People like potato juice and chocolate applesauce? The importance of using nonsense products in online panelist screening

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Background

Study Rational

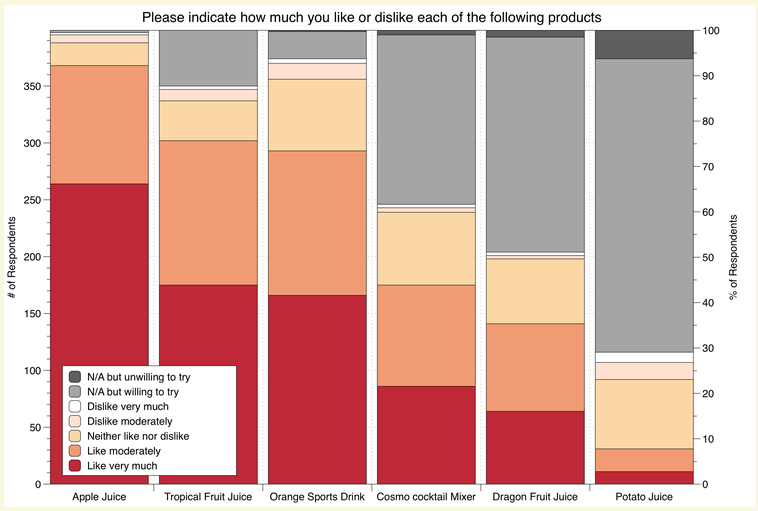
- For routine consumer testing in our facility, we recruit panelists via web-based screening to identify individuals who like or use the types of products we will be serving within a test.
- Prospective participants are emailed a link to an online form and are asked to indicate liking or usage frequency for various product types.
- In addition to target products and real non-target products, we also typically include *nonsense items* to distinguish between individuals who carefully answer the survey and those who skim down the list and check off an entire column.
- In doing so, we find that a sizable minority of individuals fail to pay close attention to the questions on our screeners.

Results

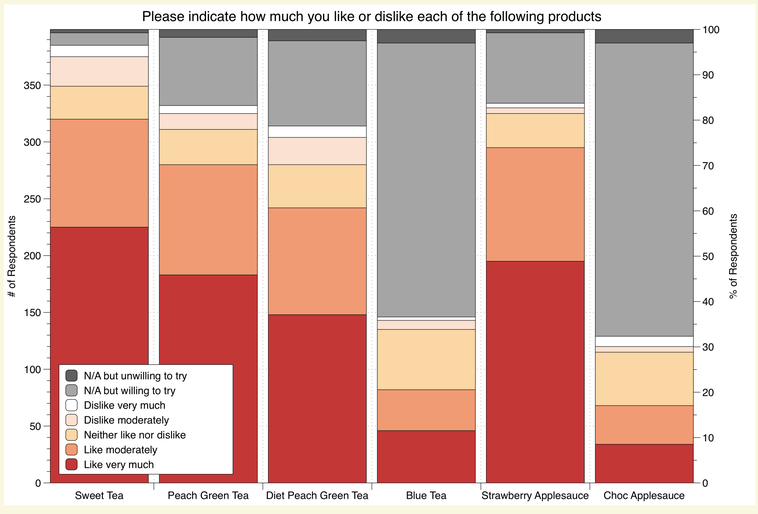
Dataset 1 (n=399 respondents):

Prospective participants rated liking of 36 products on a 5 point liking scale, along with two additional categories: 'not applicable, willing to try' and 'not applicable, unwilling to try.'

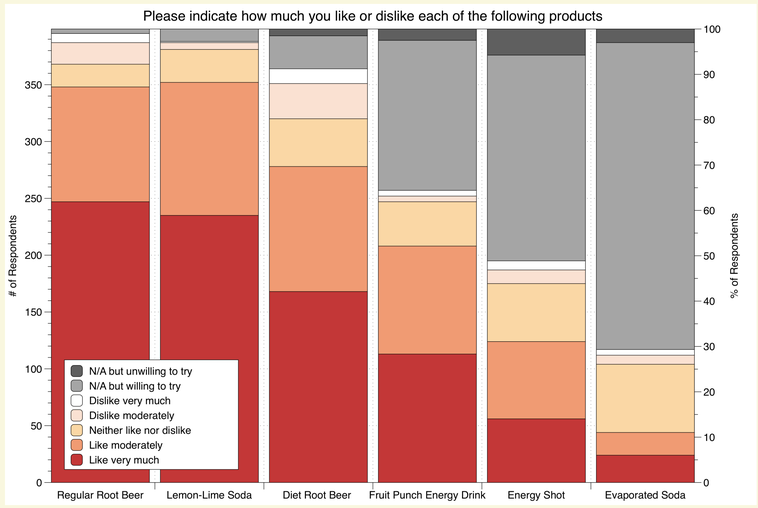
RESULT #1: Over 1 in 4 people indicated they have tried 'potato juice' by virtue of giving it a liking score



RESULT #2: Similar proportions of nonsensical answers (over 1 in 4 people) were seen for 'blue tea' and 'chocolate applesauce'



