



34.51°

The Quest for Quality: Benefits of behaviorally targeted sampling

The Quirk's Event - Chicago
March 27, 2023

Kroger's footprint creates scale for insights



Our first-party transaction data represents 60 MM U.S. households

- **Scale** – 2 billion annual transactions from nearly 60 MM households
- **Limitless Possibilities** – UPC-level customer insights
- **Complete** – over 96% of sales are captured via the Kroger loyalty card
- **Permission-based** – consumers have opted in based on the value received
- **Omnichannel** – in-store, pickup, delivery
- **Longitudinal** – 4+ years of history
- **Data Science** – two decades of experience

84.51° Solutions

Along the fast, nonlinear and complex path to purchase

84.51° Loyalty Marketing

Builds long-term engagement and loyalty through relevant and personalized offers and messages.



84.51° Insights

Understands customer needs, behaviors and desires through actionable insights and consumer research along the path to purchase.

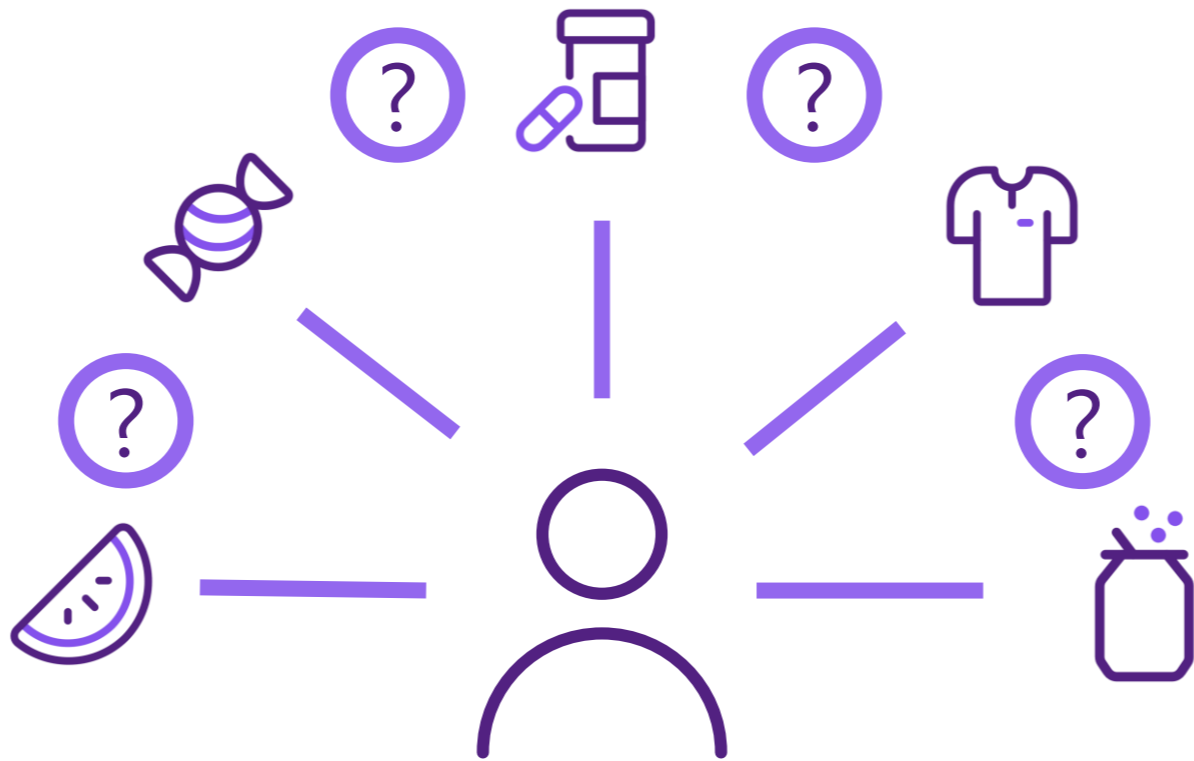


Drives your brands advertising effectiveness

by closing the loop between media exposure and store sales.



84.51° Consumer Research seamlessly integrates behaviors and attitudes to create human insights



Reachable

We reach the right shoppers with first-party data



The What

We leverage rich shopper insights to understand shopping patterns

The Why

We conduct research to understand depth of their decisions



Consumer Stories

By integrating the What and the Why we uncover the **full** view of consumer shopping patterns

What is behaviorally targeted sampling?

What do we mean by behaviorally targeted sampling?

Two methods of consumer research sampling

Traditional sampling



Relies on screening panelists or potential respondents to identify who qualifies

Behaviorally targeted sampling



Starts the sample recruitment process with a pool of potential respondents with *verified* qualifying purchase behavior, via "first-party" data


Benefits of behaviorally targeted sampling

What we'll talk about...

Makes research faster and better with higher screening efficiency



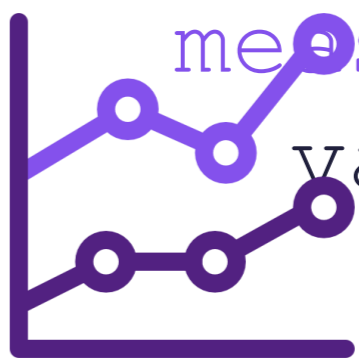
Screens for complex behavioral profiles and segmentations that wouldn't be feasible otherwise



Results in higher quality research by limiting fraudulent responses and increasing engagement



Enables true longitudinal measurement and can validate research in new ways



Behaviorally targeted sampling
makes research faster and
better with higher screening
efficiency

The power of behavioral targeting for screening efficiency

What it is and why it is important

DOUBLE VERIFICATION



1. Anonymized purchaser households



2. Purchaser confirmed via screening questions

Ensures that you're speaking to the purchaser within the buyer household

- **Incidence is much higher** than with traditional “blind” screening of general-population panels
- Potential for **faster and more efficient research** implementation

