

After decades of research, science is no better able to predict suicidal behaviors

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Experts' ability to predict if someone will attempt to take his or her own life is no better than chance and has not significantly improved over the last 50 years, according to a comprehensive review of suicide research published by the American Psychological Association.

"Suicidal thoughts and behaviors are among the most common, deadly

and potentially preventable public [health problems](#). Despite major advances in medical and psychological science, the devastating impact of this problem has remained constant for at least several decades," said Joseph Franklin, PhD, of Harvard University, lead author on the study, which appeared in the journal *Psychological Bulletin*.

A proper understanding of [risk factors](#) for [suicidal thoughts](#) and behaviors is essential in crafting scientific theories, accurate risk assessments and effective treatments, according to Franklin.

"Each day, thousands of clinicians rely on a half century of risk factor research to inform critical decisions about suicide risk and treatment," he said. "The primary purpose of this study was to estimate the power and accuracy of these risk factors."

Franklin and his colleagues conducted a meta-analysis of 365 studies conducted over the last 50 years looking at risk factors (e.g., depression, previous suicide attempts, [stressful life events](#), substance abuse) and their ability to predict suicidal thoughts and behaviors over long periods of time.

"Our analyses showed that science could only predict future suicidal thoughts and behaviors about as well as random guessing. In other words, a suicide expert who conducted an in-depth assessment of risk factors would predict a patient's future suicidal thoughts and behaviors with the same degree of accuracy as someone with no knowledge of the patient who predicted based on a coin flip," said Franklin. "This was extremely humbling—after decades of research science had produced no meaningful advances in suicide prediction."

The findings do not necessarily mean that widely used risk guidelines are invalid or useless, or that therapists should abandon them, warns Franklin. "As most of these guidelines were produced by expert

consensus, there is reason to believe that they may be useful and effective. We recommend that these guidelines remain in use but emphasize that there is an urgent need to evaluate these guidelines within longitudinal studies."

The problem with the past research analyzed in this study is that the methodologies used were extremely narrow (most only looked at a single risk factor) and may not have taken into account the complexity of the roles of these risks in the real world, suggested Franklin.

"Few scientists believe that a single factor, such as hopelessness, measured at one point in time will accurately predict suicide over the next 10 years," he said. "Instead, most would propose something like the following: a rapid elevation in hopelessness in an elderly man who just lost his wife, owns guns, has a history of [suicidal behavior](#) and has multiple physical health problems may increase risk for suicidal behaviors for a few hours, days or weeks. But the studies have not been testing these kinds of ideas."

There is good news on the horizon, according to Franklin. In the past two years, multiple groups have begun working on developing "machine learning algorithms" (the same things that drive the Google Search algorithm, make your email spam filter effective and show you relevant advertisements) to combine tens or even hundreds of risk factors together to predict suicidal behaviors.

"The preliminary results are promising, with algorithms predicting suicidal behaviors with greater than 80 percent accuracy, but this work is just in its initial phases," said Franklin. "However, in the very near future, this work may produce accurate prediction of suicidal behaviors on a large scale."

More information: "Risk Factors for Suicidal Thoughts and

Behaviors: A Meta-Analysis of 50 Years of Research," *Psychological Bulletin*, 2016.

Provided by American Psychological Association

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