

E-cigarette harm perceptions in youth e-cigarette users, dual users, and smokers

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Introduction

- Youth who are susceptible to use were less likely to report e-cigarettes are harmful to their health compared to committed never users (Bernat, 2018).
- Perception of e-cigarettes as less harmful than cigarettes was associated with increased e-cigarette use (Amrock, 2015).
- Participants who used JUUL rated JUUL as less harmful than other tobacco products except other e-cigarettes. Increased frequency of JUUL use was associated with reduced perceptions of absolute harm. (Stevens 2020).

Aims/Objective

- The objective of this study is to examine the difference in e-cigarette harm perceptions between youth ever vapers, ever smokers, and ever dual users, which has not been investigated in previous studies.

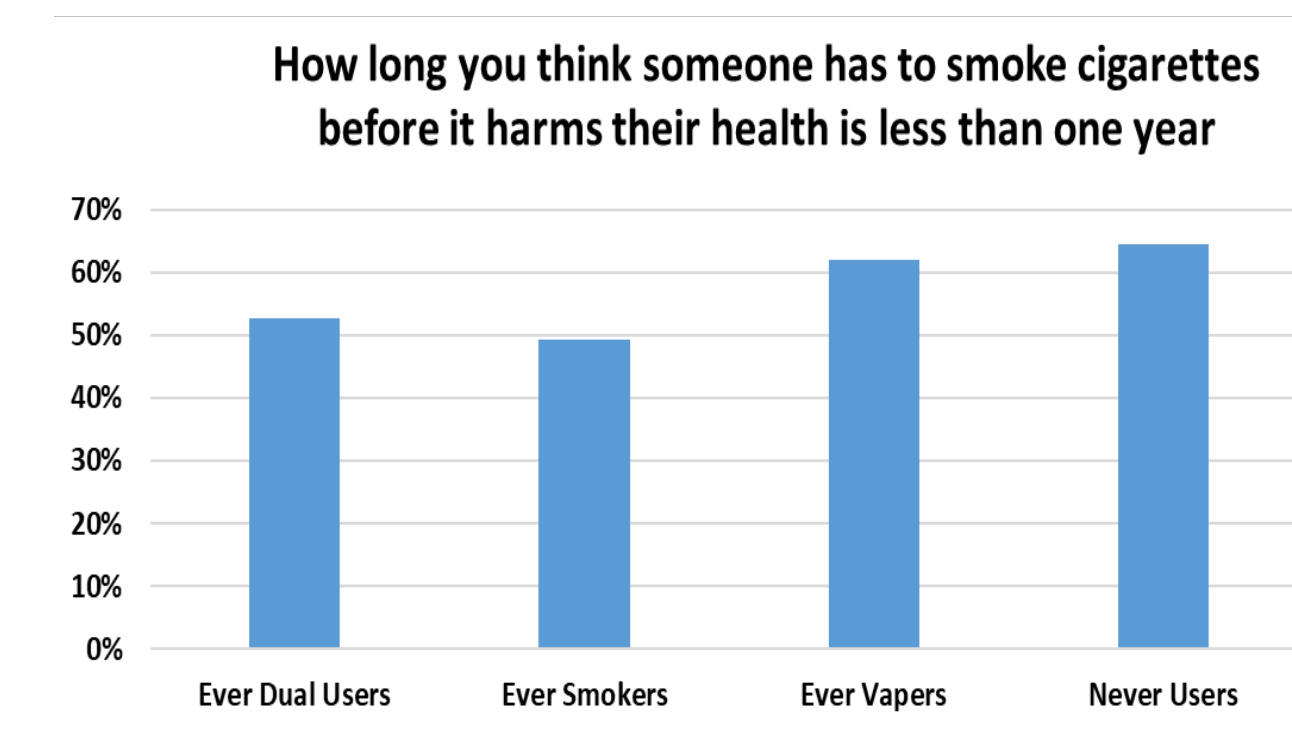
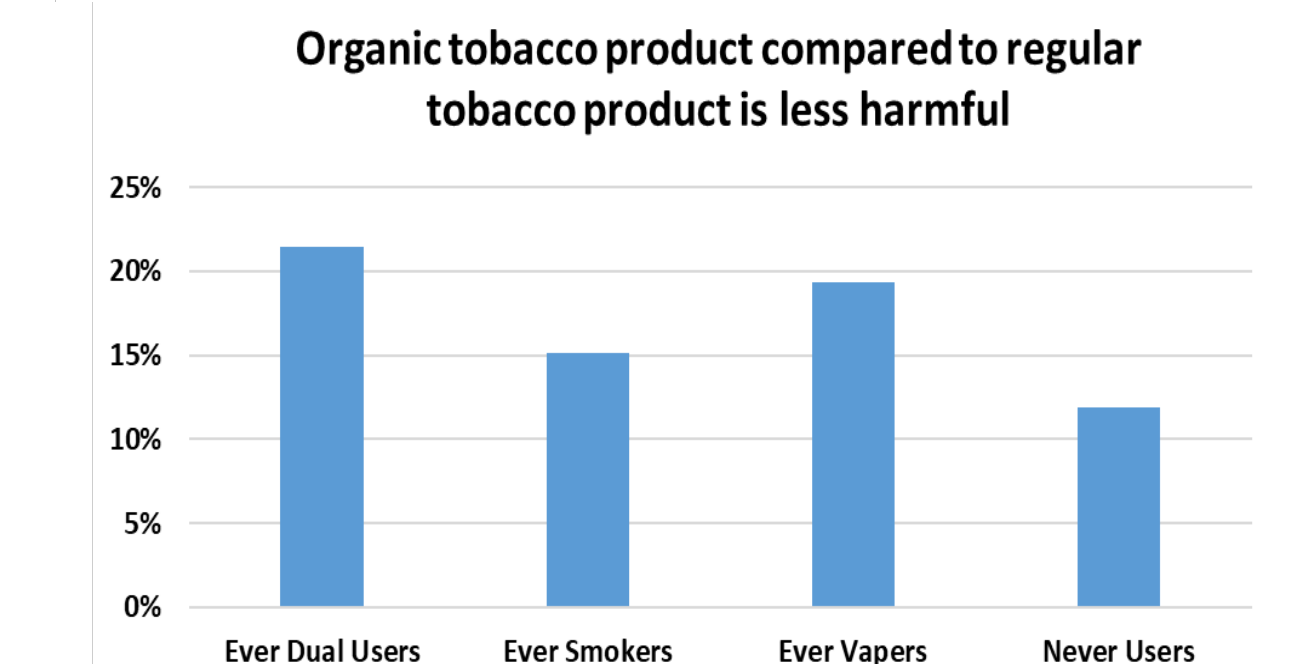
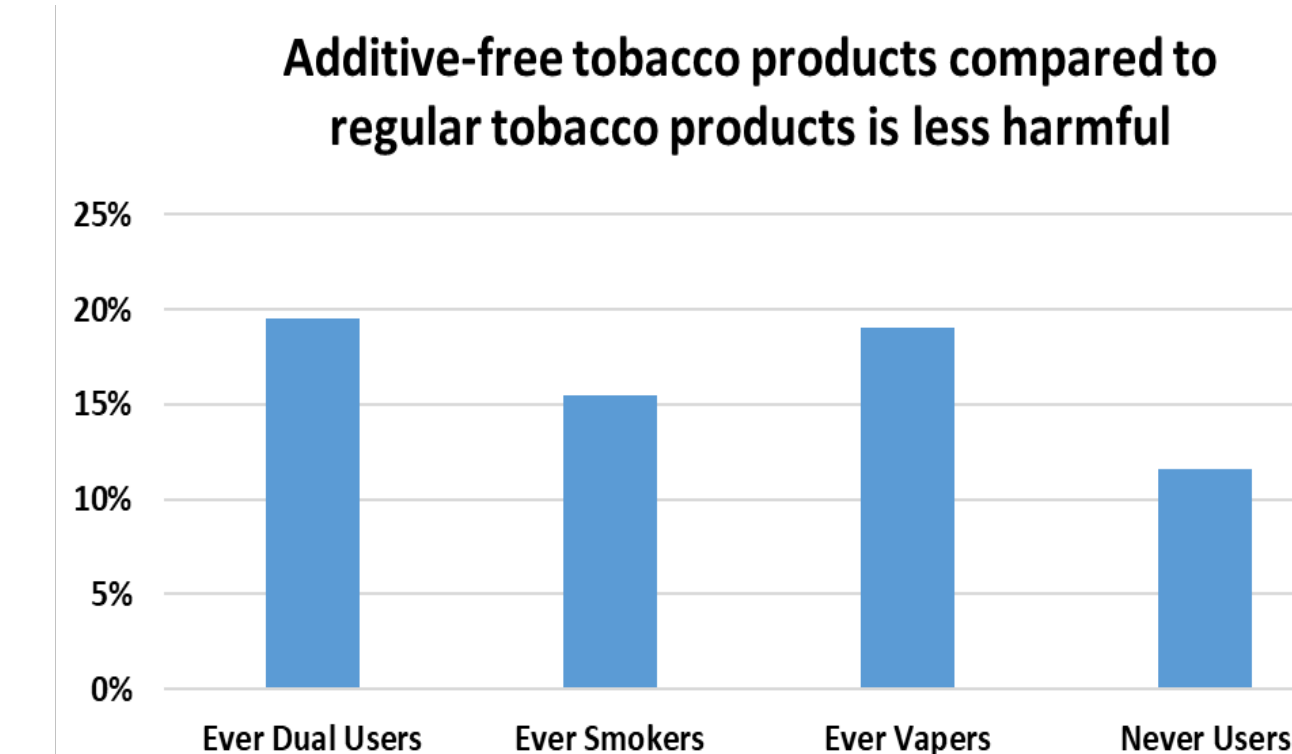
