Review of: "Randomized Experimental Test of a Reduced-Exposure Message for an E-cigarette: Comprehension and Related Misperceptions"

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Potential competing interests: No potential competing interests to declare.

This the first time I have been asked to review an article for publication without an editor, i.e. and the analogy seems to be me to similar to a self-driving car. I am thus asked to make suggestions for improvement then you will carry the ball. The decision when to go to publication is not at all clear. I cannot thus endorse your conclusions but I will make comments on your procedures.

1, OK. Straight up, this is an inhouse article by the employees of the JUUL company.

2. Potential competing interests

Authors S.A.M. and R.A.B. are employees of Juul Labs, Inc. Through PinneyAssociates, Inc, authors S.S. and M.A.S. provide consulting to Juul Labs, Inc. on tobacco harm reduction, on an exclusive basis. This work was supported by Juul Labs, Inc., which reviewed a final draft of the manuscript.

[thank you for disclosing your competing interests. Please also disclose how many stock and stock options you your family own]

3. Materials.

Data come from a large online experiment in which adult participants were randomized to be exposed to a statement about reduced exposure to harmful chemicals (Test condition) as part of a video about the JUUL ENDS product, or to see the identical video without reduced exposure messaging (Control condition). Participants were adults (18+) of varying tobacco-use profiles and histories, recruited both online through existing consumer research panels and offline through mall and street intercepts. After being shown the video, message comprehension was assessed in participants in the Test condition (i.e., among those who saw the message). All participants were assessed for risk perceptions and for their perceptions of the intended users of the ENDS product.

[This is clearly an in house test of advertisements for JUUL]

4. Review Board

This research was deemed exempt by an institutional review board (IRB), and participants provided informed consent.

Why was it exempted?]

5. Participants

Participants recruited from existing research panels were compensated with panel points, and those recruited in-person were compensated $35.

[Participants were paid]

6. Sample

Demographic quotas for age and gender (nested), race/ethnicity, geographic region and educational attainment based on the Center for Disease Control and Prevention's 2019 National Health Interview Survey were set within each Tobacco Use Group in an attempt to increase representativeness to the US population. However, a programming error impeded enforcement of these quotas early in recruitment, causing Former Users and Never Users – the most numerous groups in the population – to exceed their quotas and deviate from demographic quotas. This resulted in low weighting efficiencies for these groups (.50 and.56, respectively); accordingly, Tobacco Use Groups were not weighted to match the demographic targets.

Besides needing to fit into one of these Tobacco Use Groups that had not met quota, participants had to be US residents with internet access. Individuals were not eligible to participate if: they were unable to read, speak, or understand English; they had participated in tobacco-related research in the past month; they or a family or household member were currently or formerly employed by the tobacco industry or a company involved in the conduct of the study; or they were in litigation with a tobacco company.

A total of 14,816 people completed the survey between August and October 2021. Of these, 2,259 participants were removed as invalid responders if they: were speeders (completed the survey in ≤ 1/3 the median completion time), failed an attention check (where respondents were directed to choose a particular response), failed a manipulation check (checking if respondent had actually looked at the study stimulus), provided risk perception responses suggesting inattention (e.g., rating "Smoking 10 cigarettes daily for the rest of your life" as "0% harmful to health" or as less harmful than "Not using any tobacco products"), were living in the same household as other participants, and/or provided survey responses contradicting screening eligibility criteria. The randomization scheme was effective in balancing the two study conditions on key demographic variables

All participants were shown a brief (<1 minute) online video advertisement describing the ENDS product, explaining that the product is an alternative to cigarettes for adult smokers, comes in tobacco and menthol flavors, provides smokers with a familiar experience and does not create ash or smoke. The ad included the mandated nicotine warning required on all ENDS products in the US. The advertisement and message language were refined in preliminary qualitative and mixed-methods work with 144 smokers and non-users

[Thank you for stating your sample methods]

7. Outcome Measures

Relevant outcome measures are presented in Supplementary Table I and described below. These measures were sourced from prior research [19] or national surveys (National Adult Tobacco Survey);[20], or were developed for purposes of this study and refined through rounds of cognitive testing with tobacco users and non-users, including young adults (ages 21 to 29) and individuals with limited health literacy.acco products

[It is key to have valid and reliable outcome measures.

Can you provide these data?]

8. Results

As seen in Table II, the sample was middle aged, majority female and White, non-Hispanic, but with a substantial fraction of Black and Hispanic individuals. Half had annual household income below $50,000, most had not completed college, and about one quarter demonstrated limited health literacy. There were demographic differences between Tobacco Use Groups as expected. For example, compared to other groups, Smokers had lower educational attainment, Dual Users were younger, and Former users were older. Test and Control samples were well matched

Although the message communicated reduced exposure from ENDS, it reduced by over 50% the misunderstanding that ENDS products are meant for non-users of tobacco. Among participants who saw the message, >90% saw current smokers and not non-tobacco users as intended audiences for JUUL.