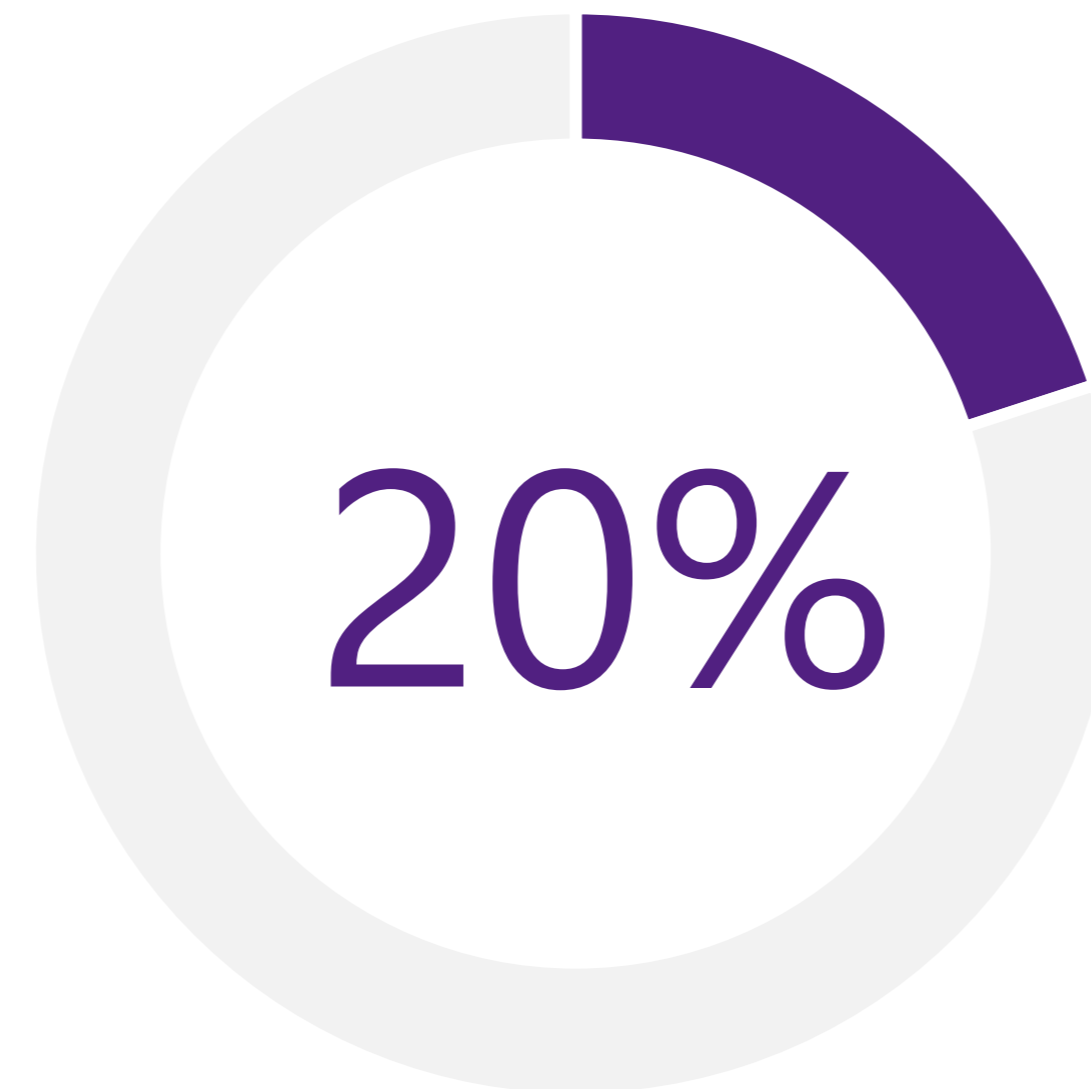
Screening incidence comparison

Research project seeking consumers who had received a coupon mailer from Kroger

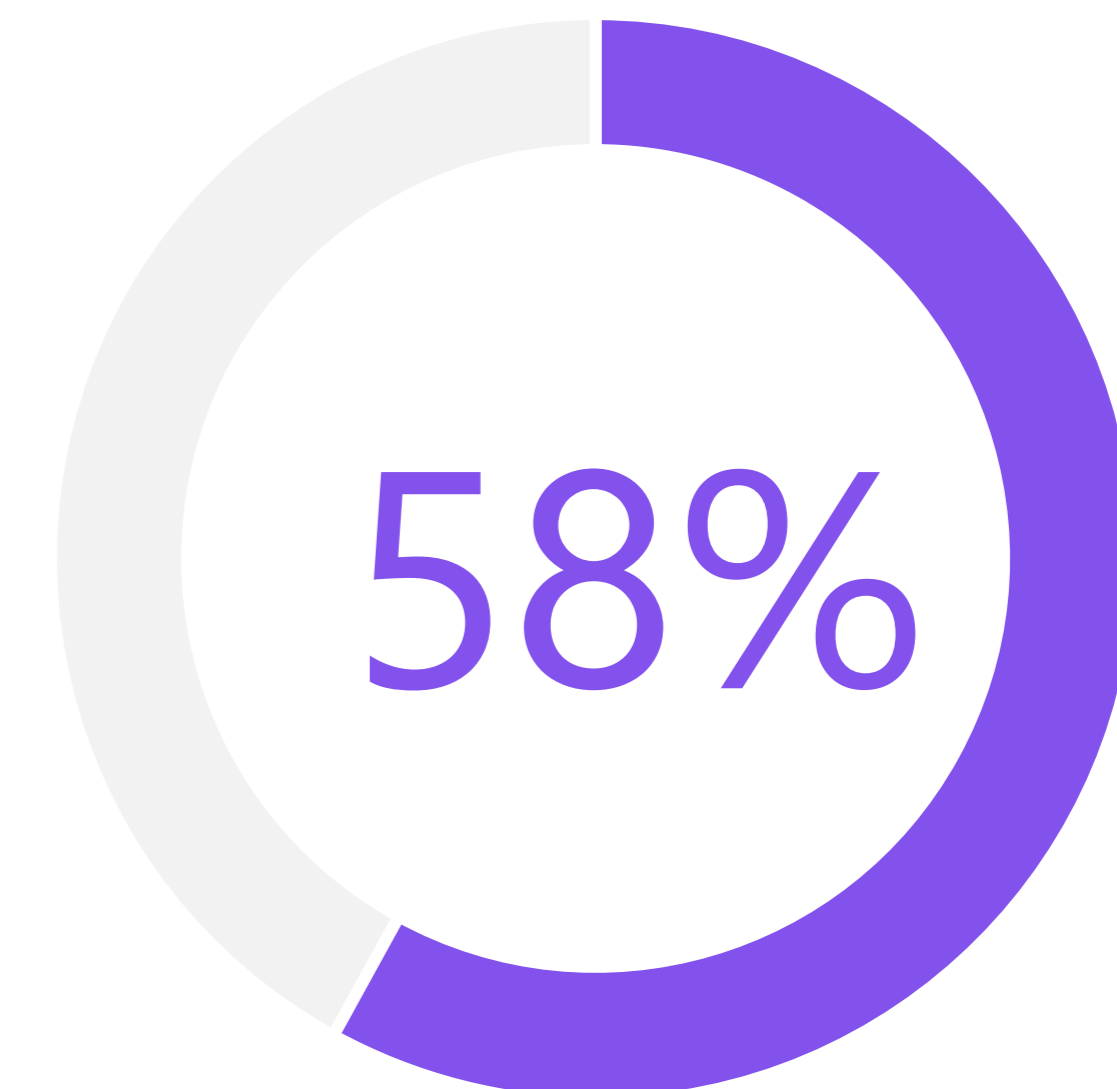
Total U.S. households receiving mailer:

4.97 million

Traditional sampling*



First-party verified Behaviorally



Low penetration categories

The survey incidence for behaviorally targeting is far more efficient than corresponding household penetration

	Survey incidence	Household penetration*
Purchasers of frozen prepared chicken	68%	12%
Purchasers of pepperoni	64%	6%
Purchasers of liquid concentrated drink enhancers	74%	3%
Purchasers of popcorn	72%	10%
Purchasers of fresh apples	73%	31%
Purchasers of natural and organic candy	51%	3%
Purchasers of fresh dinner sausage links	76%	12%
Purchasers of [BRAND] frozen waffles	52%	<0.2%
Purchasers of [BRAND] frozen breakfast sandwich	57%	<0.1%
Purchasers of [BRAND] newly launched cereal	53%	<0.7%

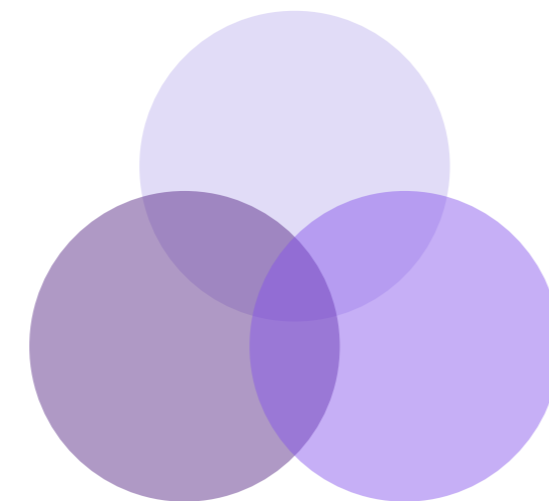
Behaviorally targeted sampling can screen for complex behavioral profiles and segmentations that wouldn't be feasible otherwise

Efficiently reached complex behavioral profiles

Natural & Organic Kids' Cereal Rejectors Study

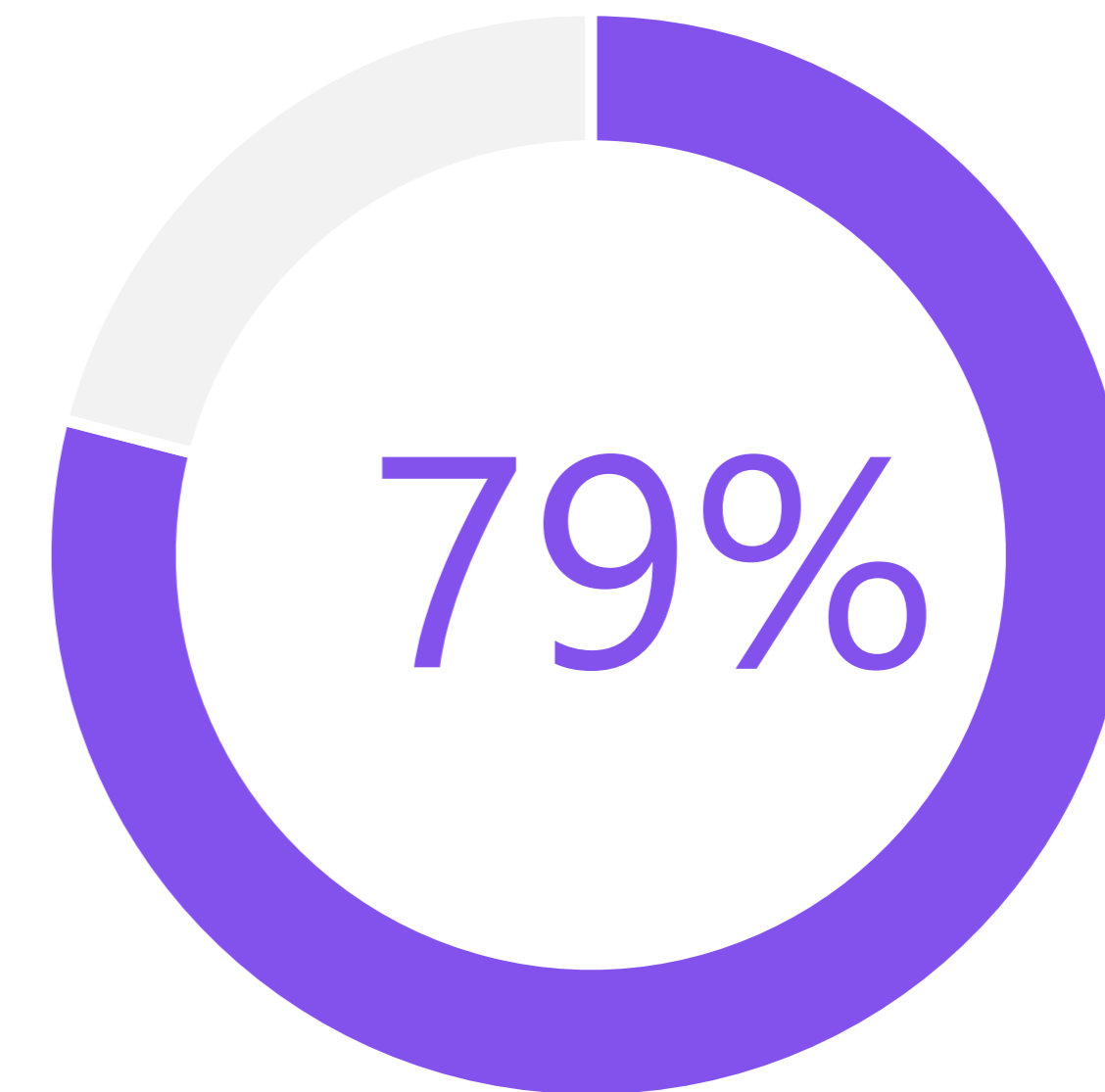
Selection criteria

- Has purchased kids' breakfast cereal
- Has **NOT** purchased a "Natural & Organic" kids' breakfast cereal
- **HAS** purchased one or more other selected "Natural & Organic" food categories
 - Milk/Plant-based milk
 - Yogurt
 - Eggs
 - Frozen breakfast
 - Cereal bars
 - Snacks



Not only did behavioral sampling make it *possible* to reach this group....

