

Boonshoft researchers study use of marijuana edibles

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FAIRBORN — Social media is shedding light on how people are consuming marijuana edibles, including brownies, cookies and candies.

Tweets related to the use of marijuana and derivatives are providing data for researchers at the Center for Interventions, Treatment and Addictions Research (CITAR) in Wright State University Boonshoft School of Medicine and the Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis), who are using Twitter data analysis as a tool to monitor emerging drug use practices and trends.

Their study, “‘Those Edibles Hit Hard’: Exploration of Twitter Data on Cannabis Edibles in the U.S.,” is the first to attempt to describe and analyze Twitter data on marijuana edibles. The study will soon be published in *Drug and Alcohol Dependence*, a peer-reviewed international journal that publishes original research, scholarly reviews, commentaries and policy analyses in the area of drug, alcohol and tobacco use and dependence.

Despite the overall positive attitude about marijuana edibles, negative tweets revealed that users of marijuana edibles could be at risk of overdosing if they are not aware about the real potency of edibles, according to the Wright State researchers. Many do not understand how much is safe to consume and how often they can consume it. In addition, the amount of THC, one of the main mind-altering chemicals found in cannabis, varies from one product to another.

“Our results demonstrate that adverse effects linked to cannabis edibles are not isolated cases,” said Francois R. Lamy, Ph.D., postdoctoral research fellow in CITAR and Kno.e.sis. “If you take into consideration that Twitter users overall have a positive attitude toward marijuana edibles, it suggests that more users will try to consume edibles and will be at risk of experiencing adverse events if not forewarned of the real potency of edibles.”

Led by principal investigators Raminta Daniulaityte, Ph.D., associate professor of community health and CITAR associate director, and Amit Sheth, Ph.D., LexisNexis Ohio Eminent Scholar and executive director of Kno.e.sis, an interdisciplinary team of researchers has developed and deployed an innovative software platform, eDrugTrends, capable of semiautomated processing of social media data on cannabis and synthetic cannabinoid use in the United States. The three-year study is supported by a \$1.4 million grant from the National Institutes of Health/National Institute on Drug Abuse.

“The key strength of our collaborative project is the creative adaptation of the state-of-the art technological advancements in computer science and engineering to meet the unique needs of drug abuse research,” Daniulaityte said.

Sheth described eDrugTrends as a social big data analytics platform that enables near real-time analysis of large and diverse social media content to tease out insights.

Tweets on marijuana edibles were collected using Twitter’s streaming application programming interface that provides free access to 1 percent of all tweets. The Twitter data filtering and aggregation framework was available through the eDrugTrends platform.

Over a three-month period, eDrugTrends collected more than 100,000 tweets mentioning marijuana edibles, with 26.9 percent containing state-level geolocation. The researchers found differences in the proportion of Twitter users posting about edibles that were statistically significant, with more posts coming from states where marijuana use is legal than from states where it is prohibited.

“The results of our study demonstrate the ability of our platform, eDrugTrends, to analyze regional differences in

terms of marijuana edibles consumption and capture the general opinion of Twitter users on this particular product,” Lamy said. “Twitter data analysis offers the possibility to retrieve timely information concerning trends of emerging cannabis product use.”

The Wright State researchers hope that the results of the study will reinforce the content testing of marijuana edibles as already established by the states of Colorado and Washington. However, Lamy warned that content testing would not affect cannabis users who cook their own edibles and don’t really know the THC content of their homemade products. “Educating marijuana users to consume edibles safely is critical,” he said.

The Twitter data could help policy makers tackle and target specific aspects of a given phenomenon or trend. Classical methodologies are unable to capture emerging drug use trends because they require an extensive period of time to collect and analyze the data.

“Monitoring Twitter offers the possibility to detect new trends as they emerge and observe their changes over time,” Lamy said. “Considering the actual changes happening across the nation in terms of cannabis legislation, the ability to obtain epidemiological data in real-time through Twitter represents a real advantage from both prevention and harm minimization perspectives. Social media provides a large amount of volunteered data from a larger user base.”

Other senior members of the research team from Wright State include Ramzi W. Nahhas, Ph.D., associate professor of community health, and Robert G. Carlson, Ph.D., professor of community health and CITAR director.

Story courtesy of the Wright State University Boonshoft School of Medicine.