

Perceptions of harm and lower-risk product use across tobacco and nicotine products: Findings from the National Tobacco Use and Transitions Survey (NTTS)

Isabelle Katz¹, Red Thaddeus D. Miguel²
¹RAI Services Company, Winston-Salem, NC, USA, ²Thera-Business Inc., Kanata, ON, Canada

Introduction

Perceptions of harm shape how people understand, avoid, continue using, or switch between tobacco and nicotine products (TNPs) (Bernat et al., 2017). These perceptions may change as products, regulations, media coverage, and public health messaging evolve (Bansal-Travers et al., 2025).

This study uses the National Tobacco Use and Transitions Survey (NTTS) to examine annual changes in perceived harm for various TNPs from 2020 to 2026.

Methodology

The NTTS is a repeated cross-sectional, monthly online survey of U.S. residents aged ≥ 21 years. Each monthly fielding targets 10,000 qualified completes using nested quota sampling and active field monitoring. Respondents report awareness and use of tobacco and nicotine products across multiple behavioral modules, including TNP category-specific measures of absolute and relative perceptions of harm.

Analyses summarize overall and annual patterns of changes in perceiving e-cigarettes, smokeless tobacco, and modern oral* products as less harmful than cigarettes between current and former established cigarette smokers from 2020 to 2026.

The study included 47,562 established cigarette smokers in three mutually exclusive groups, comprising e-cigarette users (n=29,300), smokeless tobacco users (n=16,990), and modern oral users (n=1,272), each of whom had never used either of the other two product categories.

Notes* Cigarettes included factory-manufactured cigarettes and roll-your-own cigarettes. E-cigarettes included refillable and non-refillable vapor systems. Smokeless included snus, moist snuff, portion pack or pouch, and loose leaf. Modern oral included tobacco leaf-free oral nicotine (for example: pouches or dissolvable nicotine lozenges).

Key Findings

Differences in proportions of populations perceiving TNP categories as “Less Harmful” than cigarettes were found across all demographic groups, however they varied by TNP category.

Perceptions that smokeless tobacco and modern oral products are less harmful than cigarettes have remained stable over time, while perceptions that e-cigarettes are less harmful have declined.

Across all TNP categories and e-cigarette characteristics (menthol and nicotine status), former established cigarette smokers are more likely than current established cigarette smokers to perceive non-combustible products as less harmful than cigarettes.



Acknowledgements
Thank you to Thera-Business Inc. team for support with analytics and drafting:
Kathleen Morden, MPhil
Liu Zhou, MSc
Vladimir Kuznetsov, BEng