....but, survey recruiting incidence was:



Survey questions can be asked of complex Behavioral Segments

Dimensions and their definitions

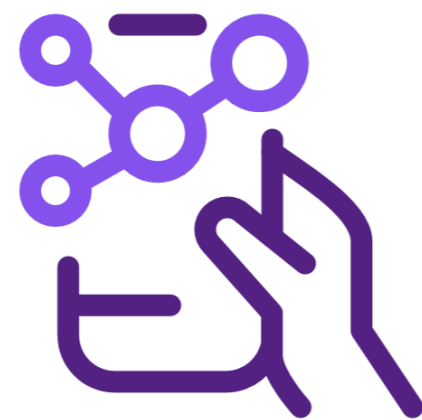
PRICE

Assesses price sensitivity considering all prices available in market



CONVENIENCE

Assesses likelihood to cook from scratch



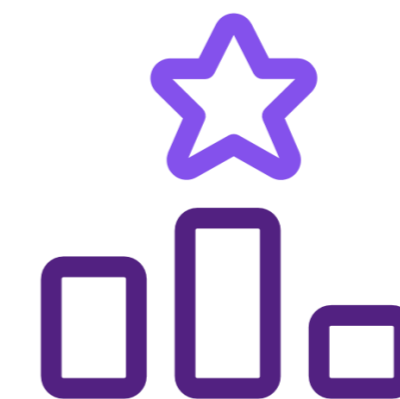
HEALTH

Assesses overall importance of nutrition based on food purchases



QUALITY

Assesses preference for perceived brand tier



VARIETY SEEKING

Assesses willingness to try new items—new to the market or new to the household

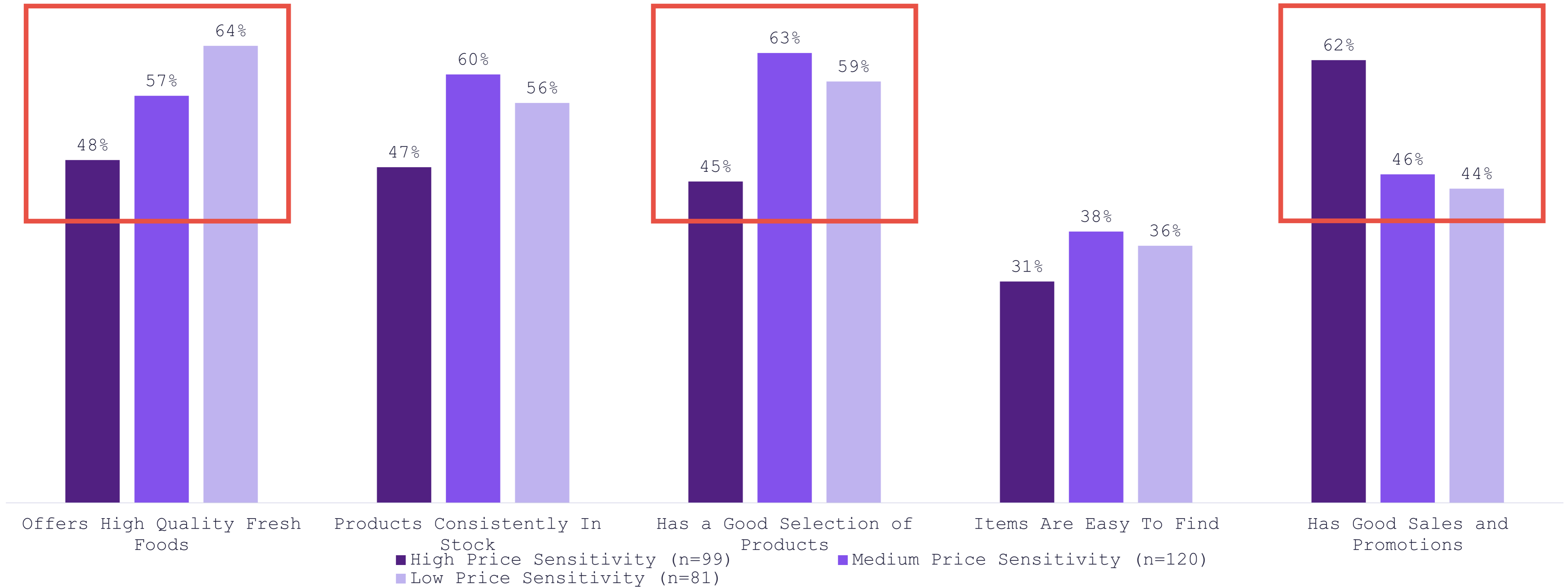


Three-category classification (High/Medium/Low)

Price dimension

Attitudes (“the why”) are consistent with behaviorally-defined and validated segments

Q: What are the most important reasons* for selecting where to shop?



Source: 84.51° Consumer Research Kroger Lapsers Custom Research Project, 2022
 *Respondents selected top five reasons from a longer list, most frequently mentioned items overall shown

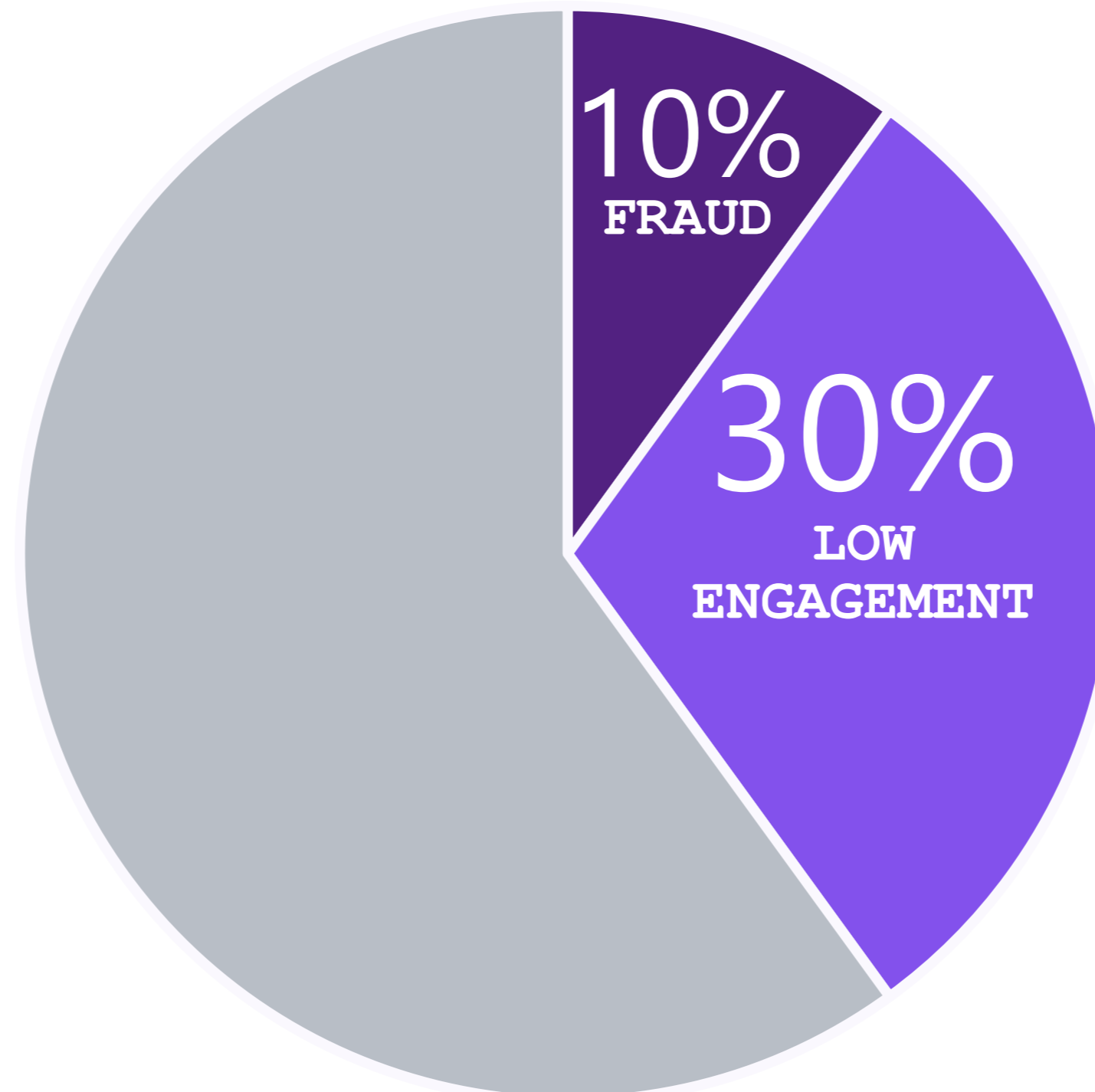
Behaviorally targeted sampling
results in higher quality research
by limiting fraudulent responses
and increasing engagement

Fraudulent and low engagement respondents

CASE and Insights Association Fraud Detection study, 2021



- n=2000 “gen pop” respondents
- Across 8 widely-used research panels (n=500 each)
- 11-minute, mobile-ready “typical” study



In the CASE study, *40% of the sample* was unstable due to fraud and poor data quality

- **Fraud** (bots, click farms, masked identity or geography, etc.) *10%*
- **Low Engagement** (speeding, straight-lining, weak open-ends, etc.) *30%*
- In the study, *19%* of surveys were completed by just 3% of accounts.
- Average respondent enters *21.5* surveys per day

Fraudulent respondents and behaviorally sampling

By definition, behaviorally-targeted survey responses have a...

