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Examining Differences in Reasons Why Former vs. Current Teenage E-Cigarette Users Smoked

Background/Introduction: Smoking regular and electronic cigarettes (e-cigarettes) causes both immediate and long-term health effects among teenagers, such as nicotine addiction, brain damage, reduced lung growth and function, and early cardiovascular damage. E-cigarette use by teenagers aged 13-19 decreased from 28% in 2019 to 19.6% in 2020 but remains troubling. It is essential to understand the reasoning behind the use of e-cigarettes among teenagers to inform the development of preventive and quit interventions. Previous studies have identified the influence of family and friends, appealing flavors, and curiosity as reasons these teenagers started using e-cigarettes. However, additional studies are needed to identify other possible explanations.

Methods: Using a cross-sectional study design, we analyzed data from the 2020 National Youth Tobacco Survey (NYTS). NYTS participants included U.S. students in grades 6-12 from all 50 states and the District of Columbia. We analyzed data for teenage responders aged 13-19. We defined current users as those who reported having ever used e-cigarettes, even once or twice and having used e-cigarettes 1 to 30 days prior to survey completion. Former users were ever smokers who did not use e-cigarettes 30 days prior to survey completion. Measures of reasons for e-cigarette use included 1) use by a friend, 2) use by a family member, 3) to quit altogether, or 4) because they cost less, 5) because they were easier to get, 6) because they were considered less harmful than other tobacco products, 7) because people online or in the media use them, 8) to do tricks, 9) because they had appealing flavors, 10) having the ability to conceal use at home or at school, and 11) curiosity. We used descriptive statistics to characterize the sample population and chi-square analyses to determine differences between the two groups, via Microsoft Excel.

Results: The majority of the respondents were 13 years old (41%), male (51%), white (46%), 9th graders (62%), and 48% identified as current e-cigarette users. Chi-square analysis revealed that compared to former smokers, current smokers were more likely to report a friend using e-cigarettes as the reason why they smoked e-cigarettes ($p=0.01$). However, curiosity was identified as the top selected reason why both former and current e-cigarette users smoked.

Conclusion/Discussion: This study revealed that friends remain a major reason why current e-cigarette users continue to smoke compared to former e-cigarette users. Previous research support this finding. Results should inform the development of targeted prevention and cessation interventions to decrease e-cigarette use among teenagers.