Letters

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CANNABIS USE AND HYPOSALIVATION

We read with interest the January JADA article titled "Frequent Recreational Cannabis Use and Its Association With Caries and Severe Tooth Loss: Findings From the National Health and Nutrition Examination Survey, 2015-2018" (Clonan E, Shah P, Cloidt M, Laniado N. *JADA*. 2025;156 [1]:9-16.e1). We applaud the authors for identifying a potentially considerable effect of recreational cannabis (RC) usage on caries. Given that 24 states have fully legalized cannabis use and many other states have legalized medicinal cannabis or cannabidiol oil or decriminalized cannabis usage (leaving only 4 states where cannabinoids [tetrahydrocannabinol, cannabidiol] are fully illegal),[1] dentists can expect to encounter frequent cannabis users among their patients. However, we were surprised that the authors did not mention associations between cannabis and cannabinoid usage and hyposalivation, a known risk factor for increased caries incidence, other than noting an effect on salivary buffering capacity. Hyposalivation, also termed dry mouth, xerostomia, or, colloquially, cottonmouth, is a commonly reported adverse effect of cannabinoid consumption, to the point that this condition is recognized by some public health agencies, and some manufacturers of products for dry mouth are targeting RC users.

A study in *JAMA Network Open* points to a disturbing effect of secondhand cannabis exposure on urinary cannabinoid biomarkers in children that could predispose them to xerostomic adverse effects of tetrahydrocannabinol.[2] Another article on cannabis use and caries, using data from the 2011-2012 National Health and Nutrition Examination Survey, failed to find an association between smoking cannabis and caries.[3] Although conflicting results on caries and periodontal disease exist from National Health and Nutrition Examination Survey samples[4] largely due to confounding variables including underreporting bias, national prevalence data for hyposalivation, a common oral health condition, remain unavailable.

Our concern is that with increasing usage of RC, dental research has not kept pace with the societal changes and potential adverse effects of cannabis and cannabinoid use on oral health. There is a paucity of empirical research on cannabinoids and saliva secretion, so we do not know the duration and intensity of the hyposalivatory effects on users, or whether these effects can become chronic. Our intent is not to criticize the authors of the article but rather point out the continuing lack of available practical information on saliva and oral health for dental care professionals, other health care providers, and the public. It is our opinion that there is an ongoing need for diagnostic tests to measure saliva output that would allow both patients and health care professionals to assess the impact of recreational or therapeutic drug use on their saliva and potential oral health risks. ■

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AUTHORS' RESPONSE

We appreciate the thoughtful comments from Dr. Dodds and colleagues regarding our January JADA article on frequent recreational cannabis use and its association with caries and severe tooth loss. We welcome the opportunity to further discuss the complexities of cannabis' potential effects on oral health care, particularly regarding hyposalivation.

Although we agree that dry mouth is a known adverse effect of cannabinoid use and is biologically plausible as a mediator of caries risk, the availability of relevant data within the National Health and Nutrition Examination Survey (NHANES) data set limited our ability to explore this in the context of our study. The continuous NHANES did include questions on dry mouth; however, these data were collected only during the 1999-2000, 2001-2002, 2003-2004, 2011-2012, and 2013-2014 survey cycles. No data on xerostomia were collected or released for the 2015-2016 and 2017-2018 cycles, which formed the basis for our cannabis analysis.

In addition, given the cross-sectional nature of NHANES, assessing the risk or causal relationship between cannabis use and xerostomia using these data would likely exceed the scope of our study. Although it may be possible to generate estimates through modeling, such analyses would require assumptions about temporality that might not be supported by the cross-sectional design of the data set.

We fully agree that additional empirical research on cannabis, hyposalivation, and oral health outcomes is critically needed. Standardized, widely available diagnostic tools for measuring salivary flow in clinical settings would be invaluable to dental practitioners, especially as cannabis use becomes increasingly prevalent.

The concerns raised regarding the potential effects of cannabis use on xerostomia highlight the ongoing need for comprehensive surveillance of xerostomia. The discontinuation of continuous monitoring in NHANES has resulted in a considerable gap in empirical data on the long-term effects of cannabinoids on salivary secretion. Addressing this gap through systematic surveillance is crucial for advancing understanding of cannabis-related oral health care outcomes.

We appreciate the authors' engagement and share their commitment to advancing understanding in this area. ■

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ARTIFICIAL INTELLIGENCE IN DENTAL EDUCATION

We read with great interest the January JADA article titled "ChatGPT's Risk of Misinformation in Dentistry: A Comparative Follow-Up Evaluation" (Danesh A, Danesh F, Danesh A. *JADA*. 2025;156[1]:3-5). The authors have provided valuable insights into the evolving role of artificial intelligence in dental education, a timely and relevant topic. The study has robust methodology, particularly the incorporation of questions from diverse, credible sources.

However, the study has certain limitations that warrant further discussion. First, the authors excluded ChatGPT-3.5 (OpenAI) from the analysis, stating that advancements pertain primarily to ChatGPT-4 (OpenAI). Although this decision is reasonable, a head-to-head comparison with this version would have offered a more comprehensive understanding of the temporal improvements.[1]