

Exploring the Relationship of Social Media Use and Oral Nicotine Pouch Use Among Adolescents aged 12–18 in Kentucky



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Background

- 1.5% of middle and high school students reported current nicotine pouch use (FDA, 2024). The addictive nature of nicotine and unknown long-term effects raise public health concerns.
- ONPs (e.g., Zyn, on!, Velo) are marketed as discreet and socially acceptable through youth-focused flavors and lifestyle messaging (Gaiba et al., 2023).
- Social media platforms like TikTok and Instagram normalize ONP use through peer and viral content (Hébert et al., 2021; Zenone et al., 2025).
- Exposure to pro-nicotine content is associated with higher ONP and e-cigarette use (Mamudu et al., 2022; Cavazos-Rehg et al., 2020).
- This study draws on Social Cognitive Theory to explore how social modeling via social media may impact ONP use, and on Uses and Gratifications Theory to understand how motivations for frequent social media use and demographic factors relate to ONP experimentation (Ruggiero, 2000; Bandura, 1986).

Research Questions

- What is the relationship between general social media usage frequency and oral nicotine pouch use among adolescents aged 12–18 in Kentucky?
- Do demographic factors (sex and grade level) predict oral nicotine pouch use among adolescents aged 12–18 in Kentucky?

Methods

Participants: 3068 Kentucky adolescents (ages 12–18) from middle and high schools.

Design: A cross-sectional survey was administered via Qualtrics during the 2022–2023 school year. Survey questions were adapted from #iCANendthetrend, an evidence-informed tobacco prevention program developed by the University of Kentucky College of Education.

Measures: Demographics, social media use frequency, and oral nicotine pouch (ONP) use.

Analysis: Descriptive statistics, cross-tabulations, chi-square tests, and logistic regression using SPSS.

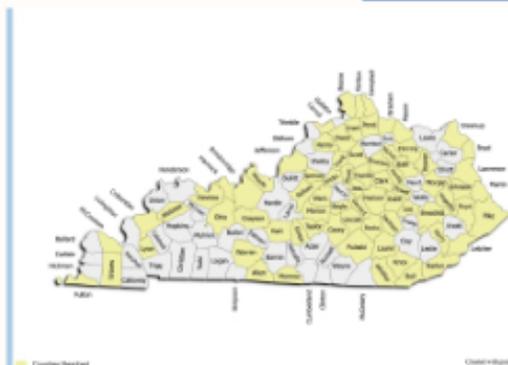
References



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Acknowledgment

Results



Total Participants: N=3068

Survey Overview & Key Variable

6,400 students took the #iCETT survey in 2023–2024
• Cleaned and finalized: 3,068 valid responses

Self-reported Social Media use

- Several times a day
- More than once an hour
- About once a day
- Less frequent
- No use

Demographics

- Sex: Male or Female
- Grade Level: Middle School (Grades 6–8) / High School (Grades 9–12)

ONP Use:

Ever tried oral nicotine pouches (yes/no)

Grade Level Differences in ONP Use

% of Students Who Use Oral Nicotine Pouches (ONP)

μ_1 Middle School (n=1808) μ_2 High School (n=1206)

H₀: $\mu_1 = \mu_2$ H_a: $\mu_1 \neq \mu_2$

Chi-Square tests revealed a statistically significant difference in ONP use between middle and high school students ($p < .001$).

*significance level is set to 0.05

4% of students reported ever using an ONP.

58.1% of ONP users were high schoolers
41.9% of ONP users were middle schoolers

Social Media Use and ONP Use



Students who reported using social media several times a day or more than once an hour had **higher rates of oral nicotine pouch (ONP) use** compared to students with less frequent or no social media use.

- 41.9% of ONP users reported using social media multiple times a day.
- Only 13.3% of non-social media users reported ONP use.

A **Chi-Square test** confirmed a statistically significant association ($\chi^2(7, N=3068) = 28.63, p < .001$).

Significance level is set to 0.05

Predictors of ONP Use

Grade Level:

High school students were 1.98x more likely to report ONP use than middle school students. ($p < .001$)

Social Media Use Frequency:

Each increase in social media frequency was associated with 1.09x higher odds of ONP use. ($p = .052$)

Sex:

Males had 1.44x higher odds of ONP use compared to females, but this result approached (did not reach) statistical significance ($p = .052$).



Discussion

- Analysis suggests a positive relationship between heavier social media use and increased likelihood of oral nicotine pouch (ONP) use within this sample of Kentucky adolescents.
- Higher social media engagement may normalize nicotine product use, even outside of direct advertising exposure.
- Grade level was a significant predictor, with high school students nearly twice as likely to report ONP use compared to middle school students.
- Sex differences approached statistical significance but were not definitive, indicating a need for further exploration.
- Future research should examine the specific types of social media content that may contribute to ONP experimentation among adolescents.
- Public health interventions should address not only traditional advertising but also broader social media influences on youth nicotine behaviors.

