

Social vulnerability linked with mental health and substance use disorders

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A [study published](#) in *JAMA Psychiatry* uncovers significant associations between social vulnerability—a measurement that aggregates social determinants of health like socioeconomic status, housing type,

education and insurance coverage—and the prevalence and treatment of mental health and substance use disorders in the United States. The results have the potential to reshape public health policies to better serve systemically disadvantaged populations.

"We're continually learning that so much of [health care](#)—both mental health and [physical health](#)—is impacted by the environment within which you live," said Robert Gibbons, Ph.D., director of the Center for Health Statistics at the University of Chicago and lead author on the new paper.

In 2022, Gibbons was one of a group of researchers at UChicago who [developed the Social Vulnerability Metric \(SVM\)](#), a [statistical model](#) that produces a single score strongly correlated with health outcomes. The SVM has outperformed other measurements of social determinants of health, such as the [CDC's Social Vulnerability Index \(SVI\)](#), in accurately predicting health outcomes like overall mortality and emergency room visits.

The researchers then applied the SVM to CDC data to study the [link between social vulnerability and suicide risk](#) at the county level, finding an 82% increase in suicide rate from the least vulnerable counties to the most.

Similarly, the latest investigation applied the SVM to data from the Mental and Substance Use Disorders Prevalence Study (MDPS), a \$30 million study conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Research Triangle Institute (RTI), to which Gibbons also contributed.

"The quality and scale of the MDPS data make our new study especially significant," Gibbons said.

"It's based on a nationally representative sample of U.S. households and also included a non-household sample of prisons, homeless shelters and state psychiatric hospitals. Furthermore, the diagnostic information was gathered in structured clinical interviews rather than being self-reported or pulled from [electronic health records](#) that vary dramatically in quality. We've never had a sample like this."

Disparities in both prevalence and treatment

The analysis revealed that socially vulnerable populations are at greater risk of specific mental health and [substance use disorders](#), including bipolar I disorder, [post-traumatic stress disorder](#), schizophrenia spectrum disorder, stimulant use disorder and opioid use disorder. In particular, they highlighted a 17-fold increase in the prevalence of schizophrenia spectrum disorder between areas with the lowest and highest SVM scores.

"A 17-fold increase in the odds of having schizophrenia spectrum disorder—that's an earthquake in terms of statistical magnitude," Gibbons said. "Public health experts, policymakers and doctors who are diagnosing and treating these disorders need to think about risk stratification that includes the social environment within which you live."

The researchers also found that schizophrenia spectrum disorder, stimulant use disorder and opioid use disorder are much more likely to go untreated in socially vulnerable areas. For example, the non-treatment rate for schizophrenia spectrum disorder in the least socially vulnerable percentiles was 0%, whereas the non-treatment rate among the most vulnerable percentiles was 48%.

Informing public health policy

"This research opens the door to a complete change in policies that could direct treatments to the community level rather than treating individuals in isolation," Gibbons said. "Using the SVM to proactively identify neighborhoods that could benefit most from interventions could produce lots of really great benefits."

Policy changes could include increasing service capacity for high-quality mental health and substance use disorder treatment in vulnerable communities.

The authors identified potential sources of funding for targeted interventions, such as opioid settlement funds, Medicaid waivers, and grants from SAMHSA. With these resources, the SVM can be integrated into quality improvement programs and equity initiatives all the way up to the federal level, paving the way for more effective [public health policies](#).

More information: Social Vulnerability and Prevalence and Treatment for Mental Health and Substance Use Disorders, *JAMA Psychiatry* (2024). [DOI: 10.1001/jamapsychiatry.2024.1870](https://doi.org/10.1001/jamapsychiatry.2024.1870)

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