- *live human...*
- *making an actual purchase...*
- *in a real store (or online)...*
- *in the geographical footprint aligned with the retailer...*

...sitting behind them.

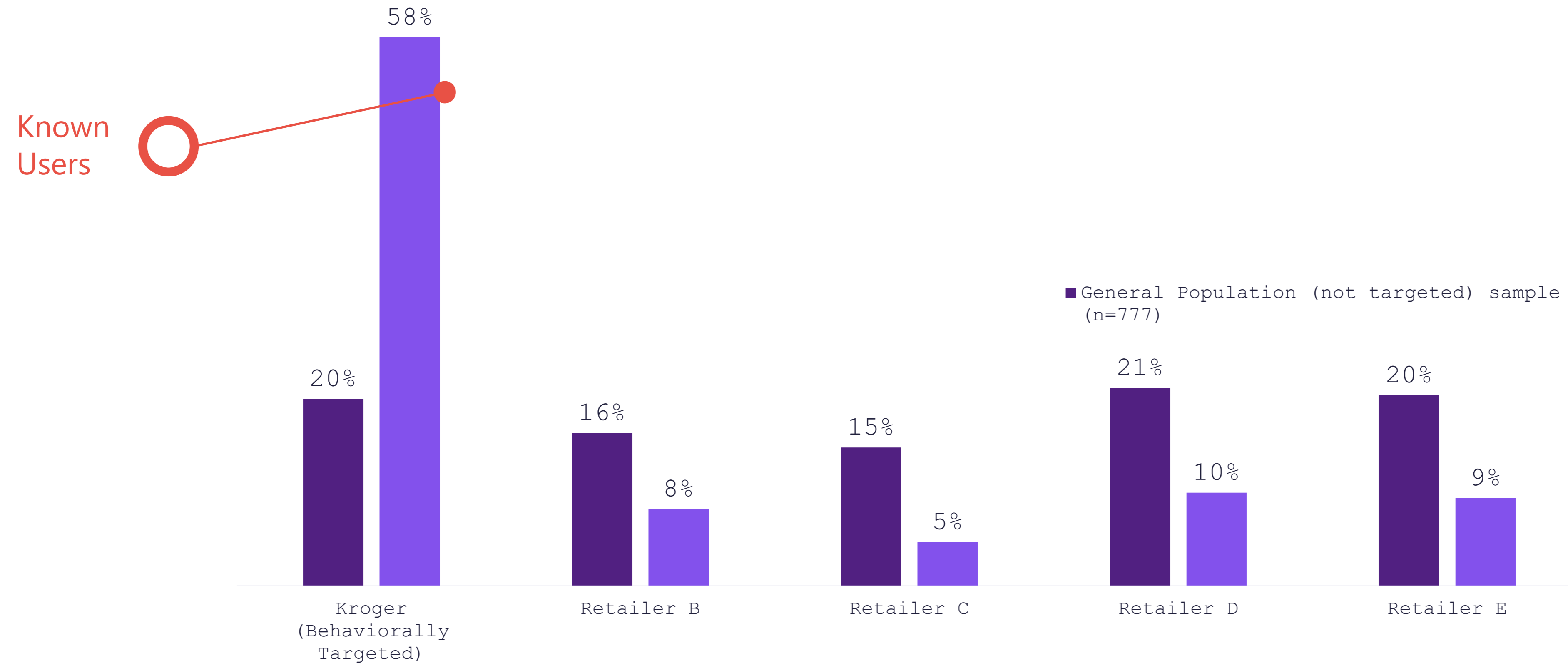
Survey research panel providers are becoming more and more vigilant at removing fraudulent respondents

Nevertheless, 84.51° has uncovered evidence that **respondents who do not pass through the additional behavioral verification provide lower quality responses.**

Lying to qualify

There is evidence that non-targeted panelists may be more likely to claim a wide variety of behaviors in screening.

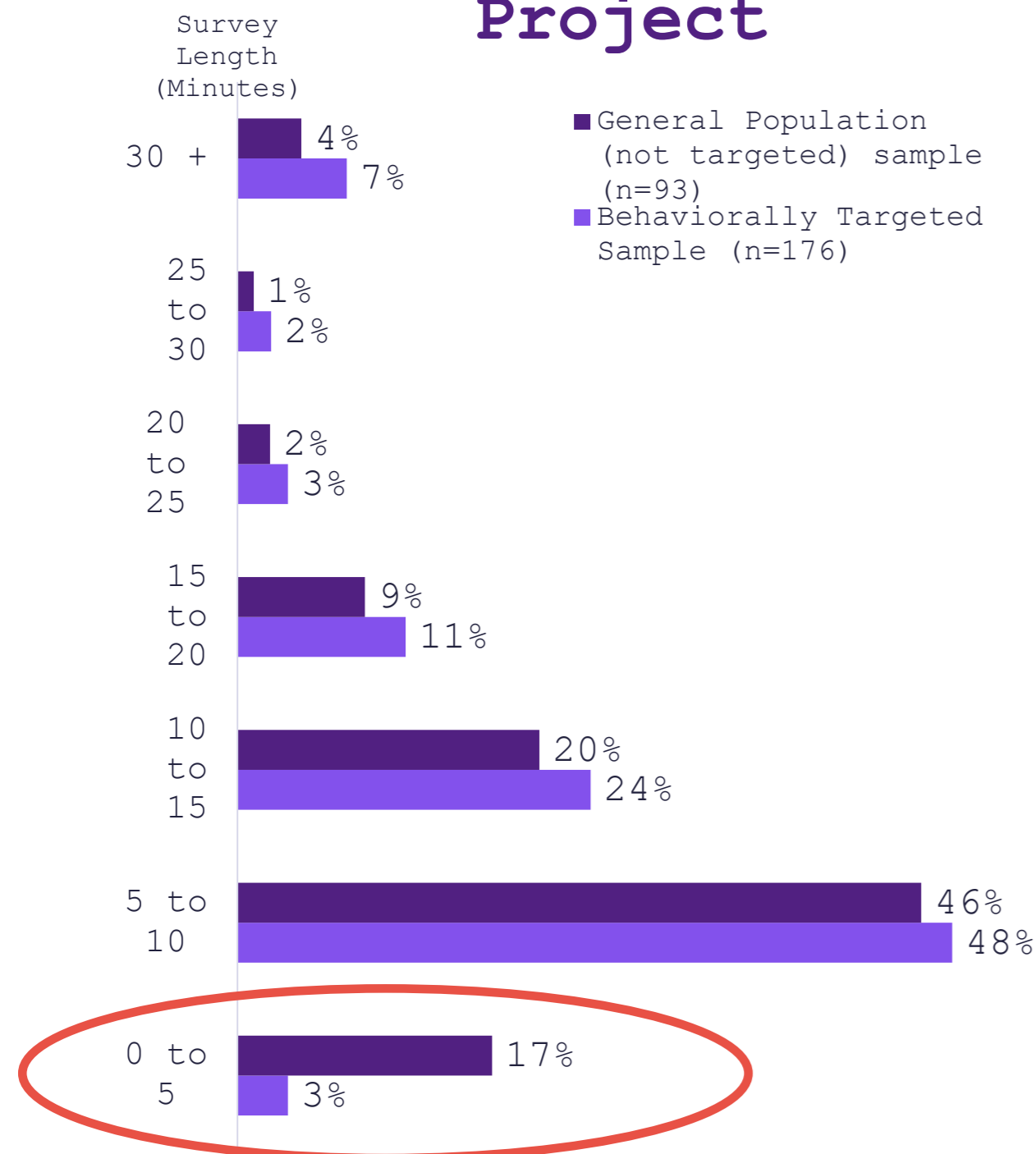
Claimed Usage of Retailer Coupon Mailers



