ASHES, Vol. 20(11) - Disposable e-cigarettes and their association with later e-cigarette use patterns

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E-cigarette use is a prevalent <u>public health problem</u> among adolescents. <u>Disposable e-cigarettes</u>, in particular, are especially <u>popular</u> and <u>appealing</u> to youth as they typically come in colorful packaging, are available in a variety of sweet flavors, and are easier to conceal than non-disposable devices. Also, users don't have to recharge them or buy more refills/replacement pods, so they are cheaper and more convenient. As a result, teens who use disposable devices to vape might vape more often and more intensely than teens who use non-disposable devices. This week, ASHES reviews a <u>study by Dae-Hee Han and colleagues</u> that examined this possibility among youth in southern California.

What was the research question?

Is disposable e-cigarette use associated with subsequent frequency and intensity of e-cigarette use among youth and young adults?

What did the researchers do?

The researchers assessed participants aged 14 - 24 years from two <u>longitudinal</u> study cohorts in southern California. In a baseline interview, participants <u>self-reported</u> past 30-day use of e-cigarette device types (disposable or non-disposable). At both baseline and an 8-month follow-up interview, participants self-reported on current/continued e-cigarette use (whether or not they were still using e-cigarettes at the time of the interview), e-cigarette use frequency (number of days within the past 30 days that they used e-cigarettes), and intensity (number of times per day that they usually used e-cigarettes). The researchers used <u>logistic regression</u> to estimate the likelihood of subsequent e-cigarette use at follow-up.

What did they find?

Just over two-thirds (69%) of participants reported ever using disposable e-cigarettes compared to 31% who only used non-disposable e-cigarettes. At baseline, participants who used disposable devices reported using e-cigarettes for a greater number of days and times per day compared to participants who used

non-disposable devices.

Baseline use of disposable e-cigarettes predicted continued e-cigarette use at follow-up (see Figure). Disposable e-cigarette use was also associated with a greater number of days used and times per day used at follow-up.

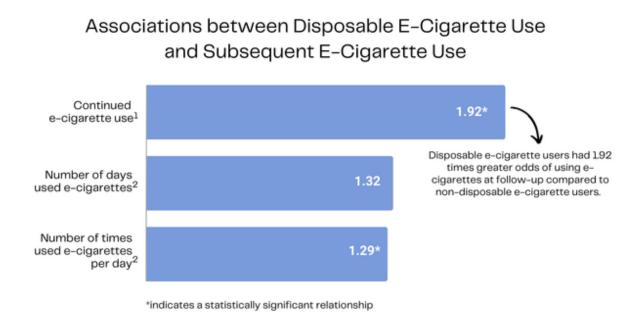


Figure. Adjusted <u>odds ratios</u>¹ and <u>incident rate ratios</u>² of e-cigarette use at follow-up. Asterisks mark effects that were <u>statistically significant</u>. Click image to enlarge.

Why do these findings matter?

These findings confirm the popularity of disposable e-cigarettes among youth and young adults. Moreover, younger people who use disposable e-cigarettes are more likely to continue using e-cigarettes and use them more frequently compared to those who use non-disposable e-cigarettes. This is important to address because youth vaping is associated with an increased risk of mental health problems and has negative impacts on brain development. This suggests the need to implement more comprehensive e-cigarette regulations such as restricting flavors and the marketing and sales of disposable devices.

Every study has limitations. What are the limitations in this study?

This study only used self-report measures, so the results might be affected by biases such as <u>recall</u> and <u>social desirability</u>. All participants in this study were from southern California, so the results might not <u>carry over</u> to other regions and

countries.

For more information:

<u>SmokeFree</u> offers tools and tips for quitting and maintaining abstinence from smoking tobacco. The Centers for Disease Control and Prevention also provides <u>research and tips</u> about cigarettes and how to quit. For additional self-help tools, please visit the BASIS <u>Addiction Resources</u> page.

— Annette Siu