

## Young adults believe hookah, e-cigs are safer than cigarettes, study shows

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| Table 2. Percentage and Adjusted Odds Ratio of Believing Various Tobacco Products Are "Less Risky" Than | n Cigarettes, Among All |
|---|-------------------------|
| Respondents (n = 2,871).  |                         |

| Respondent<br>demographics              | E-cigarettes         |                              | Hookah               |                 | Smokeless tobacco <sup>a</sup> |                 | Snus               |                 | Menthol cigarettes      |                 | Cigars               |                 |
|---|----------------------|------------------------------|----------------------|-----------------|--------------------------------|-----------------|--------------------|-----------------|-------------------------|-----------------|----------------------|-----------------|
|   | %<br>[95% CI]*       | AOR<br>[95% CI] <sup>b</sup> | %<br>[95% CI]        | AOR<br>[95% CI] | %<br>[95% CI]                  | AOR<br>[95% CI] | %<br>[95% CI]      | AOR<br>[95% CI] | %<br>[95% CI]           | AOR<br>[95% CI] | %<br>[95% CI]        | AOR<br>[95% CI] |
| Gender                                  |                      |                              |                      |                 |                                |                 |                    |                 |                         |                 |                      |                 |
| Male                                    | 65.2                 | 1.84                         | 27.5                 | 1.4             | 9.7                            | 2.1             | 13.5               | 2               | 2.4                     | 0.6             | 17.2                 | 1.8             |
|   | [61.7, 68.7]         | [1.5, 2.3]                   | [24.4, 30.7]         | [1.1, 1.8]      | [7.7, 11.7]                    | [1.4, 3.3]      | [11.2, 15.9]       | [1.4, 3.0]      | [1.4, 3.4]              | [0.2, 2.2]      | [14.6, 19.9]         | [1.3, 2.4]      |
| Female                                  | 50.4                 | Reference                    | 21.4                 | Reference       | 4.6                            | Reference       | 6.5                | Reference       | 2.6                     | Reference       | 10.6                 | Reference       |
|   | [46.6, 54.2]         |                              | [18.5, 24.4]         |                 | [3.1, 6.1]                     |                 | [4.6, 8.4]         |                 | [1.7, 3.6]              |                 | [8.6, 12.7]          |                 |
|   | 1000. > d            | 1000. > ₫                    | p = .0055            | p = .0105       | 1000. > q                      | p = .0005       | 1000. > q          | p = .0002       | p = 0.7495              | p = .4585       | 1000. > q            | p = .0002       |
| lace/ethnicity                          |                      |                              |                      |                 |                                |                 |                    |                 |                         |                 |                      |                 |
| White <sup>b</sup>                      | 62.2                 | Reference                    | 25.0                 | Reference       | 7.8                            | Reference       | 10.8               | Reference       | 1.8                     | Reference       | 17.4                 | Reference       |
| *************************************** | [58.9, 65.5]         |                              | [22.2, 27.7]         |                 | [6.1, 9.5]                     |                 | [8.8, 12.8]        |                 | [1.1, 2.5]              |                 | [15.0, 19.8]         |                 |
| Black <sup>b</sup>                      | 46.3                 | 0.62                         | 21.8                 | 0.9             | 7.0                            | 1.1             | 8.0                | 0.9             | 3.8                     | 3.2             | 5.4                  | 0.3             |
|   | F39.0, 53.71         | 10.4, 0.91                   | TI 5.8. 27.81        | TO.6. 1.31      | T3.3, 10.61                    | TO.6, 2.11      | T3.7. 12.31        | 10.5, 1.61      | FL5, 6, IT              | TO.8, 12.71     | T2.5. 8.31           | TO.2. O.51      |
| Hispanic                                | 54.2                 | 0.78                         | 23.1                 | 0.8             | 5.6                            | 0.8             | 9.0                | 0.9             | 3.3                     | 0.5             | 6.9                  | 0.4             |
|   | [46,9, 61,5]         | [0.6, 1.1]                   | [17.2, 28.9]         | [0.6, 1.2]      | [2.7, 8.5]                     | [0.4, 1.4]      | [5.3, 12.7]        | [0.5, 1.4]      | [1.0, 5.6]              | [0,1,3,1]       | [3.9, 10.0]          | [0.2, 0.6]      |
