

A vicious cycle: Research examines depression as both cause and consequence of stress

November 7 2023



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Angela Santee studies stress. For several years, the University of Rochester graduate student in psychology had been sifting through

research on stress generation and depression, working on a rigorous meta-analysis. Mentored by Lisa Starr, an associate professor in the Rochester Department of Psychology, Santee wondered if existing studies would bear out the stress generation model that had been developed in 1991 by University of California, Los Angeles, psychology professor Constance Hammen—who, in turn, had been Starr's postdoctoral mentor.

While Hammen's model had spawned plenty of research over the past three decades, the resulting literature had never been quantitatively summarized. A worthwhile undertaking, both Santee and her thesis advisor Starr believed.

Yet, unbeknown to them and some 2,800 miles to the northwest, Katerina Rnic, a postdoctoral fellow at the University of British Columbia in Vancouver, was doing exactly the same.

"There's definitely a moment where your stomach drops. It's a nerve-racking realization," says Santee.

At that point, Santee and her advisor Starr had already sunk years into the data research and were mere months away from completing it. Would she have to walk away and abandon the project, she wondered.

After a moment (or two) of panic on both sides of the border, the researchers decided to join forces instead, with British Columbia's Rnic and Rochester's Santee taking the lead. In total, the combined team looked at a whopping 95 [longitudinal studies](#), spanning 38,228 study participants, and more than 30 years of research.

The resulting [coauthored meta-analysis](#), published in the *Psychological Bulletin*, was admittedly "quite an endeavor, but ultimately strengthened the science," says Starr, a senior co-author, whose research centers on the origins and consequences of depression and [anxiety disorders](#) in

adolescents and adults.

Verifying the long-established model of stress generation

Indeed, the new quantitative US-Canadian meta-analysis concludes, in line with Hammen's model, that psychopathology—such as mental illness or disorders, including depression—does predict dependent stressful life events (events that the person, at least in part, contributed to) more strongly than it predicts independent (fateful) events. In other words, those who suffer from mental disorders are more likely to find themselves in stressful situations of their own making.

Psychologists refer to this phenomenon as [stress](#) generation, in which the depressed person is an active contributor rather than a passive player in their own environment.

"People with depression might be more likely to have arguments with others, or put off completing important tasks at work or home," explains co-lead author Rnic. "This can lead to more stressors in their relationships, work, education, finances, health—all domains of life."

Yet, the team found that the theory of stress generation not only holds for people with depression but also across many other mental health disorders, such as anxiety, [personality disorders](#), substance use, and childhood disruptive disorders.

"We saw that people with mental disorders experienced more dependent stressors than those without mental disorders," Rnic says, which suggests that "people with mental disorders are actively generating greater stressors."

The finding is crucial, the team argues, because it means that people have some agency over the amount of stress they experience.

Importantly, the new meta-analysis offers strong evidence that stress generation seems to act as a factor that maintains and feeds a person's depression. "This finding is crucial because the major reason that depression is such a burden on society is that it's a recurrent and often chronic problem," Starr notes.

Breaking the vicious cycle

Being able to target the self-perpetuating generation of stress with specific interventions may improve a person's [mental illness](#) or psychological disorder. That's why the researchers embarked on a second undertaking: trying to isolate the specific processes that contribute to the occurrence of life stress. Treatments that target stress generation could reduce "the personal and economic cost of mental disorders," the team writes, noting that stress generation is "malleable."

The result is a [second meta-analysis](#), published in *Clinical Psychology Review*, which looked at both the modifiable risk and protective factors in stress generation, incorporating the findings of 70 studies with nearly 40,000 participants in total, and spanning again more than 30 years of research.

The team found common [risk factors](#) that predict a person's stress generation over time, including personal traits and behaviors commonly associated with [mental disorders](#), ineffective interpersonal emotion regulation (such as seeking excessive reassurance from others), repetitive negative thoughts (including ruminating and worrying), excessive standards for oneself, and the tendency to withdraw or avoid challenging situations or social interactions.

Addressing these risk factors in treatment approaches, the authors argue, may be crucial to breaking the vicious cycle of stress generation. The team also noted that preventive factors remained understudied.

Yet, the silver lining that became clear during the analysis is that dependent stress is moldable and that people have agency.

"It's a powerful realization that some of the stressors we experience are within our control and so, theoretically, we can act to control how much stress we experience and the impact of that stress on us," Santee says. "We all have the ability to shape our worlds."

Ultimately, the cross-border, cross-institutional collaborative approach, which also involved other researchers from Rochester, British Columbia, and the University of Western Ontario, improved the project.

"Rather than racing to be first to publish, which is very stressful in itself, we decided to make the science stronger," Santee says. "We finished sooner and really accomplished much more together."

More information: Katerina Rnic et al, The vicious cycle of psychopathology and stressful life events: A meta-analytic review testing the stress generation model., *Psychological Bulletin* (2023). [DOI: 10.1037/bul0000390](https://doi.org/10.1037/bul0000390)

Angela C. Santee et al, Risk and protective factors for stress generation: A meta-analytic review, *Clinical Psychology Review* (2023). [DOI: 10.1016/j.cpr.2023.102299](https://doi.org/10.1016/j.cpr.2023.102299)

Provided by University of Rochester

Citation: A vicious cycle: Research examines depression as both cause and consequence of stress (2023, November 7) retrieved 12 May 2024 from <https://medicalxpress.com/news/2023-11-vicious-depression-consequence-stress.html>

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