

# Depression linked to e-cigarette use among college students

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Credit: George Hodan/Public Domain

The emergence of e-cigarettes as a nicotine product has left scientists with many questions about their impact on health, including how the product interacts with depression. A new study by researchers at The University of Texas Health Science Center at Houston (UTHealth), published today in *Nicotine & Tobacco Research*, found a connection between depression and initiation of e-cigarette use among college

students.

"This is the first study to establish a longitudinal relationship between elevated [depressive symptoms](#) and e-cigarette use," said lead author Frank Bandiera, Ph.D., assistant professor in the Department of Epidemiology, Human Genetics and Environmental Sciences at UTHealth School of Public Health in Dallas.

Among a sample of 5,445 undergraduate [students](#) from 24 colleges across Texas, students who experienced elevated levels of depressive symptoms were significantly more likely than students who did not experience elevated levels of depressive symptoms to start using e-cigarettes six months later. However, e-cigarette use did not appear to lead to elevated [depression](#) levels among the students.

"We don't know why depression leads to e-cigarette use. It may be self-medication. Just like with cigarettes, when students feel stressed out, using e-cigarettes may make them feel better. Or it could be that since e-cigarettes have been marketed as a smoking cessation device, depressed students may be using e-cigarettes to help them quit smoking traditional cigarettes," said Bandiera, noting that there is little published clinical research to support that e-cigarettes help people quit smoking traditional cigarettes.

Bandiera was surprised by the results since previous research showed a reciprocal relationship between depression and traditional cigarette use. He assumed the same would be true for e-cigarettes.

"Since e-cigarettes typically deliver less nicotine per puff than cigarettes, it is possible that the lower content of nicotine in [e-cigarettes](#) could explain the null findings," Bandiera wrote in the paper.

The data used for the study was collected by the Tobacco Center of

Regulatory Science on Youth and Young Adults (Texas TCORS), a center created by several of The University of Texas System institutions to develop research that can guide future decisions on tobacco regulations at the national level. The researchers chose to study [college students](#) because the prevalence of e-cigarette use is higher among adolescents and [young adults](#).

Nicotine exposure during adolescence and young adulthood can cause addiction and harm the developing brain, according to the U.S. Surgeon General's Report on E-Cigarette Use Among Youth and Young Adults.

Provided by University of Texas Health Science Center at Houston

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