

# Associations between smokers' knowledge of causes of smoking harm and related beliefs and behaviors: findings from the International Tobacco Control (ITC) Four Country Smoking and Vaping Survey

King, B., Borland, R., Le Grande, M.R., Diaz, D., O'Connor, R.J., East, K.A., Taylor, E., Gartner, C., & Yong, H.H.

## Abstract

**Background:** Most smokers know that smoking is harmful to health, but less is known about their understanding of what causes the harms. The primary aim was to examine smokers' perceptions of the relative contributions to smoking-related morbidity from combustion products, nicotine, other substances present in unburned tobacco, and additives. A secondary aim was to evaluate the association of these perceptions with nicotine vaping product use intentions, and quitting motivation/intentions.

**Methods:** Participants were current smokers and recent ex-smokers from Australia, Canada, England and the United States (N = 12,904, including 8511 daily smokers), surveyed in the 2018 International Tobacco Control Four Country Smoking and Vaping Survey. Respondents reported on how much they thought combustion products, nicotine, chemicals in the tobacco and additives in cigarettes contribute to smoking-related morbidity (none/very little; some but less than half; around half; more than half; all or nearly all of it; don't know).

**Results:** Overall, 4% of participants provided estimates for all four component causes that fell within the ranges classified correct, with younger respondents and those from England most likely to be correct. Respondents who rated combustion as clearly more important than nicotine in causing harm (25%) were the least likely to be smoking daily and more likely to have quit and/or to be vaping. Among daily smokers, all four cause estimates were independently related to overall health worry and extent of wanting to quit, but the relative rating of combustion compared to nicotine did not add to prediction. Those who answered 'don't know' to the sources of harm questions and those suggesting very little harm were consistently least interested in quitting.

**Conclusions:** Most smokers' knowledge of specific causes of harm is currently inadequate and could impact their informed decision-making ability.

## Recommended Citation

King, B., Borland, R., Le Grande, M.R., Diaz, D., O'Connor, R.J., East, K.A., Taylor, E., Gartner, C., Yong, H.H. (2023). Associations between smokers' knowledge of causes of smoking harm and related beliefs and behaviors: findings from the International Tobacco Control (ITC) Four Country Smoking and Vaping Survey. *PLOS One*, 18(10): e0292856. <https://doi.org/10.1371/journal.pone.0292856>.

**Link to PDF:** <https://doi.org/10.1371/journal.pone.0292856>