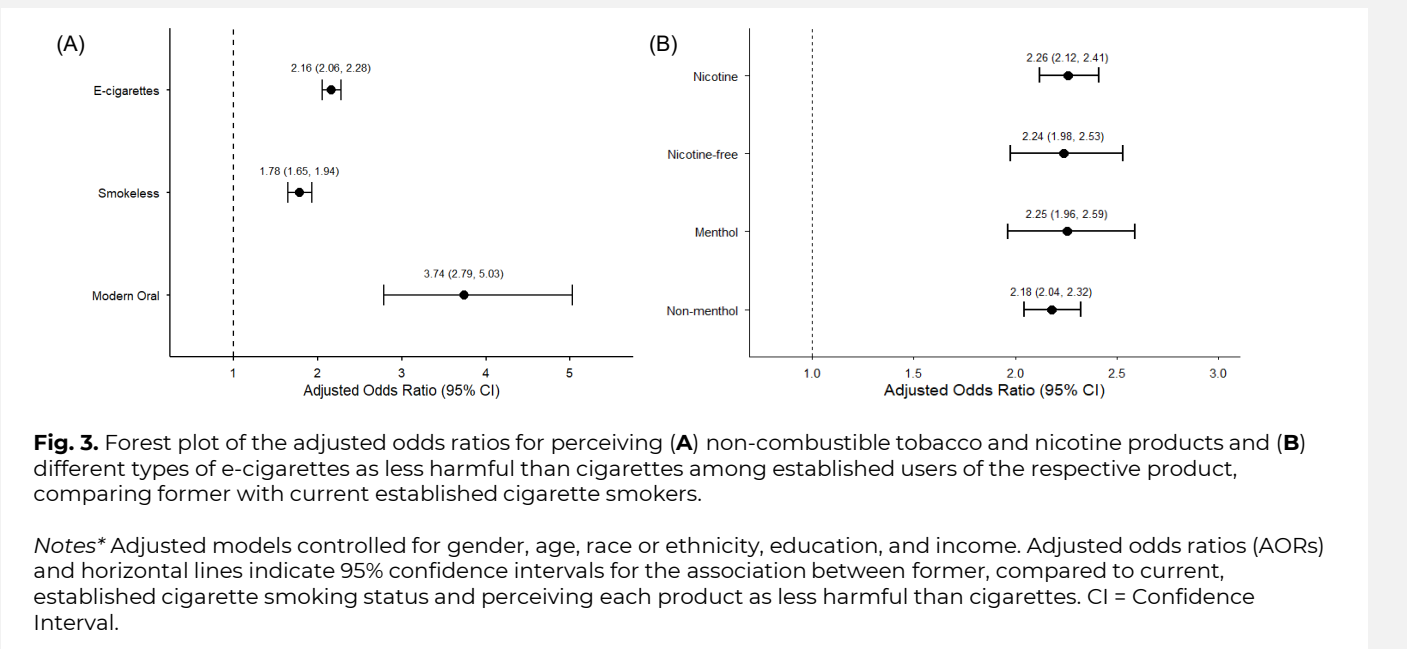
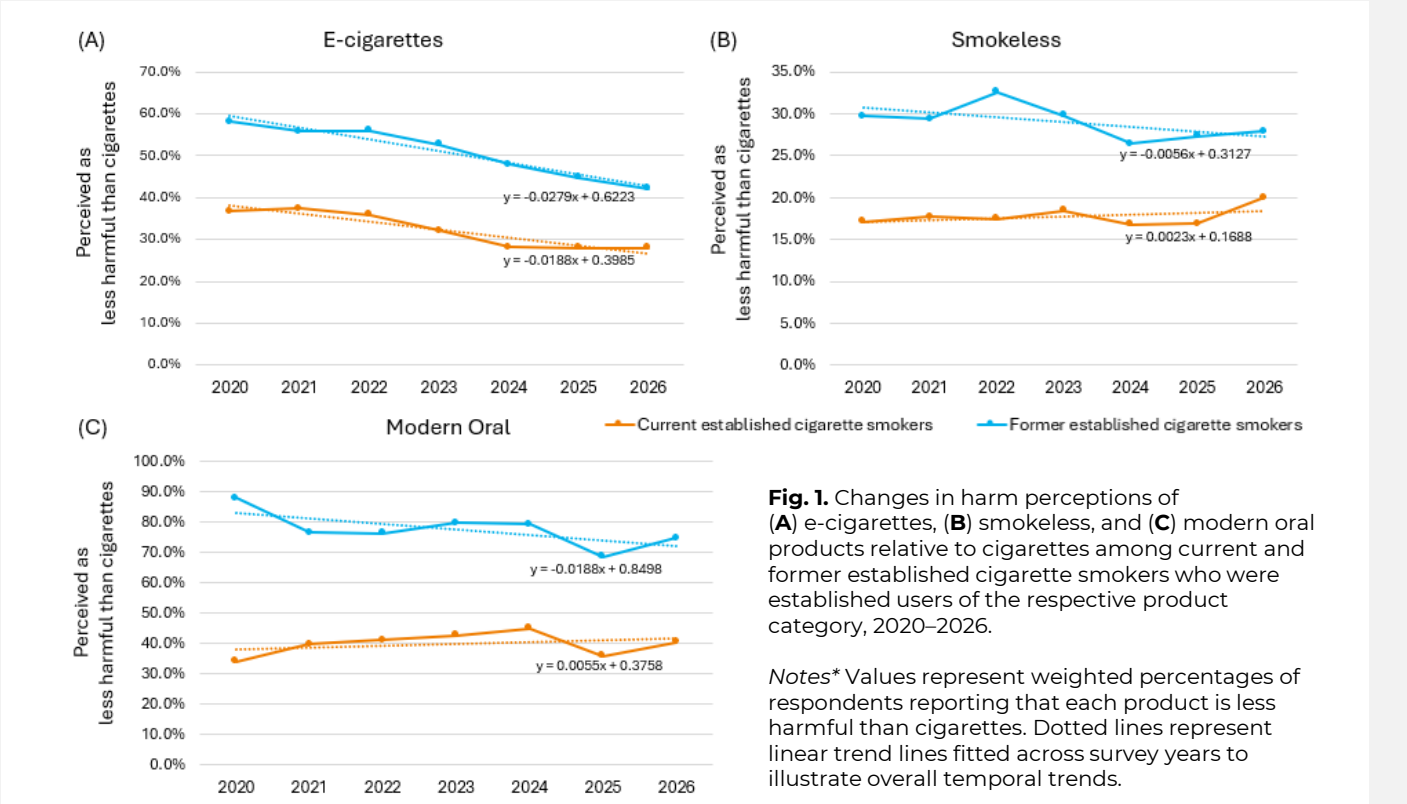
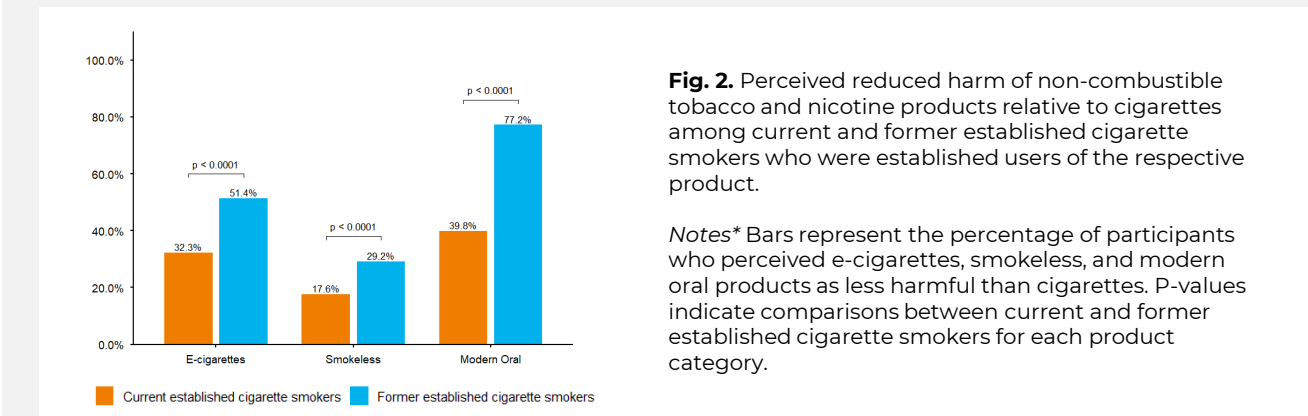
Contacts
Isabelle Katz. Isabelle_katz@rjrt.com

