe that using these brief screeners, whether in a hospital or a community health care setting, provides feedback that is helpful in

understanding risk for cardiovascular disease in a very multidimensional way compared to only using more standard assessments like blood pressure or cholesterol levels," she said. "Even without meeting criteria necessarily for, say, high psychological distress, those patients who are exhibiting any psychological distress may still benefit from additional clinical support in order to aid their prevention of [cardiovascular disease](#)."

The findings follow updated guidelines from the American Heart Association that expand the checklist of health and lifestyle factors for optimal cardiovascular health. The researchers noted that while "[healthy sleep](#)" was added as an essential aspect of good heart health, "managing stress and mental health" was not.

"There is a solid amount of evidence indicating that individuals who have high psychological distress tend to do worse with the other factors on the checklist," said co-author Emily Gathright, an assistant professor of psychiatry and human behavior at the Warren Alpert Medical School. "Our study is part of the accumulating evidence that psychological distress is a really important factor in a cardiovascular diagnosis, such as the other health behaviors and risk factors, like physical activity and cholesterol levels, that clinicians monitor."

In other words, the researchers said, the checklist should be expanded to include good mental health.

Goldstein noted that in the studies the researchers looked at in their analysis, by far the most common domain of psychological distress that was assessed was depression. Because anxiety also contributes to psychological [distress](#) and may even manifest in ways distinct from depression, she suggested that screeners used in clinical practice include ways to fully evaluate for anxiety as well as depression.

The three psychology researchers work in cardiac rehabilitation, Goldstein said, and are therefore familiar with how supporting [psychological health](#) supports cardiovascular health.

"I would encourage all providers, cardiovascular and specialty providers as well as primary care providers, to do some kind of brief screening for [psychological distress](#) to assess [cardiovascular risk](#)," Goldstein said.

"And I would argue that every provider's office can make brief recommendations to patients who warrant them, which may be as simple as pointing towards free, publicly available mental health resources."

Just as the screening process can be brief and efficient, Goldstein added, so can the mental health support recommendations, and both stand to make a difference in the patient's overall health.

Lauren Fletcher, a medical education and clinical engagement librarian at Brown University, also contributed to this research.

More information: Allison E. Gaffey et al, Screening for Psychological Distress and Risk of Cardiovascular Disease and Related Mortality, *Journal of Cardiopulmonary Rehabilitation and Prevention* (2022). [DOI: 10.1097/HCR.0000000000000751](https://doi.org/10.1097/HCR.0000000000000751)

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