

# Study: Tailored mobile messaging reduces young adult waterpipe tobacco use by 49%

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Tailored mobile messaging is an effective intervention strategy to reduce tobacco waterpipe smoking in young adults, according to a new study published by researchers with the Center for Tobacco Research at The Ohio State University Comprehensive Cancer Center—Arthur G. James

Cancer Hospital and Richard J. Solove Research Institute (OSUCCC—James).

Researchers report their findings in the Aug. 26, 2021, online first issue of the *American Journal of Public Health*. This is the first study to demonstrate the effectiveness of a tailored [mobile messaging](#) intervention to support [smoking](#) cessation in youth [tobacco](#) hookah users, study authors say.

"In the United States, hookah tobacco smoking is most prevalent among [young adults](#). Our study is one of the first to demonstrate that a tailored mobile [messaging](#) intervention can motivate young adult hookah smokers to quit. This technology-based intervention is scalable to implement at the population-level," said Dr. Darren Mays, principal investigator of the study and a member of the OSUCCC—James Cancer Control Research Program. Mays is an associate professor in the Ohio State College of Medicine Division of Medical Oncology.

## Study methods and results

For this study, researchers recruited 349 waterpipe (also known as a hookah) tobacco users between the ages of 18 and 30. All participants were recruited between 2018 and 2020 and then randomized into one of three trial arms—two intervention arms and a control arm.

All participants underwent baseline evaluation prior to the beginning of the six-week intervention trial to gauge perceived associated "riskiness" of smoking, personal motivation to quit, waterpipe smoking frequency and cessation.

Individuals in the two intervention arms received six weeks of messaging sent via their personal mobile phones and designed to increase motivation to quit smoking, including both [visual cues](#) and specific

messages about the long- and short-term health harms, toxicant exposure and addictiveness of water pipe tobacco use. Message content was developed to address misconceptions about risks of waterpipe tobacco use in young adults, based on previously published research.

In the untailed intervention arm, all participants received the same message content. In the tailored intervention arm, the message content was personalized to participants' frequency of waterpipe tobacco use, how risky they believed water pipe smoking to be, and to their responses to text messages during the intervention. The control arm received no intervention. Participants were assessed again at the end of the intervention (six weeks), three months, and six months.

Study results showed that 49% of individuals who received tailored mobile messaging quit smoking waterpipe tobacco at 6 months— 20% more compared to participants who did not receive any mobile intervention. At the six-month follow-up, results also showed that individuals who received the tailored mobile messaging intervention but did not quit smoked [waterpipe](#) tobacco less frequently than those in the control arm.

The tailored mobile messaging intervention targeted water pipe tobacco smoking specifically, but did not target other tobacco use.

"Waterpipe tobacco smoking is often associated with other tobacco use among young people. As a public health community, we are very concerned about rising rates of dual- and poly-tobacco product use, particularly among adolescents and young adults. In the future it will be important to study how our [intervention](#) affects use of water pipe along with other tobacco products, such as cigarettes and electronic cigarettes, among young people," Mays added.

**More information:** Tailored Mobile Messaging Intervention for

Waterpipe Tobacco Cessation in Young Adults: A Randomized Trial,  
*American Journal of Public Health* (2021). [DOI:  
10.2105/AJPH.2021.306389](https://doi.org/10.2105/AJPH.2021.306389)

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