Results

Table 1. Proportions Perceiving TNP-category as “Less Harmful” Than Cigarettes

Characteristic	E-Cigarettes % (95% CI)	Smokeless % (95% CI)	Modern Oral % (95% CI)
Sex			
Male	43.2 (42.3, 44.2)	22.1 (21.4, 22.8)	45.7 (42.1, 49.3)
Female	36.1 (35.4, 36.8)	15.7 (14.4, 16.9)	58.2 (53.9, 62.6)
Age			
21-29	29.4 (28.0, 30.7)	16.7 (15.3, 18.1)	32.1 (25.6, 38.5)
30+	40.8 (40.1, 41.4)	21.7 (21.0, 22.4)	54.5 (51.4, 57.5)
Race and Ethnicity			
Non-Hispanic White	42.3 (41.7, 43.0)	22.4 (21.7, 23.1)	60.2 (56.9, 63.4)
Non-Hispanic Black	28.1 (26.1, 30.1)	16.2 (14.5, 18.0)	36.9 (28.3, 45.4)
Non-Hispanic Other	37.9 (35.8, 40.0)	19.4 (16.9, 21.9)	40.8 (29.6, 52.1)
Hispanic	28.2 (26.7, 29.8)	17.9 (16.2, 19.5)	28.9 (22.6, 35.2)
Education			
High School or Less	34.5 (33.7, 35.3)	20.0 (19.0, 21.0)	36.1 (31.7, 40.4)
College Graduate or More	42.6 (41.8, 43.4)	21.4 (20.6, 22.2)	59.4 (55.9, 62.8)
Income			
<\$50K per year	38.1 (37.3, 38.8)	21.3 (20.3, 22.2)	47.6 (43.7, 51.5)
≥\$50K per year	40.2 (39.3, 41.1)	20.7 (19.9, 21.5)	54.0 (50.0, 58.0)

Notes* Values represent weighted percentages and 95% Confidence Intervals (CI).



Conclusion

These findings show that TNP-user perceptions of relative harm are variable across demographic and TNP-status groups.

In this study, TNP-user relative harm perceptions did not align with the increasing market prevalence of non-combustible TNPs and the growing evidence base and scientific consensus on the TNP risk continuum (U.S. Food and Drug Administration, 2026). Additionally, for e-cigarettes, perceptions may be shaped more by product category than by product-specific characteristics.

Future research should explore how these perceptions develop and their impact on subsequent TNP use to better inform public education and risk communication.

Point your phone's camera at the QR code to find our library of publications

Follow us:

www.ReynoldsScience.com @RAI_News