Adult Perceptions of the Relative Harmfulness of Tobacco Products: Descriptive Findings from Wave 1 of the PATH Study, 2013-14

Geoffrey T. Fong1,2,5, Tara Elton-Marshall1,3,6,7, Pete Driezen1, Annette R. Kaufman8,9, K. Michael Cummings9, Kelvin Choi10, Jonathan Kwan11, Amber Koblitz12, Andrew Hyland11,13, Maansi Bansal-Travers12,13, Charles Carusi12, Mary E. Thompson14

Introduction

Currently, there is a lack of research examining the perceived harmfulness of many of the various tobacco products that are available in the United States and few studies compare the relative perceptions of the harmfulness of different products. Identifying consumers’ perceptions of harm can help inform regulatory activities with respect to marketing tobacco products and communicating product risks.

Objectives

(1) To measure adult perceptions of the harmfulness of 8 tobacco products relative to cigarettes; (2) To identify characteristics of adult tobacco users related to perceptions that a particular product is less harmful than cigarettes; (3) To determine the relationship between harmfulness perceptions and the likelihood of using a product; and (4) To measure perceptions of harmfulness of cigarettes and how these perceptions vary as a function of products used.

Methods

Data are from Wave 1 of the Population Assessment of Tobacco and Health (PATH) Study, a nationally representative cohort study of adults and youth in the United States. Results are from the 32,320 respondents in the PATH adult (18 years and older) survey conducted from September 2013 to December 2014. The PATH Study used Audio-Computer Assisted Self-Interviews (ACASI) available in English and Spanish to collect information on tobacco-use patterns and associated health behaviors.

Results

1. Perceptions of the harmfulness of 8 tobacco products relative to cigarettes

   1.1 In general, less harmful than cigarettes

   1.2 In general, more harmful than cigarettes

2. E-cigarettes were the product that was most likely to be perceived as less harmful than cigarettes, followed by hookah.

3. Snus or smokeless tobacco was the product that was more likely to be perceived as more harmful than cigarettes followed by traditional cigars.

4. Factors associated with the belief that each non-cigarette tobacco product is less harmful than cigarettes

   a. Those less knowledgeable about the health risks of smoking were significantly more likely to believe that each non-cigarette tobacco product was less harmful than cigarettes.

   b. With the exception of hookah, men were more likely to believe that no nicotine tobacco product was less harmful than cigarettes.

   c. Young adults were significantly more likely than older adults to believe that e-cigarettes and hookah are less harmful than cigarettes.

   d. Other factors associated with perceptions of the relative harmlessness of non-cigarette tobacco products varied by product type.

Conclusions

1. Overall, among current tobacco users, cigarettes were perceived as being “very” or “extremely harmful” (77.0%).

2. A significantly higher proportion of respondents who said that cigarettes were “very” or “extremely harmful” used filtered cigars, cigarettes, pipes, and dissolvables.

3. There was no significant difference in use of e-cigarettes, snus, smokeless tobacco, or cigars by perceptions of the harmfulness of cigarettes.

Acknowledgments

The study was supported by funds from the National Institutes of Drug Abuse, National Institutes of Health, and the Food and Drug Administration, Department of Health and Human Services, under a contract with Westat [Contract No. HHSN271201200030C]. The National Institutes of Health (NIH) and the National Institute on Drug Abuse (NIDA) have no role in the study design, data collection, data analysis, decision to publish, or preparation of the report. This is a summary of the PATH Study which is the largest population based survey and scientific project to date to assess tobacco use, nicotine exposure, and smoking-related risks among youth and adults in the United States. Additional information about the study is available at www.pathstudy.net.

References

1. Department of Psychology, University of Waterloo, Waterloo, Ontario, Canada
2. The Public Health Agency of Canada, Ottawa, Ontario, Canada
3. Department of Psychology, University of Alberta, Edmonton, Alberta, Canada
4. School of Public Health and Health Systems, University of Waterloo, Waterloo, Ontario, Canada
5. Department of Psychology, Simon Fraser University, Burnaby, British Columbia, Canada
6. College of Public Health, University of Kentucky, Lexington, Kentucky, USA
7. Department of Psychology, University of Massachusetts, Amherst, Massachusetts, USA
8. Department of Psychology, University of Iowa, Iowa City, Iowa, USA
9. Tobacco Control Research Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, USA
10. Department of Psychology, The Ohio State University, Columbus, Ohio, USA
11. School of Public Health and Health Systems, University of Waterloo, Waterloo, Ontario, Canada
12. Department of Psychology, University of British Columbia, Vancouver, British Columbia, Canada
13. Department of Psychology, Boston University, Boston, Massachusetts, USA
14. University of Waterloo, Waterloo, Ontario, Canada

Method Continued

1. Differences in perceptions between products were tested using a repeated measures analysis approach. For Generalized Estimating Equation (GEE) regression models were used to test for differences between products (controlling for demographic variables). Tests were adjusted for multiple comparisons using a Bonferroni correction.

2. Weighted logistic regression models were used to examine the factors associated with rating each of the non-cigarette tobacco products as less harmful than cigarettes. Models adjusted for demographic variables and knowledge of the health harms caused by cigarette smoking.

3. Weighted logistic regression models were used to examine the likelihood of using each tobacco product by the belief that the product is: (a) less harmful and (b) more harmful than cigarettes.

4. Descriptive statistics were used to estimate the proportion of respondents who used each product if they believed that: (a) cigarettes were not at all/only slightly or somewhat harmful; or (b) if they believed that cigarettes were very/extremely harmful. Only current users of any of the non-cigarette tobacco products or cigarettes were included in this analysis.

5. Repeat weights were used to estimate all variables.

Results Continued

4. Prevalence of Use of Each Product by Beliefs About the Harmfulness of Cigarettes When Comparing Current Tobacco Users

   a. Oral in use: among current tobacco users, cigarettes were perceived as being “very” or “extremely harmful” (77.0%).

   b. A significantly higher proportion of respondents who said that cigarettes were “very” or “extremely harmful” used filtered cigars, cigarettes, pipes, and dissolvables.

   c. There was no significant difference in use of e-cigarettes, snus, smokeless tobacco, or cigars by perceptions of the harmfulness of cigarettes.

Conclusions

1. Most U.S. adults believe that cigarette smoking is very harmful to health, reflecting the success of public campaigns to educate the population about the harms of smoking.

2. Perceptions of product harmfulness relative to cigarettes varied widely across the 8 non-cigarette tobacco products.

The PATH longitudinal data will allow us to examine whether perceptions of relative harmfulness predict subsequent tobacco use.