

Poster #11

Research Study

Title: “Association of Different Forms of Tobacco Use and Exercise in US Adults”

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Introduction and Objective. E-cigarette prevalence has been rapidly increasing in the United States and they are frequently advertised as a healthier and safer alternative to conventional cigarettes. Such marketing may lead to e-cigarette users having different behavior characteristics, such as exercise frequency. While studies have tried to gain insight into exercise behaviors of e-cigarette users, few studies have assessed the exercise frequency amongst the users of different forms of tobacco use in US adults. The objective is to assess if there is an association between different forms of tobacco use and exercise activity in US adults

Methods. We performed secondary analyses of data from the 2020 Behavioral Risk Factor Surveillance System (BRFSS) Of the 38 states that were asked about e-cigarette use we included participants 18-99 years old, who were able to walk. The independent variable was forms of tobacco use (categorized as e-cigarettes users, conventional cigarettes users, both e-cigarettes and conventional cigarettes users, and non-user of either e-cigarette or conventional cigarettes). The dependent variable was exercise reported in the past 30 days. Multivariate logistic regression analyses were done to estimate the association of smoking status with exercise activity while controlling for potential confounders. Odds ratio and corresponding 95% confidence intervals are reported.

Results. Our sample included 204,211 US adults. About 1.6% of adults were e-cigarette users and 80.7% of adults exercised. The unadjusted results indicated that compared to conventional cigarette smokers, e-cigarette only users had 1.55 times higher odds to exercise (OR=1.55, CI 1.29,1.87, p<0.001), E-cigarette and conventional cigarette users were 1.48 times more likely to exercise (OR 1.48, CI 1.23, 1.77, p<0.001) and non-smokers were 1.61 times more likely to exercise (OR 1.61, CI 1.48,1.75, p<0.001). After adjusting for age, sex, race, employment, and health status using results were slightly attenuated, yet, compared to conventional smokers, e-cigarette users were 1.37 times more likely to exercise (OR 1.37 CI 1.13,1.67, p<0.001), e-cigarette and conventional smokers were 1.44 (OR=1.44, CI 1.18,1.75, p<0.001), and non-smokers were 1.57 times more likely to exercise (OR=1.57, CI 1.44,1.72, p<0.001).

Conclusions-Implications. Our study found that e-cigarette users (alone or combined to conventional smoking) exercise more frequently than conventional cigarette users. Also, non-smokers had the highest odds of exercising compared to smokers. Additional prospective studies should aim to assess the temporality of this association and to evaluate the underlying reason why e-cigarette users exercise more than conventional cigarette users as such knowledge may be helpful in regulating e-cigarette marketing tactics in the future.