ASHES, Vol. 21(2) – The effects of a video-based social media intervention on vaping intentions and beliefs

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Despite reductions in traditional cigarette smoking in recent years, the use of nicotine vaporizers remains persistently high, especially among adolescents and young adults. While evidence suggests that e-cigarettes are less harmful than traditional cigarettes, vaping is associated with adverse health effects. Public health initiatives to reduce vaping are using social media to reach young people, given social media's popularity with this age group. This week, ASHES reviews an experimental study by William Douglas Evans and colleagues that examined the effects of a video-based social media intervention on vaping intentions and anti-vaping industry beliefs among young adults.

What were the research questions?

(1) Does a video-based social media intervention reduce nicotine vaping intentions among young adults? (2) Does a video-based social media intervention increase anti-vaping industry beliefs among young adults?

What did the researchers do?

The researchers recruited 1,491 young adults aged 18 to 24 from Facebook and Instagram. Participants were surveyed about vaping status (i.e., current, former, and never), vaping intentions (i.e., do you plan to vape in the next year), and anti-vaping industry beliefs (e.g., "vape companies make me angry"). They completed the surveys at baseline, 30-day follow-up, and 60-day follow-up. Between each survey, participants watched four 15-second videos on anti-vaping industry beliefs via their social media account newsfeeds. Using multivariate linear regression, the authors tested how exposure to the videos influenced vaping intentions and anti-vaping industry beliefs, separately for the three vaping status groups, and for all participants.

What did they find?

More than half of participants (n = 854; 57.28%) were still participating in the

study at the 60-day follow-up period. The researchers did not find any differences between the participants who dropped out of the study, and those who continued through all three periods of data collection. The overall sample at baseline was predominantly female (69.01%) and was very diverse, with 47.95% reporting non-Hispanic White as their race and ethnicity. Exposure to the videos were effective in reducing vaping intentions and increasing anti-vaping industry beliefs, but only among people who reported current vaping (see Figure). They did not find this statistically significant effect among those who had never vaped, who formerly vaped, or in the full sample of participants.

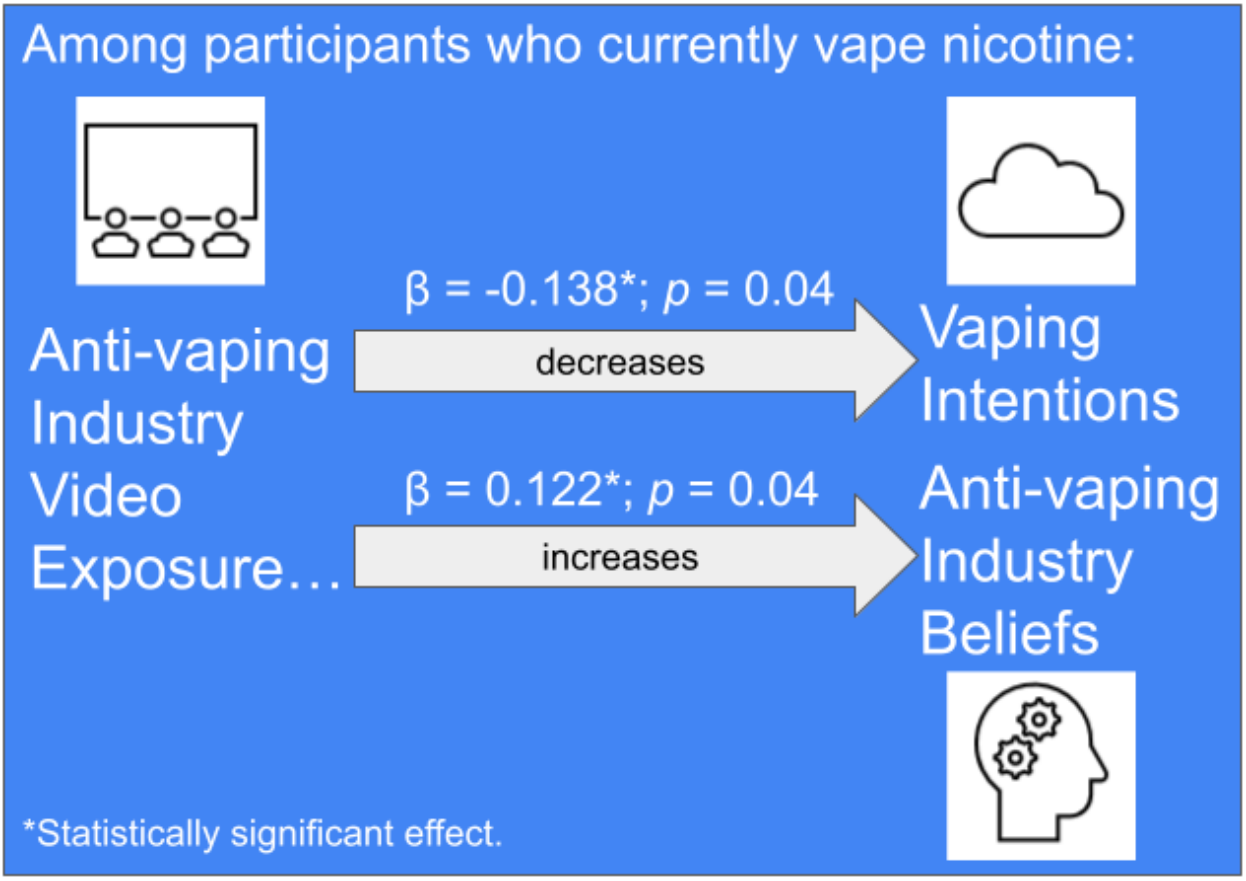


Figure. Figure shows effects of exposure to anti-vaping industry social media videos on vaping intentions and anti-vaping industry beliefs, among respondents who currently vape nicotine (n = 157). β = standardized regression coefficient. p = p-value. Both effects were statistically significant. β less than 0 indicates a negative effect (i.e., video exposure reduces vaping intentions) and β greater than 0 indicates a positive effect (i.e., video exposure increases anti-vaping industry beliefs).

Why do these findings matter?

These results show that it is possible to reduce intentions to vape nicotine via a set of very brief videos delivered on social media. These findings are promising

and suggest that more research on social media-based behavioral interventions is warranted, including for other objects of addiction (e.g., drugs, gambling). For example, researchers could use a longitudinal design to test whether exposure to anti-opioid company videos reduces misuse of prescription drugs in the future. As our world becomes increasingly technologically-focused, these types of interventions represent a low-cost tool for affecting positive behavioral change and promoting public health.

Every study has limitations. What are the limitations in this study?
Over 40% of the sample dropped out by the end of the study, which means that the participants who remained might have different views than the full sample. The sample was only recruited from Facebook and Instagram, so the findings may not be generalizable to users on other social media platforms (e.g., X [formerly Twitter], TikTok, Threads).

For more information:
Individuals who want to reduce or stop vaping can find help resources on the CDC website. The American Lung Association and the Truth Initiative also provide helpful tips and strategies to quit nicotine. Additional resources can be found at the BASIS Addiction Resources page.

—Eric R. Louderback, Ph.D.

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