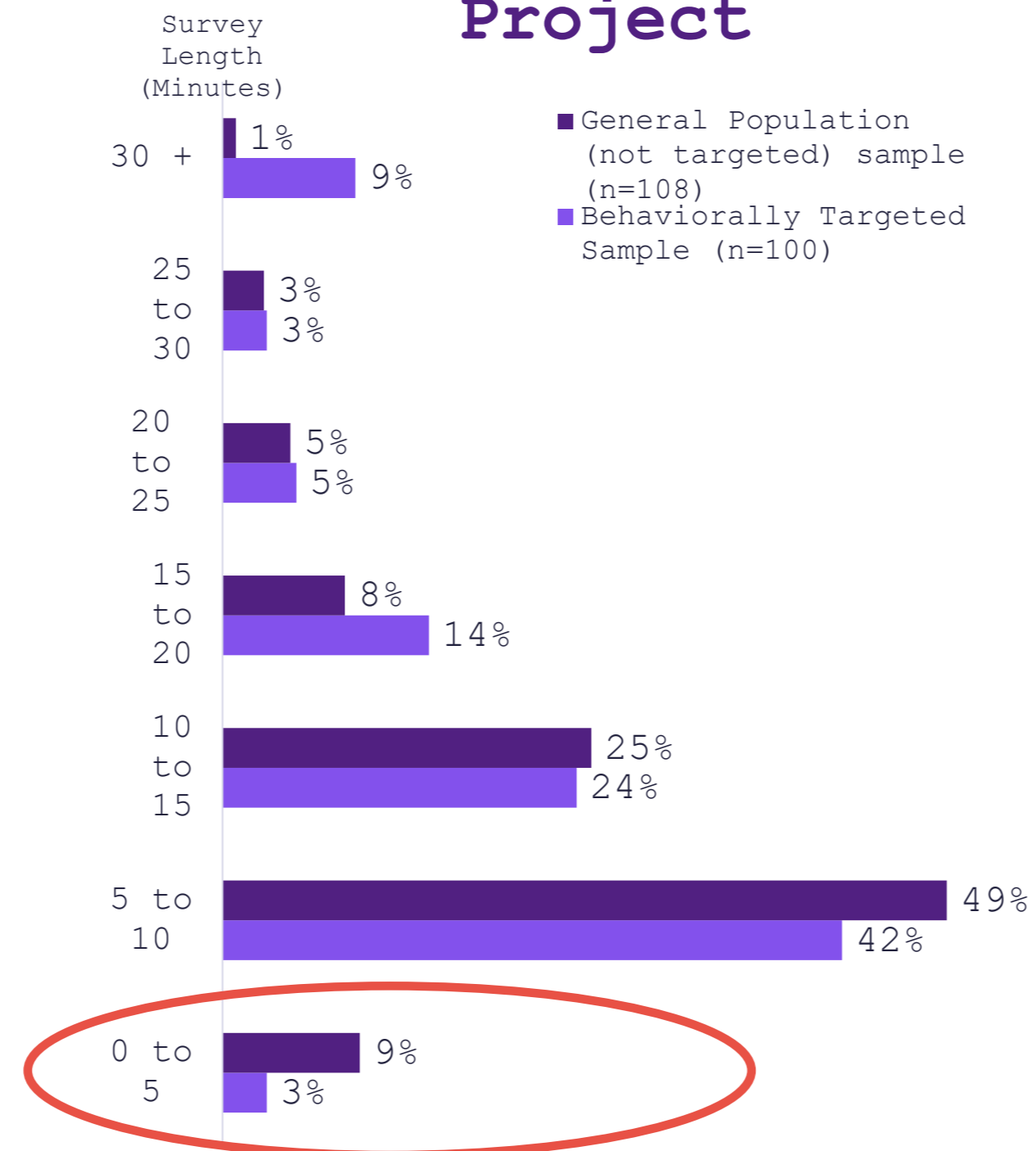
Survey completion time

Gen pop survey respondents show significantly faster completion times

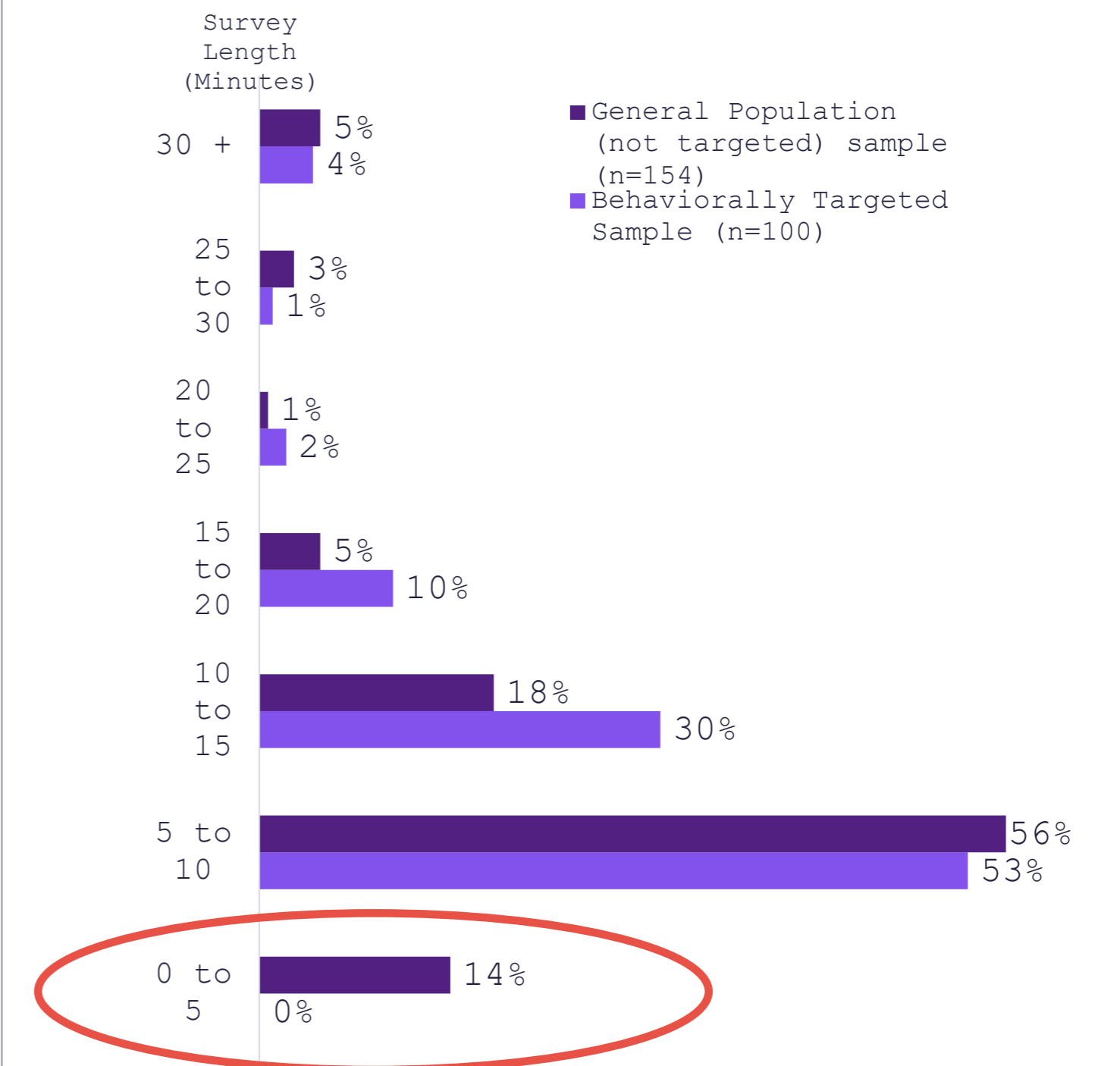
Meal Kit Project



Delivery Service Project



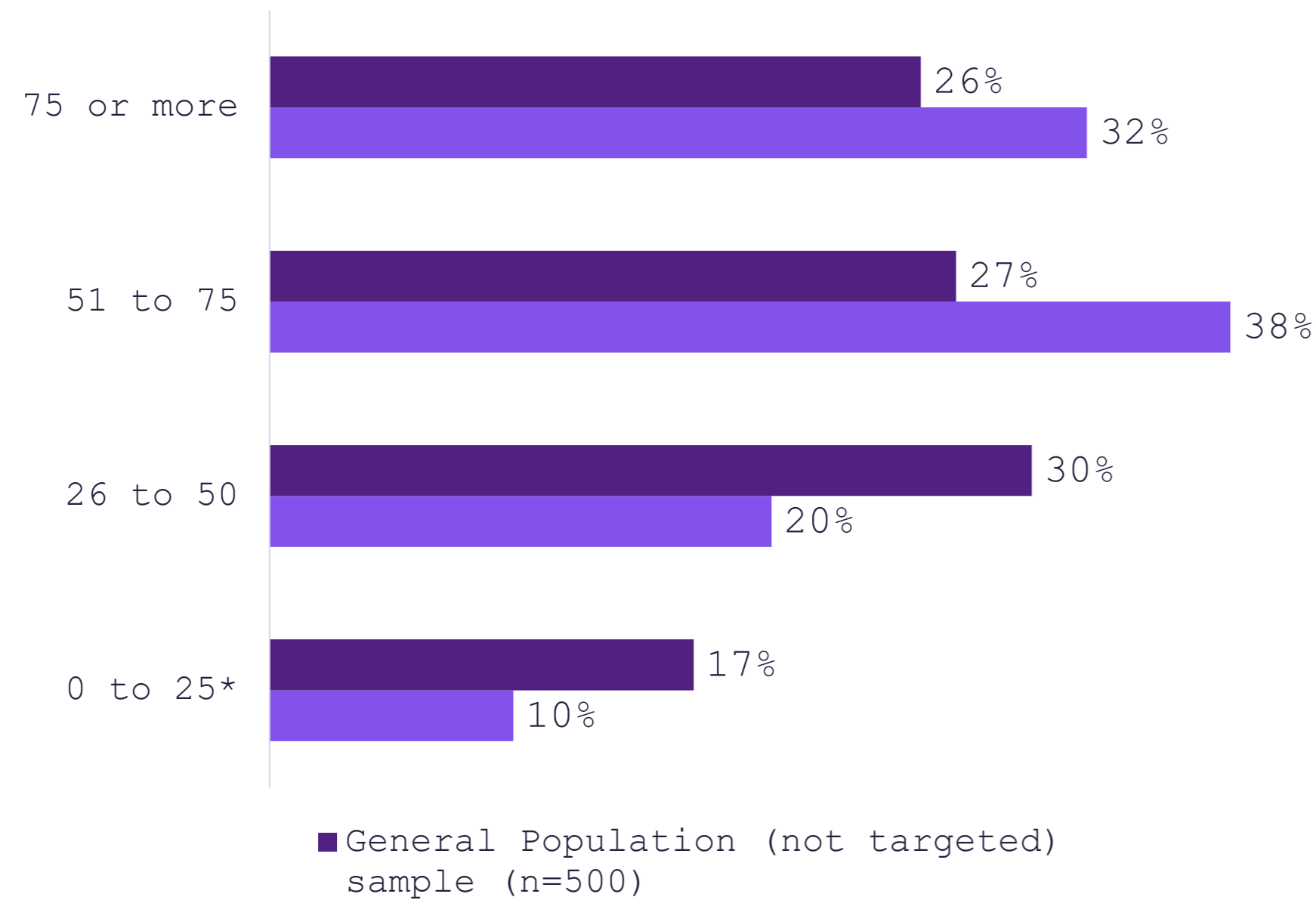
Coupon Mailer Project



Richer open-ended responses

Behaviorally targeted respondents provide significantly richer open-ended responses

