

Josephine Hinds, BS, Sherman Chow, MPH, MA, Alexandra Loukas, PhD, Keryn E. Pasch, PhD, MPH, Cheryl Perry, PhD, Cristine Delnevo, PhD, MPH, & Olivia Wackowski, PhD, MPH

BACKGROUND & PURPOSE

Use of non-cigarette alternative products has been increasing rapidly over the last few years, particularly among young adults.

Traditional survey items assessing tobacco product use have not specified their content. However, non-tobacco substances (e.g. marijuana) are often smoked in alternative tobacco products like ENDS, cigars, hookah, and roll-your-own cigarette paper.

The aims of this study were to:

- Determine how college-aged tobacco users interpret traditional items assessing tobacco use, including non-cigarette alternatives.
- Refine measurements of non-cigarette alternative products and assess their use as tobacco or nicotine delivery systems by college students.

METHODS

Participants were 25 college-aged tobacco users from the Austin, Texas area (52% female, M age = 22). See Table 1 for tobacco-use characteristics.

After completing a 175-item survey, the young adults each participated in a one-hour cognitive interview to assess the comprehension, meaning, and acceptability of the survey items.

Interviews were conducted in 3 rounds, with item revisions made between each round and subsequently tested. Probes used in discussions about survey items are found in Table 2.

Table 1: Tobacco Use Among Participants (N=25)

Number of ever cigar users	15
Number of ever roll-your-own users	8
Number of ever hookah users	22
Number of ever ENDS users	18

Table 2: Probes Used in Cognitive Interviews

- 1) How easy or difficult was this question?
- 2) How did you come up with your answer?
- 3) How confident are you of your answer?
- 4) Are there any answer choices missing in this multiple choice?
- 5) Could you rephrase this question in your own words?

RESULTS

Comprehension error existed when product questions were asked without specifying the content of 4 primary cigarette alternative products.

As shown in Table 3, students discussed the use of marijuana in tobacco/nicotine products and were confused as to whether survey questions were specifying the use of the product with or without marijuana.

Table 3: Sample Participant Responses to Product Questions

Cigars
<i>"Make sure these products are with tobacco...specify in the question. Maybe it's just me... but I smoked a bunch of these without tobacco. That's where the confusion is for me."</i>
<i>"Those are cigars I guess. The little skinny ones, I see people wrap blunts with them, never seen someone smoke them as-is."</i>
Roll-Your-Own Cigarettes
<i>"Roll your own means smoking a joint...and I've seen people mix tobacco and marijuana."</i>
Hookah
<i>"I didn't know hookah had tobacco in it... I just thought [hookah] was to get high."</i>
ENDS
<i>"You can smoke dry herbs from the e-cigs as well. That kind of confused my answers. I'm being honest. When I smoke e-cigs it's not tobacco. Mention e-cigs with nicotine or tobacco."</i>

RECOMMENDATIONS

Specifying content of non-cigarette alternative products is recommended to assess tobacco and nicotine use by college students. Suggested revisions are in Table 4.

Questions pertaining to marijuana use in tobacco products should be included in surveys of college students, specifically with:

- large cigars, cigarillos, or "blunts"
- roll-your-own cigarettes with tobacco, or "spliffs"
- ENDS products (i.e. e-cigarettes, vape pens, or e hookah)

Future research validating revised tobacco assessment items is warranted.

Table 4: Suggested Revisions to Measurement Items

	BEFORE REVISION	SUGGESTED REVISION
Cigars	Have you ever tried these products, even one or two puffs?	Have you ever tried these products <u>as intended (i.e. with tobacco)</u> , even one or two puffs?
Roll-Your-Own Cigarettes	Have you ever smoked a roll-your-own cigarette?	Have you ever smoked a roll-your-own cigarette <u>with only tobacco inside</u> , even one or two puffs?
Hookah	How old were you when you first tried smoking hookah?	How old were you when you first tried smoking a hookah <u>as intended (i.e. with tobacco)</u> , even one or two puffs?
ENDS	Have you ever used an ENDS product (i.e. e-cigarette, vape pen, or e-hookah), even one or two puffs?	Have you ever used an ENDS product (i.e. e-cigarette, vape pen, or e-hookah) <u>as intended (i.e. with nicotine cartridges and/or e-liquid/e-juice)</u> , even one or two puffs?