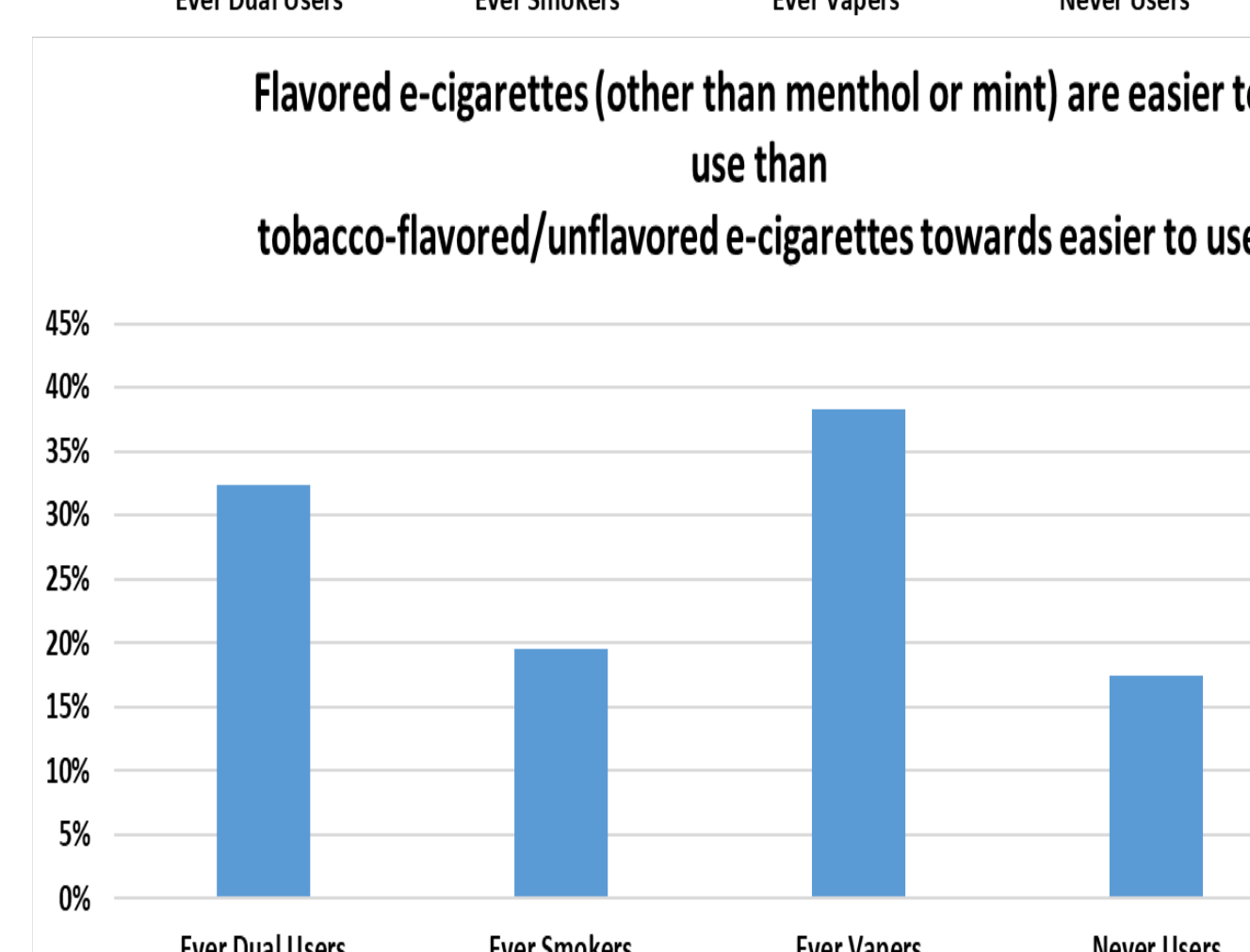
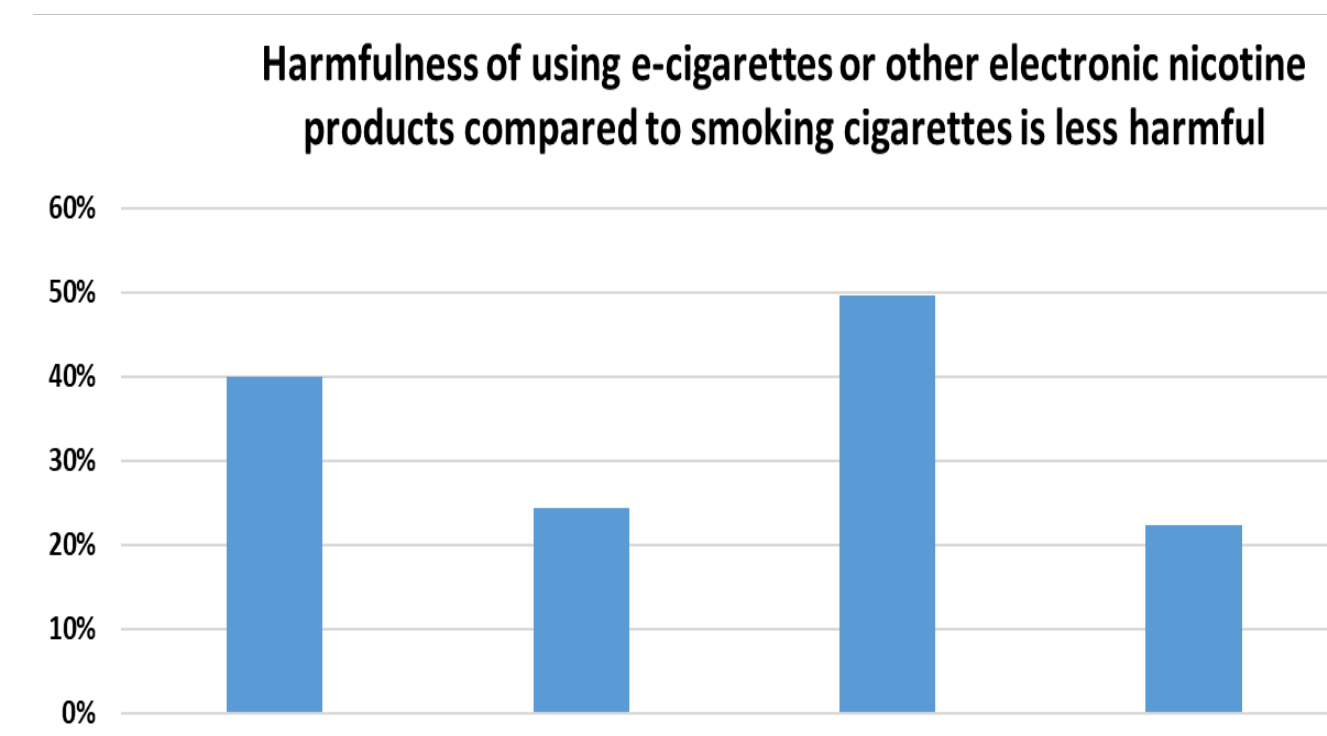
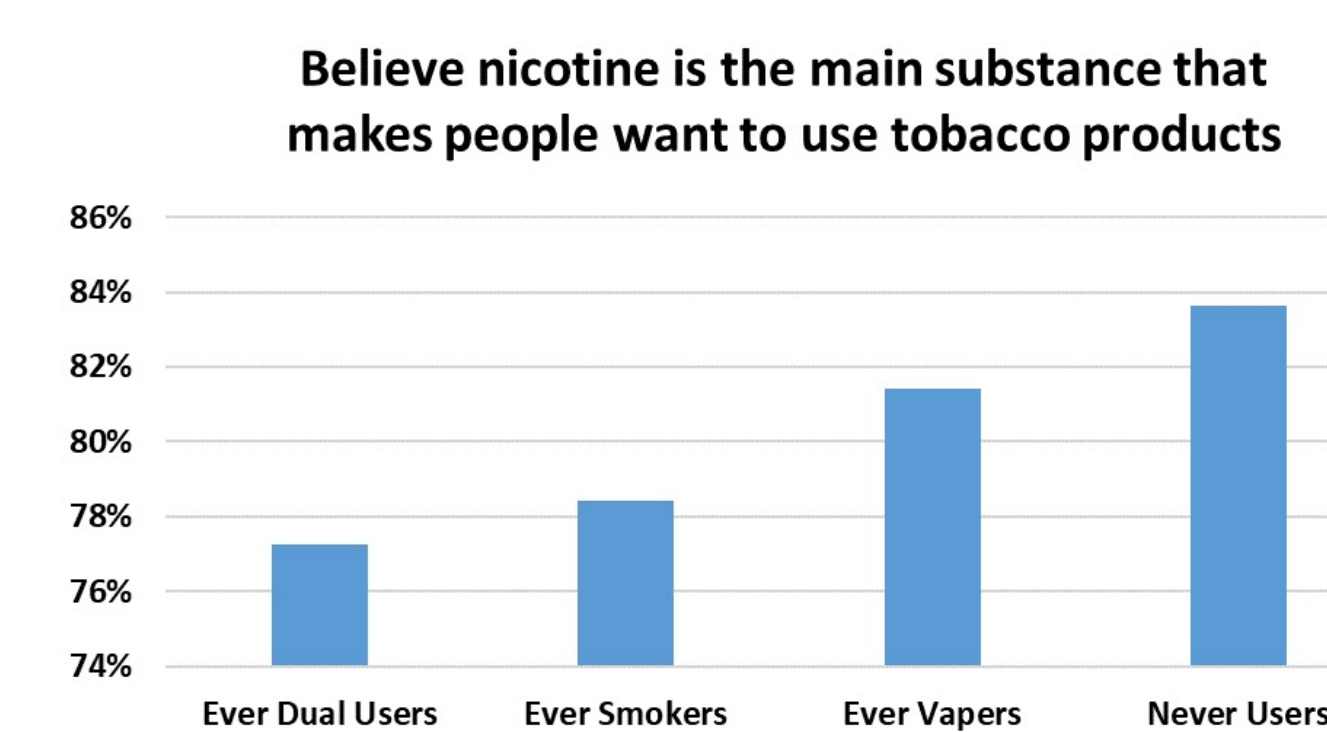
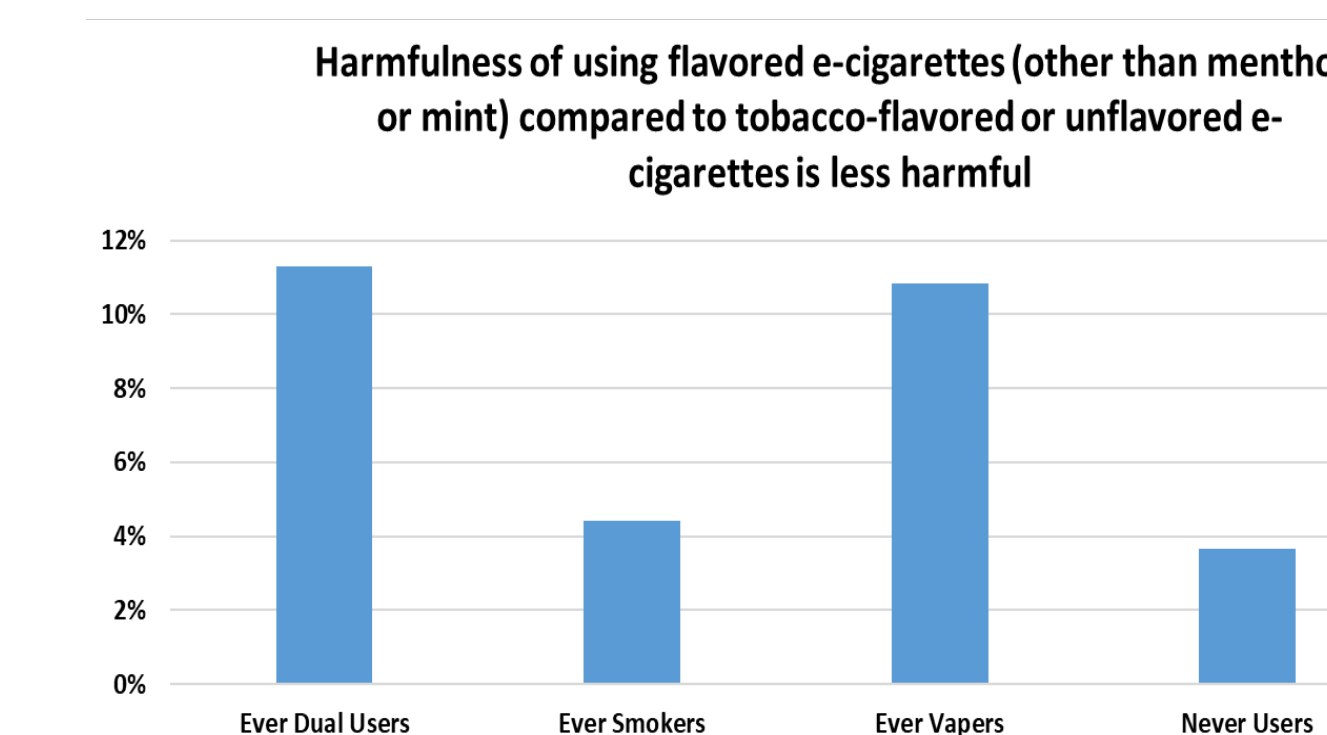
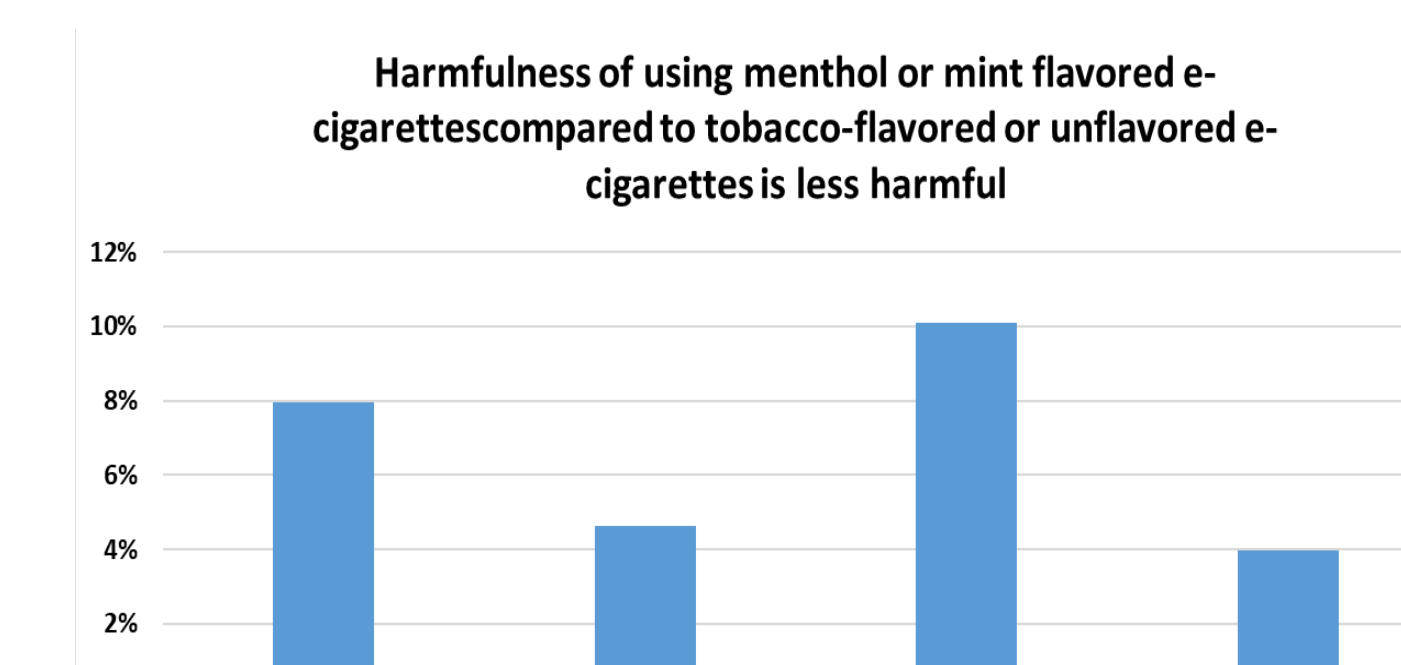
Methods