| Asian <sup>b</sup>                      | 48.1                 | 0.52                         | 30.4                 | 1.1             | 6.8                            | 0.7             | 9.2                | 0.8             | 3.2                     | 1.9             | 15.5                 | 0.8             |
|   | F38.3, 57.91         | ro.3, 0.81                   | T21.4. 39.31         | TO.7. 1.81      | T2.3, 11.41                    | TO.4. 1.31      | [4.1, 14.3]        | [0.4, 1.4]      | 10.5, 5.81              | TO.2, 16.81     | 17.3, 23.81          | 10.4, 1.51      |
| Other <sup>b</sup> 63<br>[54.2,         | 63.1                 | 0.97                         | 22.5                 | 0.8             | 6.2                            | 0.7             | 9.7                | 0.8             | 2.1                     | 2.6             | 18.4                 | Li              |
|   | [54.2, 72.0]         | [0.6, 1.5]                   | [15.1, 29.8]         | [0.5, 1.2]      | [2.0, 10.5]                    | [0.3, 1.7]      | [4.5, 15.0]        | [0,4, 1,6]      | [0.1, 4.1]              | [0.5, 13.4]     | [11,6, 25,3]         | [0.7, 1.7]      |
|   | 1000.> d             | b = 0049                     | b = .3372            | p = .6336       | b = .7747                      | p = .6515       | b = .7590          | p = .8923       | b = .2303               | b = .3494       | 1000.>0              | 1000. > d       |
| Age-group, yea                          |                      | p = .0047                    | p = .3372            | p = .0350       | p =                            | p = .0515       | p = .7370          | p = .0723       | p = .2303               | p5474           | p = .0001            | p = .0001       |
| 18-24                                   | 62.1                 | 1.57                         | 32.7                 | 2.0             | 7.4                            | 100             | 11.0               | 1.2             | 4.3                     | 9.1             | 15.2                 | 1.3             |
| 18-24                                   | [58.6, 65.7]         |                              | [29.3, 36.1]         | [1.6, 2.6]      | [5.7, 9.2]                     | [0.7, 1.5]      | [8.8, 13.2]        | [0.8, 1.7]      | [2.9, 5.8]              | [2.3, 36.6]     | [12,7, 17,6]         | [1.0, 1.7]      |
| 25-34                                   | 54.6                 | Reference                    | 185                  | Reference       | 6.9                            | Reference       | 9.3                | Reference       | 1.2                     | Reference       | 13                   | Reference       |
| 25-34                                   | ISO.9, 58.41         | Keterence                    | FI 5.9. 21.11        | Keterence       | [5.2, 8.6]                     | Reference       | 7.3<br>17.2. 11.31 | Keterence       | 1.2                     | Keterence       | FIO.7, 15.31         | Keterence       |
|   | b < .0043            | b < 0.0001                   | p < .0001            | 1000. > d       | b = .6841                      | b = .8881       | b = .2636          | b = 35/0        | [0.7, 1.0]<br>0 < .0001 | b = .0019       | b = .2052            | b = .0900       |
| ducation                                | p < .0043            | p < 0.0001                   | p < .0001            | p < .0001       | p = .0041                      | p = .0001       | p = .2030          | p = .3307       | p < .0001               | p = .0017       | p = .2032            | p = .0700       |
| ≤HS                                     | 54                   | Reference                    | 20.9                 | Reference       | 7.1                            | Reference       | 11.5               | Reference       | 2.8                     | 0.8             | 10.1                 | Reference       |
| 2H2                                     | 54<br>[49.4, 58.5]   | Keterence                    | [17.5, 24.2]         | Reterence       | rs.i. 9.21                     | Kererence       | [8.7, 14.2]        | Keterence       | FI.6. 4.11              | TO.2. 3.31      | 17.7. 12.51          | Keterence       |
| 2H<                                     | 60.3                 | 1.54                         | 26.6                 | 1.5             | 7.0                            | 1.1             | 8.9                | 0.9             | 2.2                     | Reference       | 16.2                 | 1.6             |
| >HS                                     | 60.3<br>[57.0, 63.5] | 1.54<br>[1.2, 2.0]           | 26.6<br>[23.8, 29.4] | TLL 2.01        | 7.0<br>[5.4, 8.5]              | ro.7, 1.71      | 8.9<br>[7.1, 10.6] | IO.6. 1.31      | FL4. 3.01               | Keterence       | 16.2<br>[13.9, 18.5] | FI.1. 2.21      |
|   |                      |                              |                      |                 |                                |                 |                    |                 |                         |                 |                      |                 |
