

Poster #9

Research Study

Title: "Adolescent Perception of Peer E-Cigarette Use and Frequency of Personal Use"

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Introduction and Objective. Electronic cigarettes have increased in popularity with use increasing from 1.5% in 2011 to 20.8% in 2018 among adolescents. This growth is concerning due to negative health impacts. Adolescents are known to be influenced by their peers which may impact their decision to vape. To address the concern of increased use, our objective is to identify influencing factors that encourage e-cigarette use in adolescents to promote new preventive healthcare interventions.

Methods. We used the 2021 National Youth Tobacco Survey which surveyed high school students in the US. Independent variable was perception of peer use of e-cigarettes (categorized low if $\leq 50\%$ of peers were perceived to vape or high if the frequency was $\geq 50\%$). Dependent variable was reporting of personal use of e-cigarettes (no if used for < 21 lifetime days, and yes if used for ≥ 21 days). Multivariate logistic regression was performed to determine associations while controlling confounders.

Results. Our sample included 9,653 students. Unadjusted logistic regression showed students perceiving high prevalence of e-cigarette use had 2.56 times the odds of e-cigarette use (95%CI 2.10-3.12, $p < 0.001$). After adjusting for age, race/ethnicity, sex, sexual orientation, marijuana use, synthetic marijuana use, tobacco use, family use, and grades, the association was weaker (OR=1.37, 95%CI 1.01-1.85, $p < 0.041$). Other variables associated with higher odds of e-cigarette use were age 17 (OR 1.95, 95%CI 1.32-2.88, $p = 0.001$) and age 18+ (OR 2.11, 95%CI 1.32-3.38, $p = 0.002$) compared to age 15, female sex (OR 1.49, 95%CI 1.14-1.94, $p = 0.004$), marijuana use (OR 14.78, 95%CI 11.05-19.76, $p < 0.001$), tobacco use (OR 6.52, 95%CI 4.82-8.83, $p < 0.001$), and family use (OR 2.87, 95%CI 2.17-3.79, $p < 0.001$). Those with bisexual orientation had lower odds of e-cigarette use compared to heterosexual (OR 0.54, 95%CI 0.33-0.90, $p = 0.019$).

Conclusions-Implications. Students that perceive a majority of peers use e-cigarettes are more likely to use themselves. This finding should be further researched in targeted interventions for U.S. high school students to decrease e-cigarette use. Factors such as age, race, sex, sexual orientation, tobacco use, marijuana use, and family use also play a role in personal use and should be studied to aid development of preventive interventions.