- We used data from the PATH Wave 4 Youth survey (n=14,389) from December 2016 to January 2018.

We divided adolescents into 4 categories: never users (n=11747, 81.87%), ever dual users (n=1022, 7.05%), ever e-cigarette users only (n=1152, 7.94%), and ever cigarette users only (n=468, 3.14%).

- We used weighted Rao-Scott Chi-Square tests to identify the association between smoking/e-cigarette use status and covariates. We used both unadjusted and adjusted odds ratios from weighted logistic and cumulative logistic regression models to identify the difference in harm perceptions between the four e-cigarette or cigarette use categories.
- Variance inflation factor (VIF) values were used to examine potential multicollinearity.
- Covariates adjusted for in the weighted logistic and cumulative logistic regression model include demographic variables, tobacco product and substance use status, and secondhand exposures.

Results



Discussion

Compared to never users:

- Ever dual users and ever smokers were less likely to believe that nicotine is the main substance that makes people want to use tobacco products, and thought smoking takes a long time to harm their health.
- Ever dual users and ever vapers felt additive-free and organic tobacco products are less harmful and thought vaping is less harmful than smoking.
- Ever dual users and ever vapers felt flavored e-cigarettes (other than menthol or mint) are easier to use than tobacco-flavored or unflavored e-cigarettes.
- Ever dual users and ever vapers thought using menthol or mint flavored e-cigarettes or flavored e-cigarettes (other than menthol or mint) are less harmful compared to tobacco-flavored or unflavored e-cigarettes.

Conclusion

- Both ever dual users, ever vapers, and ever smokers had disparate views on the behavioral contribution of nicotine and the overall harm profile of e-cigarettes when compared to never users.

Table 1: Weighted adjusted odds ratios of outcomes comparing ever dual users, ever smokers, and ever vapers with never users in PATH Wave 4 youth data.

Perceptions of tobacco products (relative to never users)	Ever dual users Adjusted OR (95% CI)	Ever cigarette smokers Adjusted OR (95% CI)	Ever electronic cigarette Adjusted OR (95% CI)
Believe that nicotine is the main substance in tobacco that makes people want to use tobacco products	0.58 (0.47, 0.71)	0.69 (0.53, 0.90)	0.83 (0.68, 1.01)
Level of harm: Additive-free tobacco products compared to regular tobacco products less harmful	1.42(1.18,1.70)	1.03(0.73,1.44)	1.47(1.23,1.75)
Level of harm: Organic tobacco product compared to regular tobacco product is less harmful	1.53(1.26, 1.86)	0.89(0.63, 1.25)	1.57(1.33, 1.86)
How long you think someone has to smoke cigarettes before it harms their health towards less time	0.64(0.54, 0.77)	0.53(0.44, 0.65)	0.91(0.78, 1.05)
Harmfulness of using e-cigarettes or other electronic nicotine products compared to smoking cigarettes towards less harm	1.55(1.27, 1.88)	0.81(0.60, 1.09)	2.58(2.20, 3.02)
Flavored e-cigarettes (other than menthol or mint) are easier to use than tobacco-flavored or unflavored e-cigarettes towards easier to use	1.60(1.31, 1.96)	0.83(0.64, 1.07)	2.23(1.87, 2.65)
Harmfulness of using menthol or mint flavored e-cigarettes compared to tobacco-flavored or unflavored e-cigarettes towards less harmful	1.05(0.83, 1.34)	0.80(0.59, 1.09)	1.53(1.21, 1.94)
Harmfulness of using flavored e-cigarettes (other than menthol or mint) compared to tobacco-flavored or unflavored e-cigarettes towards less harmful	1.64(1.27, 2.11)	0.88(0.63, 1.23)	1.63(1.28, 2.06)

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