|   | p = .0247            | p = .0004                    | p = .0120            | p = .0056       | p = .9201                      | p = .6368       | p = .1012          | p = .4578       | p = .3897               | p = .7518       | 6000. = q            | p = .0089       |
| moking status                           |                      |                              |                      |                 |                                |                 |                    |                 |                         |                 |                      |                 |
| Current                                 | 68.9                 | 1.86                         | 25.2                 | 1.1             | 8.2                            |                 | 13.8               | 1.4             | 1.5                     | 0.5             | 12.6                 | 0.9             |
|   | [63.6, 74.2]         | [1.4, 2.5]                   | [20.4, 30.0]         | [0.8, 1.5]      | [5.4, 11.0]                    | [0.6, 1.7]      | [10.3, 17.4]       |                 | [0.5, 2.5]              | [0.1, 2.9]      | [9.2, 16.1]          | [0.6, 1.3]      |
| Former                                  | 62                   | 1.46                         | 18.0                 | 0.7             | 8.5                            | 1.2             | 10.9               | 1.3             | 0.8                     | 0.4             | 13.6                 | 0.8             |
|   | [54.0, 70.0]         | [1.0, 2.1]                   | [12.2, 23.8]         | [0.5, 1.2]      | [4.2, 12.7]                    | [0.6, 2.3]      | [5.9, 15.9]        | [0.7, 2.4]      | [0.0, 1.7]              | [0.1, 2.8]      | [8.1, 19.1]          | [0.5, 1.4]      |
| Never                                   | 53                   | Reference                    | 25.3                 | Reference       | 6.5                            | Reference       | 8.5                | Reference       | 3.2                     | Reference       | 14.5                 | Reference       |
|   | [49.8, 56.2]         |                              | [22.7, 28.0]         |                 | [5.1, 8.0]                     |                 | [6.8, 10.2]        |                 | [2.2, 4.2]              |                 | [12.4, 16.5]         |                 |
|   | 1000. > q            | p = .0003                    | p = .1270            | p = .3269       | p = .4586                      | 2188. = q       | p = .0172          | p = .1925       | 1800. = q               | p = .6443       | p = .6992            | p = .6493       |
| roduct use                              |                      |                              |                      |                 |                                |                 |                    |                 |                         |                 |                      |                 |
| Yes                                     | 77.3                 | 1.75                         | 57.3                 | 3.5             | 25.9                           | 4               | 37.5               | 4               | 1.5                     | 0.5             | 17                   | 1.2             |
|   | [70.9, 83.6]         |                              | [46.1, 68.5]         | [2.1, 5.9]      | [14.1, 37.7]                   | [1.9, 8.4]      | [24.8, 50.1]       |                 | [0.2, 2.8]              | [0.2, 1.6]      | [10.5, 23.5]         | [0.7, 2.1]      |
| No                                      | 55.6                 | Reference                    | 22.5                 | Reference       | 6.4                            | Reference       | 9.0                | Reference       | 1.5                     | Reference       | 13.6                 | Reference       |
|   | [52.8, 58.4]         |                              | [20.4, 24.6]         |                 | [5.2, 7.6]                     |                 | [7.5, 10.4]        |                 | [0.4, 2.6]              |                 | [11.9, 15.4]         |                 |
|   | 1000. > q            | p = .0121                    | 1000. > q            | 1000. > q       | ا 1000. > م                    | p = 0.0003      | 1000. > q          | 1000. > q       |                         | p = .2462       | p = .2908            | p = .4702       |
| Total                                   | 57.8                 |                              | 24.5                 |                 | 7.1                            |                 | 10.0               |                 | 2.5                     |                 | 13.9                 |                 |
| Total                                   | ISS.I. 60.41         |                              | T22.3. 26.61         |                 | [5.9. 8.4]                     |                 | 18.5. 11.51        |                 | TI.8. 3.21              |                 | [12.2, 15.6]         |                 |

