Phone apps could monitor teen angst

By LINDSEY TANNER
Associated Press

Rising suicide rates and depression in U.S. teens and young adults have prompted researchers to ask a provocative question: Could the same devices that some people blame for contributing to tech-age angst also be used to detect it?

The idea has sparked a race to develop apps that warn of impending mental health crises. Call it smartphone psychiatry or child psychology 2.0.

Studies have linked heavy smartphone use with worsening teen mental health. But as teens scroll through Instagram and Snapchat, tap out texts or watch YouTube videos, they also leave digital footprints that might offer clues to their psychological well-being.

Changes in typing speed, voice tone, word choice and how often kids stay home could signal trouble, according to preliminary studies.

There might be as many as 1,000 smartphone "biomarkers" for depression, said Dr. Thomas Insel, former head of the National Institute of Mental Health and now a leader in the smartphone psychiatry movement.

Researchers are testing experimental apps that use artificial intelligence to try to predict depression episodes or potential self-harm.

"We are tracking the equivalent of a heartbeat for the human brain," said Dr. Alex Leow, an app developer and associate professor of psychiatry and bioengineering at the University of Illinois' Chicago campus.

At least, that's the goal. There are technical and ethical kinks to work out — including privacy issues and making sure kids grant permission to be monitored so closely. Developers say proven, commercially available mood-detecting apps are likely years — but not decades — away.

"People often feel that these things are creepy," because of the tech industry's surreptitious tracking of online habits for commercial purposes, said University of Oregon psychologist Nick Allen.

Using smartphones as mental illness detectors would require informed consent from users to install an app, "and they could withdraw permission at any time," said Allen, one of the creators of an app that is being tested on young people who have attempted suicide.

"The biggest hurdle at the moment," Allen said, "is to learn about what's the signal and what's the noise — what is in this enormous amount of data that people accumulate on their phones that is indicative of a mental health crisis."

Depression affects about 3 million U.S. teens, and rates have climbed in the past decade. Last year, 13 percent of 12- to 17-year-olds had depression, up from 8 percent in 2010, U.S. government data show. One in 10 college-aged Americans is affected.

Suicide has risen to the second leading cause of death for ages 10 to 34. Rates among teen girls doubled from 2007 to 2015, climbing to 5 per 100,000. And among boys, rates jumped 30 percent, to 14 in 100,000.

A recent study suggested a parallel rise in smartphone use likely contributed.

People with mental illness typically get treatment "when they're in crisis and very late in the course of an illness. We want to have a method to identify the earliest signs," in an objective way, Insel said.

If smartphones prove to be accurate mood predictors, developers say the ultimate goal would be to use them to offer real-time help, perhaps with automated text messages and links to help lines, or digital alerts to parents, doctors or first responders.

Facebook is already doing just that with what it calls "proactive detection." Last year, after a live-streamed suicide, Facebook trained its AI systems to flag certain words or phrases in online posts that could indicate imminent self-harm. Friends' comments expressing concern about the user's well-being are part of the equation.

"In the last year, we've helped first responders quickly reach around 3,500 people globally who needed help," Facebook CEO Mark Zuckerberg announced in November. Facebook has not disclosed outcomes of those cases.
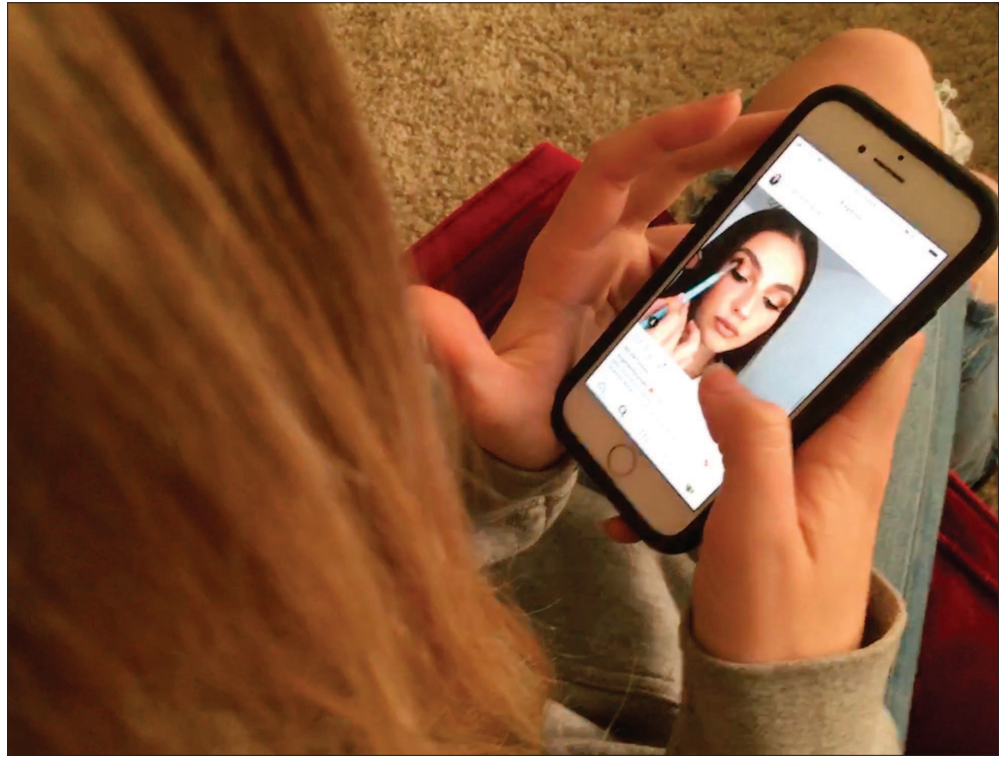

AP Photo/Haven Daley
Laurel Foster holds her phone on Nov. 1, 2018, in San Francisco. Foster is among teens involved in Stanford University research testing whether smartphones can be used to help detect depression and potential self-harm.

AP Photo/Haven Daley
Laurel Foster looks at Instagram in San Francisco on Nov. 1. 2018. App developers say as teens scroll through Instagram and Snapchat, tap out texts, or hole up in their rooms watching YouTube, they're leaving enormous digital footprints that may offer clues to their psyches. Studies are underway to find out.

FRIDAY AFTERNOON & EVENING — JANUARY 4, 2019

[TV listings grid — broadcast and cable channels, 12 PM through 11:30 PM. Detailed program listings omitted for legibility.]

FRIDAY LATE NIGHT & SATURDAY MORNING

[TV listings grid — 12 AM through 11:30 AM. Detailed program listings omitted for legibility.]