Suicidal talk on Twitter mirrors suicide rates

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(Medical Xpress)—Heart-breaking accounts of cyber bullying and suicide seem all too common, but a new study offers hope that social media can become an early warning system to help prevent such tragedies.

Researchers at Brigham Young University examined tweets originating from all 50 states over a three month period. Sifting through millions of tweets, their algorithms searched for direct discussion of suicide, as well as keywords and phrases associated with known risk factors such as bullying.

"With social media, kids sometimes say things that they aren't saying out loud to an adult or friend in person," said Christophe Giraud-Carrier, a BYU computer scientist and one of the study's seven authors.

They found 37,717 genuinely troubling tweets from 28,088 unique users for whom some location information was available. As they report in the journal *Crisis*, each state's ratio of suicidal tweets strongly correlated with its actual suicide rate.

In Alaska, which has the nation's highest suicide rates, the BYU researchers identified 61 Twitter users as at-risk individuals. In Texas, where the rate of suicide is slightly lower but the population is significantly higher, more than 3,000 Twitter users were flagged as at-risk cases. In Utah, the study found 195 Twitter users who may be at risk.

"Somebody ought to do something," Giraud-Carrier said. "How about using social media as a complement to what is already done for suicide prevention?"

That would be fairly simple to do on Twitter, where most tweets are visible to the public and open for a response.

"Tweets may be useful to address some of the functions that suicide hotline groups perform, but at the discretion and potential for such organizations to provide those services via Twitter," said Michael Barnes, a health science professor at BYU and a study co-author.

[Previous research](#) found that about 15 percent of [tweets](#) contain at least state-level location information, suggesting that state health departments might also play a role.

For other [social media](#) platforms, the BYU researchers want to develop an app for schools that will incorporate and analyze information that students post. The idea is that schools make a connection with the students and obtain permission to receive the content they post socially. The app's algorithms can notify counselors when a student posts something that is a cry for help.

"Suicide is preventable," said Carl Hanson, a BYU health scientist and study co-author. "Social media is one channel for monitoring those at risk for suicide and potentially doing something about it."

Provided by Brigham Young University

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