Note: AOR = adjusted odds ratio; CL = confidence interval; HS = high school. Prevalence p values are for Rao-Scott chi-square test of covariate by binomial risk perception; AC p values are Wald chi-square Type 3 analysis of offices.

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AOR = adjusted odds ratio; CL = confidence interval; HS = high school. Prevalence p values are for Rao-Scott chisquare test of covariate by binomial risk perception; AORp values are Wald chi-square Type 3 analysis of effects.aExcluding snus. bNon-Hispanic. cAdjusted for ever (e-cigarettes) or current (hookah, smokeless tobacco/snus, menthol cigarettes, and cigars) use of the product being modeled. Credit: Olivia A. Wackowski, PhD, MPH, and Cristine D. Delnevo, PhD, MPH

Many college students are making their way back to campus this month, and back to the habits - good or bad - that dorm-life promotes. A new study finds that young adults under 25, including high school grads and college students, are more likely to rate hookah and e-cigarettes as safer than cigarettes, when compared to 25 to 34-year-olds. This research was published today in *Health Education & Behavior*, a Society of Public Health Education journal published by SAGE.

Studying data from 2,871 smoking and nonsmoking young adults, ages 18-34, Dr. Olivia A. Wackowski and Dr. Cristine D. Delnevo found that a quarter of young adults believed hookah to be less risky than cigarettes - a belief shared by current cigarette smokers and those who had never smoked cigarettes before.

"This is concerning as it suggests that even a substantial proportion of nonsmokers may view hookah as being a relatively safer and acceptable way to use tobacco," the researchers wrote.

The researchers also found the following:

- 62.1% of young adults ages 18 to 24 believed that e-cigarettes were less risky than cigarettes, while 54.6% of 25 to 34-year-olds believed e-cigarettes to be less risky. Additionally, 32.7% of 18 to 24-year-olds believed hookah to be less risky than cigarettes, while 18.5% of 25 to 34-year-olds believed hookah to be less risky.
- 57.8% of respondents believed e-cigarettes to be less risky than cigarettes and 11.4% said they were unsure.
- 50% of respondents said that methanol cigarettes, hookah, cigars, smokeless tobacco, and snus were about as risky as cigarettes.
- 30% of all respondents believed that smokeless tobacco, menthol cigarettes, and cigars were more risky than cigarettes.
- 24.5% of respondents reported that <u>hookah</u> is less risky than cigarettes, which was equally prevalent for both cigarette smokers and nonsmokers.
- 31.2% of respondents reported that they had smoked at least 100 cigarettes before and smoked regularly at the time of the survey.

"This might be associated with differences in



advertising messages these groups are exposed to, the variety of flavors these different products are offered in, and in the case of e-cigarettes, possibly an inclination for younger people to attribute more positive feelings toward newer products that are seen as new and 'techy'," commented the study authors.

The study authors also found that the belief that some tobacco products were riskier than cigarettes did not stop people from using them. They speculated that promoting other tobacco products, such as snus, as safer may not encourage smokers to switch products but instead encourage new product uptake for both smokers and nonsmokers.

**More information:** "Young Adults' Risk Perceptions of Various Tobacco Products Relative to Cigarettes: Results From the National Young Adult Health Survey" *Health Education & Behavior*, 2015.

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