

Suicide rates increase after disasters strike, researcher finds

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Disasters like hurricanes and tornadoes are occurring with increasing frequency and severity across the globe. In addition to impacting local communities, infrastructure and the economy, these disasters also can lead to severe emotional distress and anxiety for those living in their paths.

A team of researchers including the University of Delaware's Jennifer Horney, founding director of the epidemiology program in the College of Health Sciences, examined the impact of 281 [natural disasters](#) on [suicide rates](#) during a 12-year span.

Horney and others looked at disaster declaration data and found overall [suicide](#) rates increased by 23% when compared to rates before and after the disaster. Suicide rates increased for all types of disasters—including [severe storms](#), floods, hurricanes and ice storms—with the largest overall increase occurring two years after a disaster, according to an article published in *The Journal of Crisis Intervention and Suicide Prevention*.

"That finding is important, I think, because those could be preventable deaths with better disaster preparedness and response," Horney said. "It's particularly important to consider the risk of suicide since those with more existing social vulnerabilities live in areas with a greater risk of being damaged by disaster."

The researchers looked at counties in the continental United States with a single major disaster declaration between 2003 and 2015, based on data from the Federal Emergency Management Agency (FEMA). For each county, suicide rates were estimated for three 12-month periods before and after the disaster. Although FEMA gives disaster declarations for nine types of disasters, storms, floods and hurricanes occurred frequently enough to be included in the study.

For all disaster types combined as well as individually for severe storms, flooding and ice storms, researchers found the suicide rate increased in both the first and second year following a disaster, then declined in the third year. Flooding saw suicide rates increase by nearly 18% the first year and 61% the second year before declining to the baseline rate after that.

By contrast, the suicide rate following hurricanes rose in the first year—jumping 26%—then returned to the baseline in the second year. "Counties impacted by hurricanes saw the biggest increase in the rate of suicide in the first year, which makes sense because it's the most widespread type of disaster among those we examined," Horney said.

The study only looked at counties with a single disaster declaration and excluded those with multiple disaster episodes. Therefore, "these data are probably underestimate the association between disaster exposure and suicide because we know that there are a lot of additional mental health impacts from repetitive loss," Horney said.

The findings suggest a need for more mental health resources being made available to address challenges that can arise after a natural disaster, Horney said. Policy changes also should address the duration of these funding resources.

"From a policy perspective, we can use this data to say we should really extend funding for mental health services out at least two years after a disaster because people clearly are not yet recovered, even to their old normal, after one year, when this type of funding typically expires" she said. "The goal cannot be to recover to the pre-disaster status quo. We want those impacted by disasters to recover and be more resilient to the mental health impacts of [disasters](#) than they were before."

More information: Jennifer A. Horney et al. The Impact of Natural Disasters on Suicide in the United States, 2003–2015, *Crisis* (2020). [DOI: 10.1027/0227-5910/a000723](https://doi.org/10.1027/0227-5910/a000723)

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