Open End Response Length



"Likes" About Product (illustrative comments)

- Gen-pop**
- Quick meal
 - Not sure
 - Delicious
 - The taste
 - Easy meal
 - Healthy
 - It's easy
 - Taste
 - Ready made
 - Price
 - Fresh
 - Simple Meals

- Behaviorally targeted**
- High quality ingredients and easy to use
 - All the work and planning is done for you
 - Their products are very strong and sturdy
 - It looks like it would be easy and delicious.
 - You're able to get a whole meal in a kit.
 - All of the ingredients you need are there, pre-portioned.

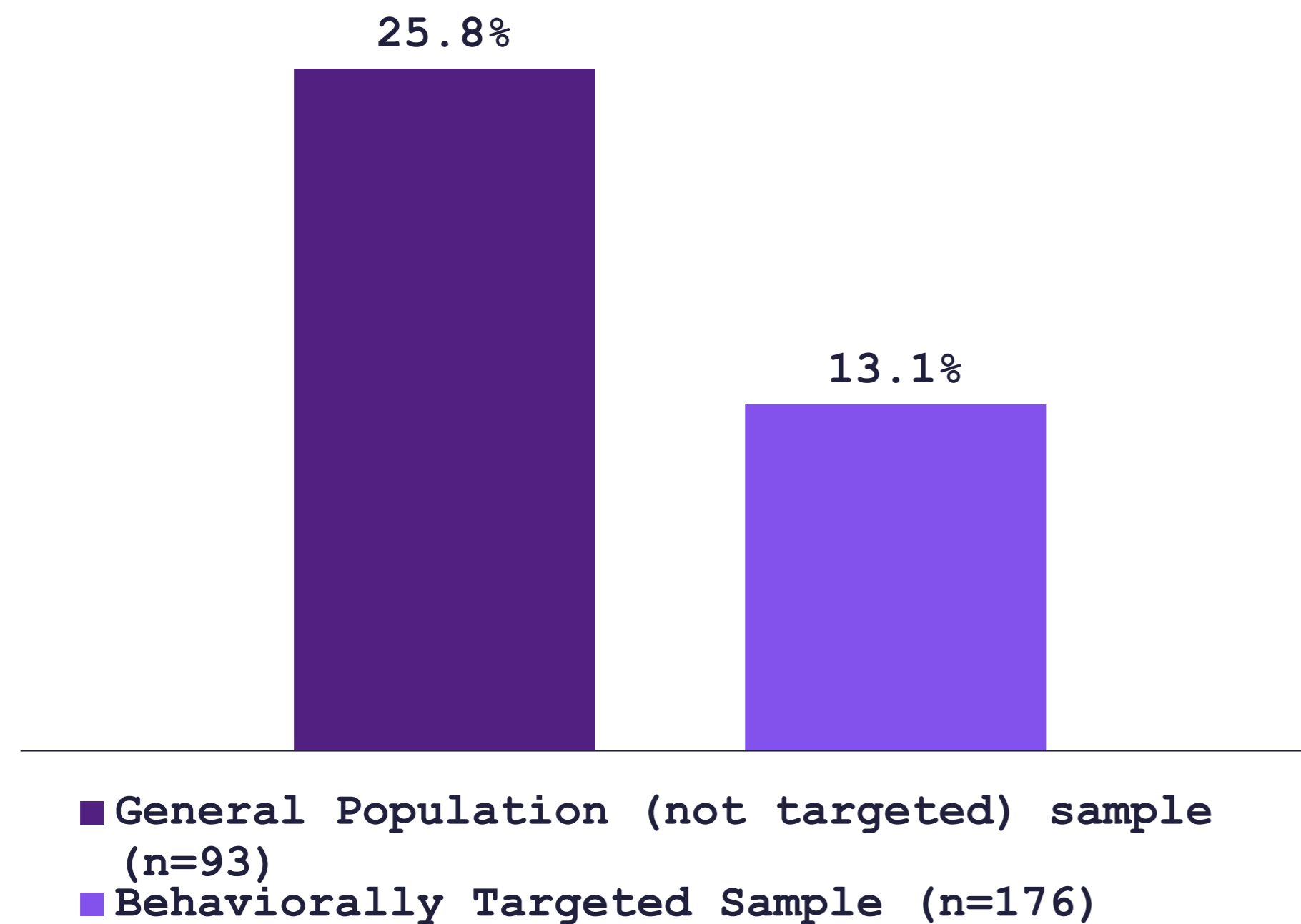
Total number of characters typed across two open-ended survey questions:

- "What do you like about [PRODUCT]?"
- "What would you like to see changed or improved about [PRODUCT]?"