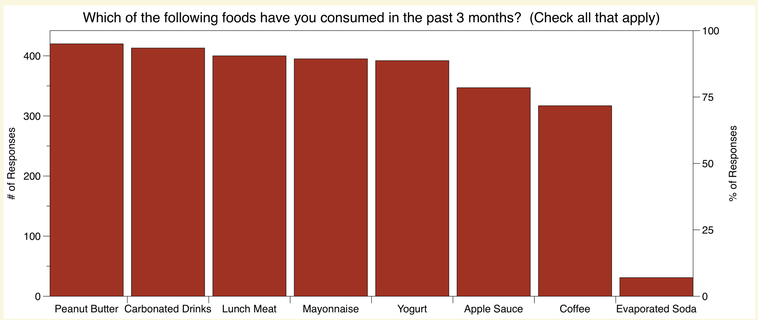
RESULT #3 : A similar proportion of nonsensical answers (1 in 4 people) were seen for 'evaporated soda'



RESULT #4: Collectively, when responses were filtered to select for neutral or higher liking ratings (ie top 3 boxes) for 'evaporated soda','chocolate applesauce' and 'potato juice', we found the same 68 individuals (17%) were repeatedly giving nonsense answers

Dataset 2 (n=442 respondents):

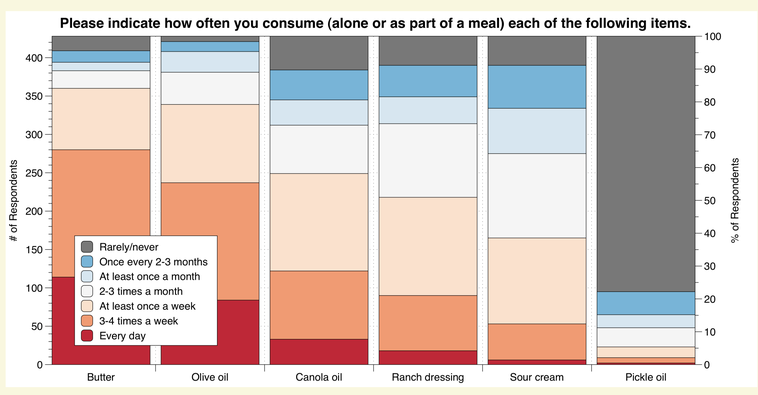
RESULT #5: A 'check all that apply' format appears to be most robust, as the fraction of those reportedly consuming 'evaporated soda' drops to 7% (31 of 442)



Dataset 3 (n=428 respondents):

Prospective participants indicated consumption frequency of 6 foods, including 'pickle oil' as the nonsense item.

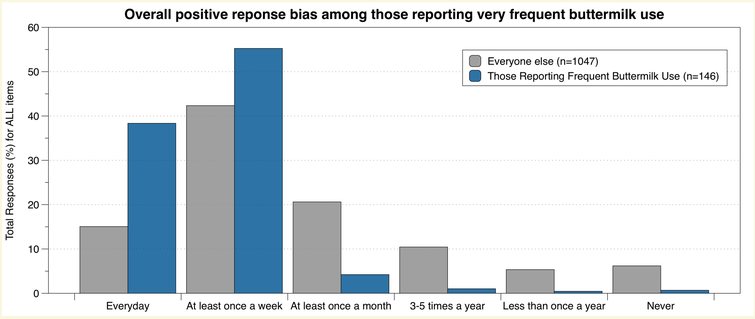
RESULT #6: 22% of respondents reported consuming 'pickle oil' at least quarterly



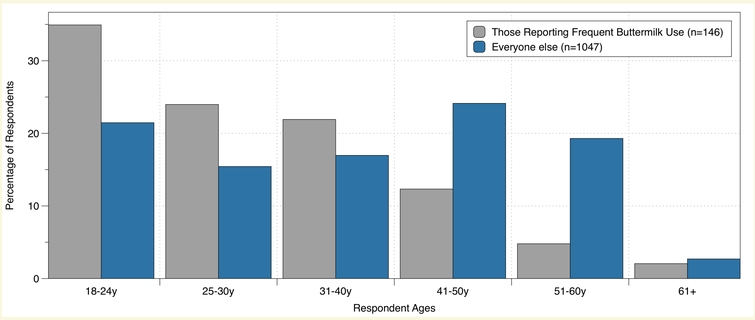
Dataset 4 (n=1193 respondents):

Prospective participants were asked to report consumption frequency of 6 breakfast foods, with 'buttermilk' as the nonsense item.

RESULT #7: Those who report consuming buttermilk at least once a week (12%) also skew toward higher reported frequencies for all foods.



RESULT #7: Those same individuals also skew toward being younger (59% under 30 vs. 37% under 30 for everyone else)



Discussion

- Here we provide evidence that a sizable minority of potential participants (approximately one in four) will provide biased data when asked to indicate liking or consumer frequency via an online screening form. By including *nonsense items* in our screening protocol, we identify and exclude these individuals.
- The psychological reasons behind this effect are unclear. Potential explanations include an error of anticipation wherein the participant merely gets in the habit of saying yes, a social desirability bias (to please the experimenter), or a mistaken belief that being invited to participate in a test is always contingent of liking or using the product (*ie,* failing to consider that the target sample for a given test may be nonusers).
- Notably, in one dataset, we find that the age distribution of those giving biased answers is skewed. There are two potential explanations for this. It may reflect a cohort effect, where those who have have grown up with internet access are habituated to ubiquitous online forms, having learned to fill them out rapidly with minimal attention to detail. It remains to be seen whether these types of effects fade as these individuals age, or remain throughout life as a result of this habituation process.
- Critically, these data should not be interpreted as a criticism of online screen methods, as we find them to be incredibly useful and efficient in our lab. Instead, they suggest, as with any survey method, paper or electronic, careful attention to the wording, task, and design are paramount in collecting quality data.