Straight-lining behavior

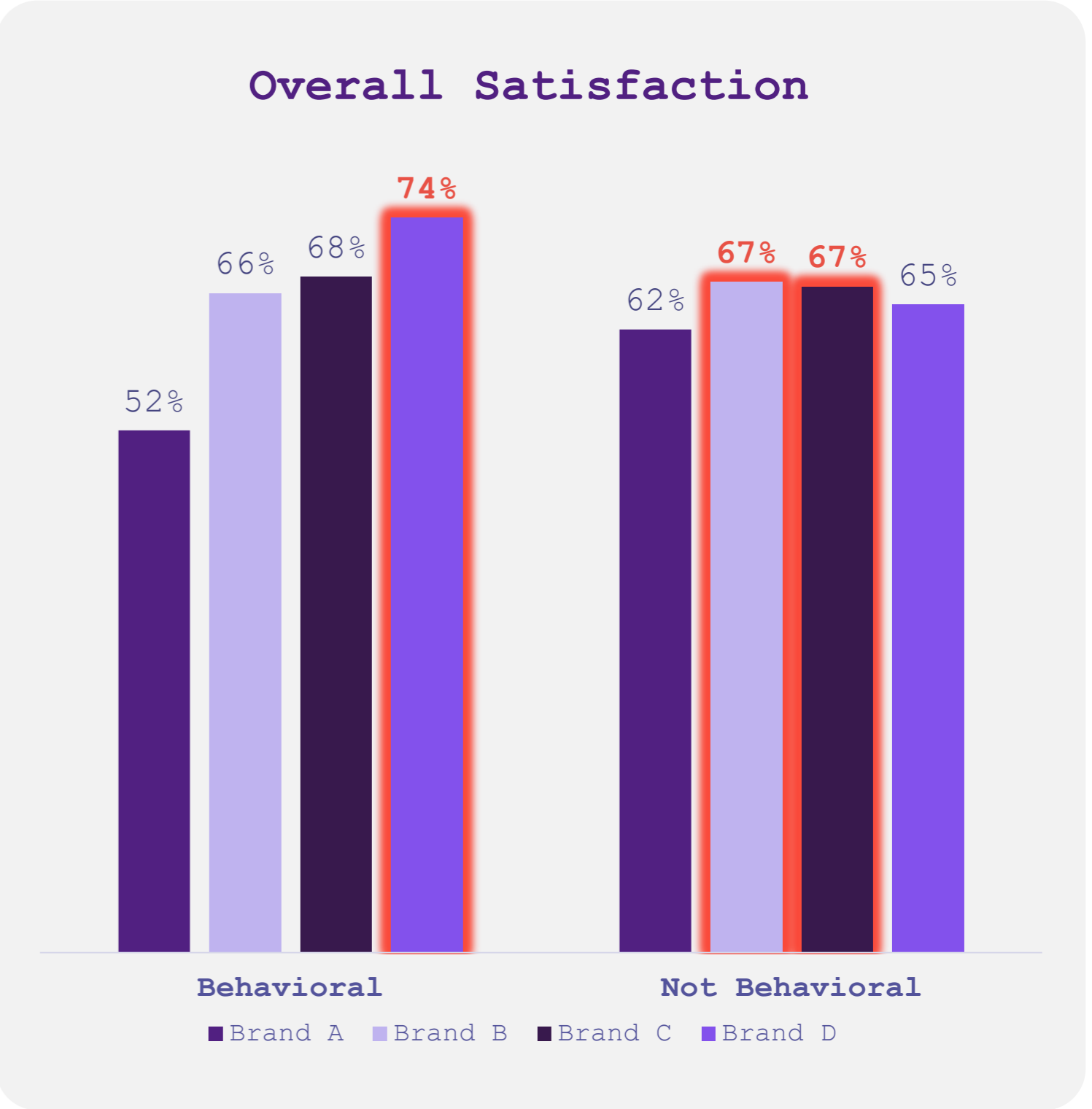
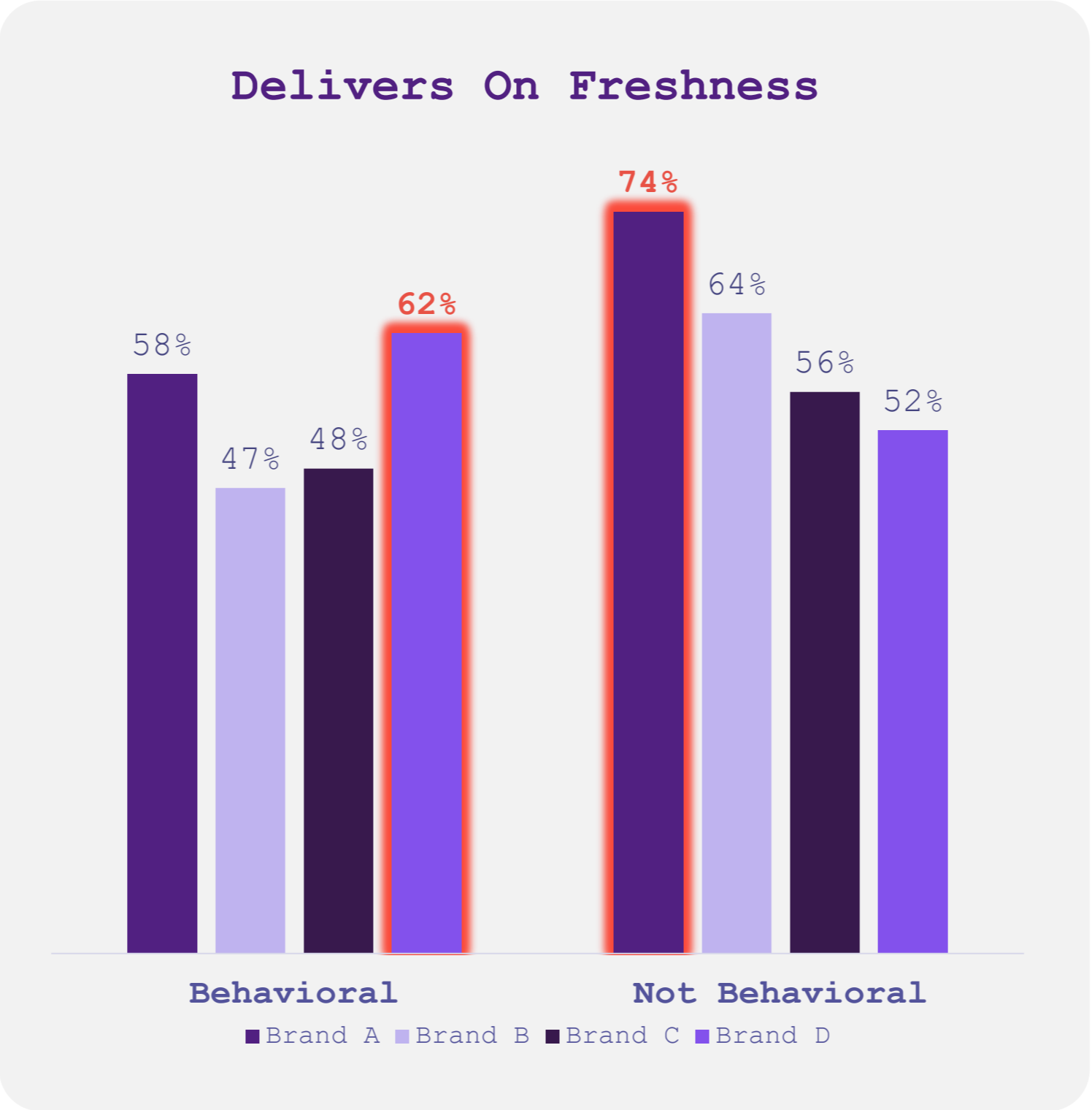
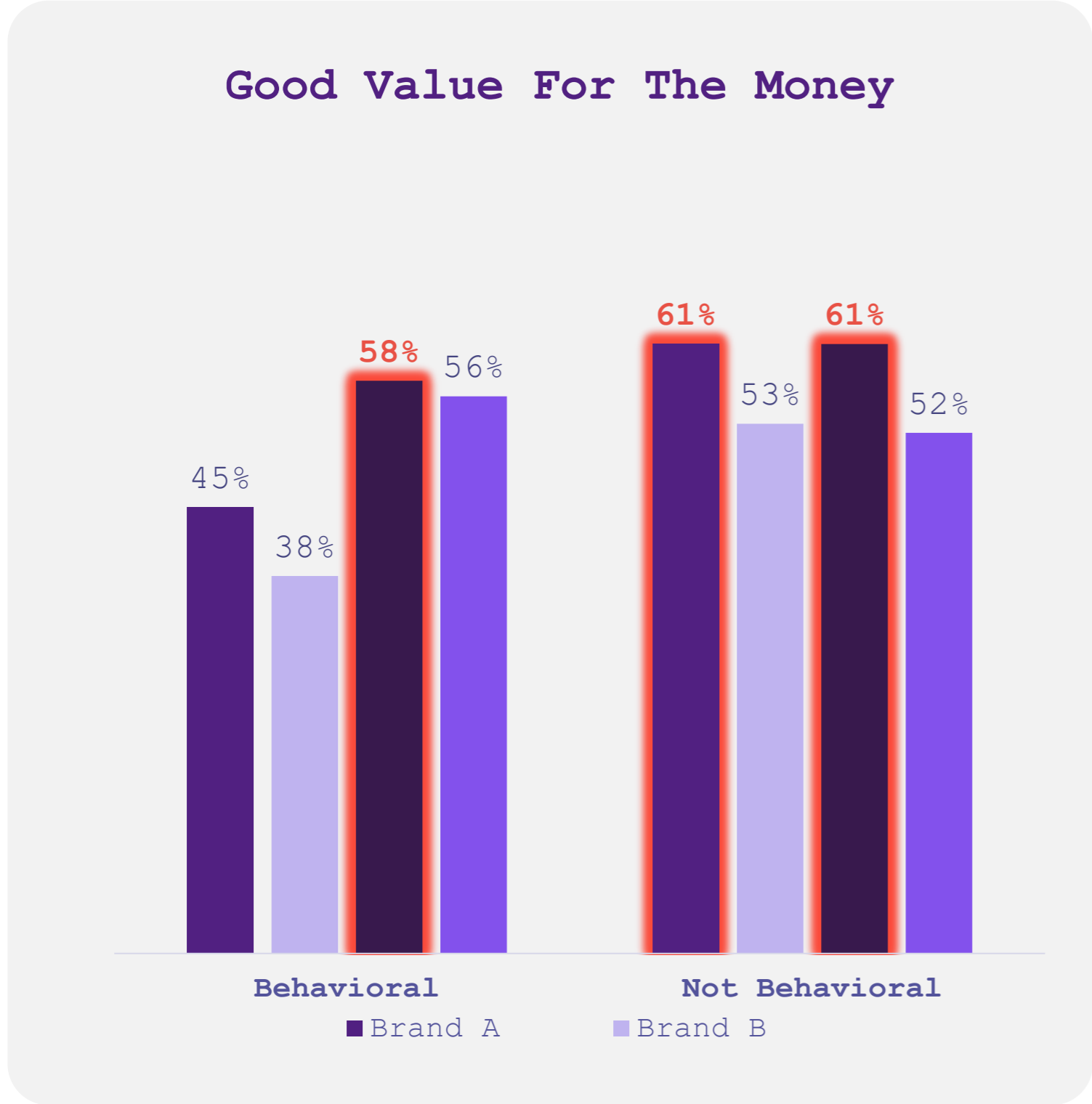
Gen pop samples are more likely to provide the same answers on every item attribute

Percent of Respondents Straight-lining*, Meal Kit Project



Behavioral vs. non-behavioral sampling have different patterns of results

The business decisions made as a result can be different when behaviorally targeted sampling is used



Source: 84.51° Consumer Research Product Profile, 2021

Attributes: Top two box ratings on 7-point scale
 Brand A (Behavioral n=176, Not Behavioral n=93)
 Brand B (Behavioral n=58, Not Behavioral n=139)
 Brand C (Behavioral n=50, Not Behavioral n=172)
 Brand D (Behavioral n=66, Not Behavioral n=333)

Satisfaction: Top two box ratings on 7-point scale
 Brand A (Behavioral n=176, Not Behavioral n=93)
 Brand B (Behavioral n=153, Not Behavioral n=210)
 Brand C (Behavioral n=159, Not Behavioral n=259)
 Brand D (Behavioral n=167, Not Behavioral n=405)

Case Study: Using behaviorally targeted sampling for a new, niche but growing category



Case Study: Unmet needs of the the plant-based market for the Plant Based Foods Association Objective

A qualitative and quantitative approach to understanding consumers' mindsets around plant-based foods and where the opportunities for growth exist.



Methodology

Recruitment Parameters

- Kroger/84.51° shopper data of 60M households
- Behaviorally target and recruit top 50% spenders of plant-based meats, milk, or cheese during the past six months
- Consumers' ages 25-64



Who's in the sample?

- 1) 78% Female
- 2) More likely to be plant-based consumers
- 3) Primary Grocery Shoppers

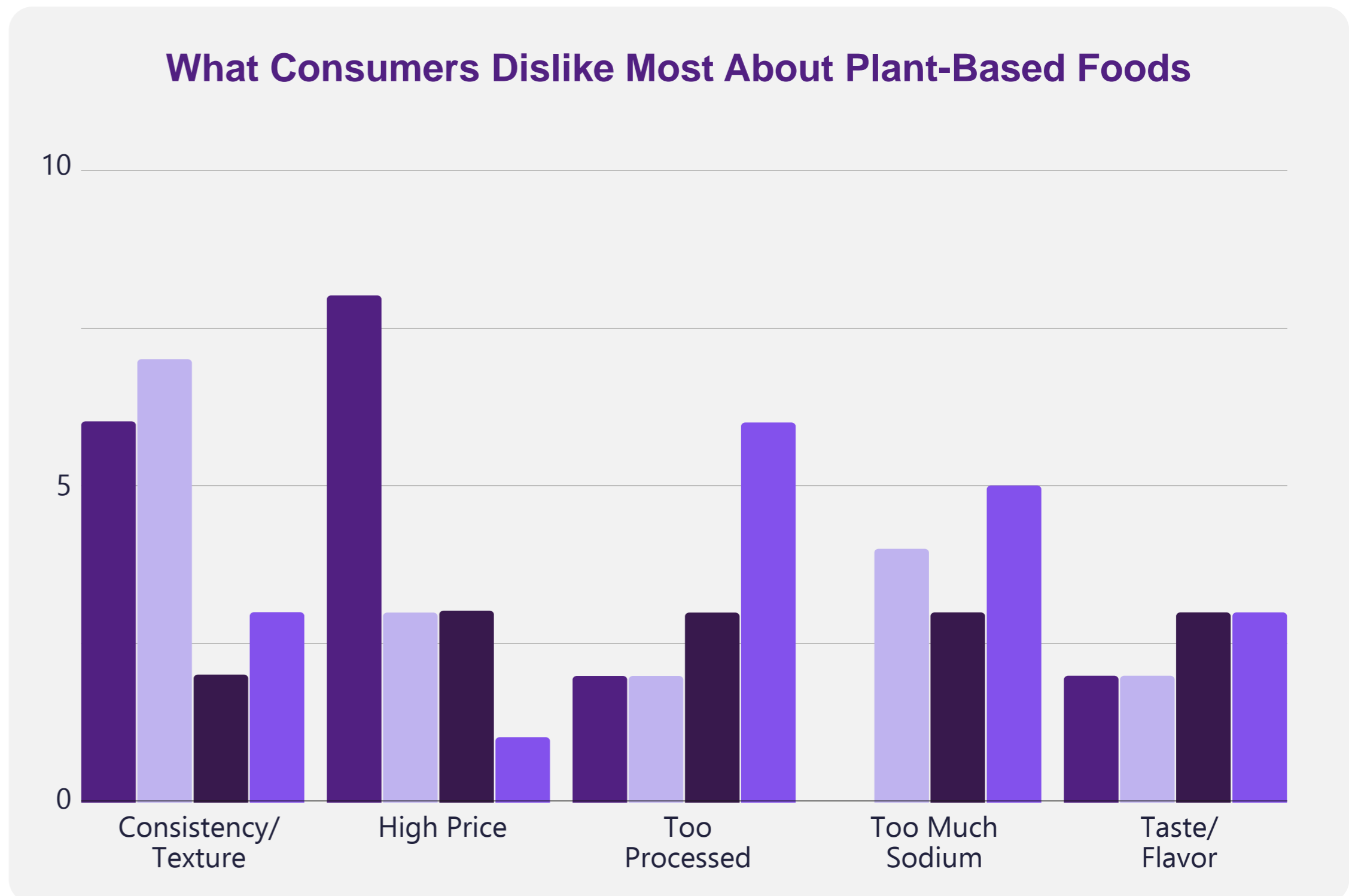
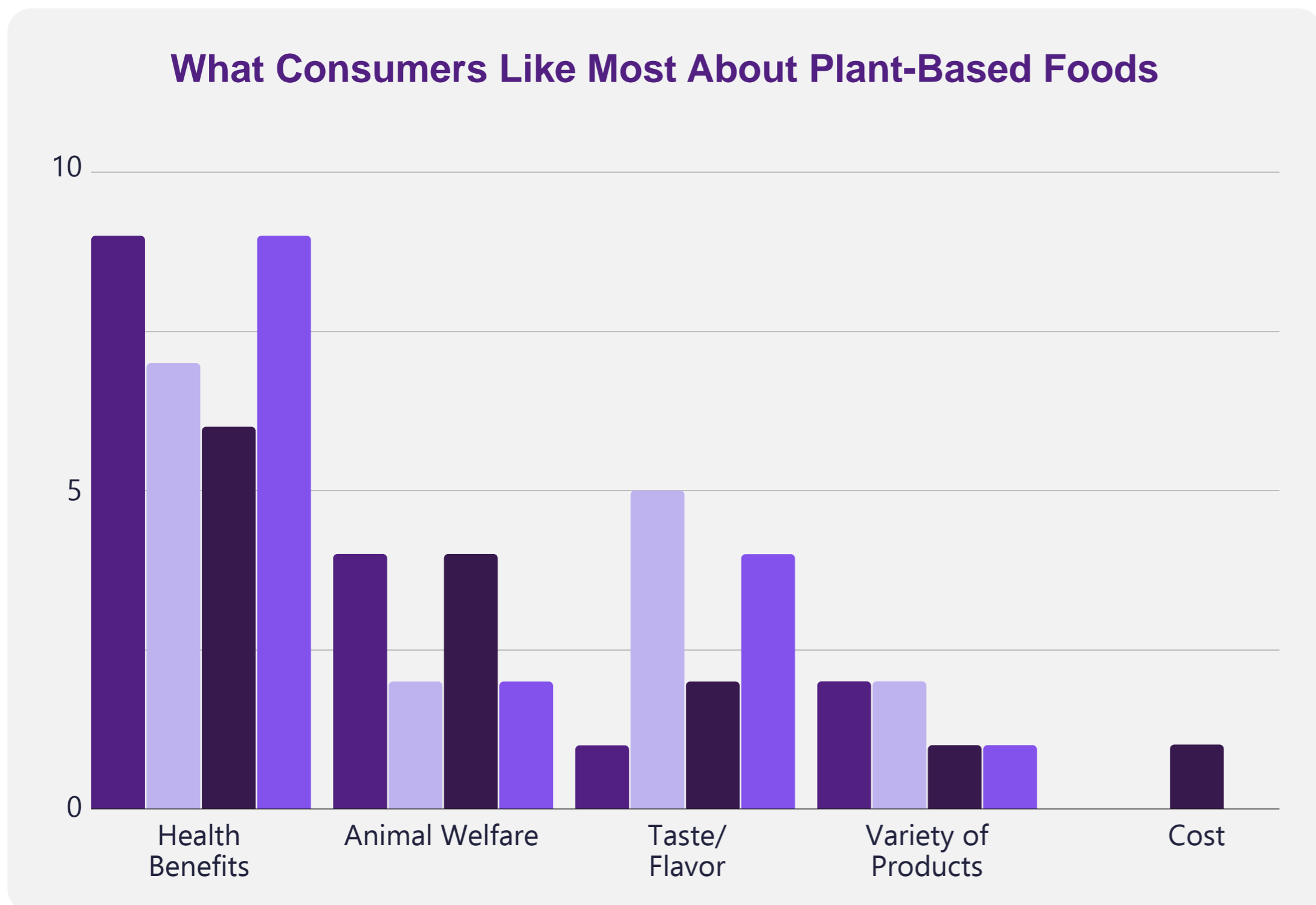
What do consumers want?

want?

On average, consumers like health benefits most, followed by animal welfare

and not

On average, consumers dislike the consistency/texture most, followed by high price



■ 25-34 ■ 35-44 ■ 45-54 ■ 55-64

■ 25-34 ■ 35-44 ■ 45-54 ■ 55-64

Research-based recommendations to help solve unmet needs



Exciting, Bold Flavors

- Exciting, bold new flavors and spices in lieu of salt
- Culturally relevant ethnic cuisine foods like curries and Thai dishes
- Familiar foods like tamales, enchiladas, and mac & cheese



Pre-made Meals

- More pre-made, nutrient-dense meals that are easy for breakfast, lunch, or on-the-go (frozen/non-frozen)



Cheese Advancements

- Advancements in plant-based cheese for better taste, texture, and the ability to melt

Why the plant-based industry benefits significantly from behaviorally targeted research



Niche, specialized target audience



Complex purchase behavior defines the desired segments



Relatively new category with high growth, requiring innovation to mature and develop



The cost of getting it wrong is HIGH!

Behaviorally targeted sampling
enables true longitudinal
measurement and can
validate research in new ways

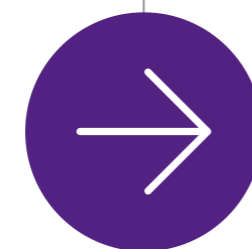
Demonstrating predictive validity: the say-do gap

How do we really know that survey respondents do what they say they will do? (over time)

84.51° New Product Trier Research

Measure spending of the survey taker over time to see their actual purchases.

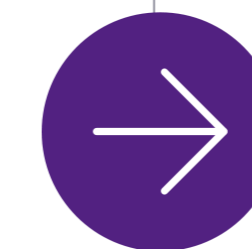
PRODUCT RELEASED
IN STORES



CONSUMERS MAKE
INITIAL PURCHASE



TARGETED SURVEY
CONDUCTED



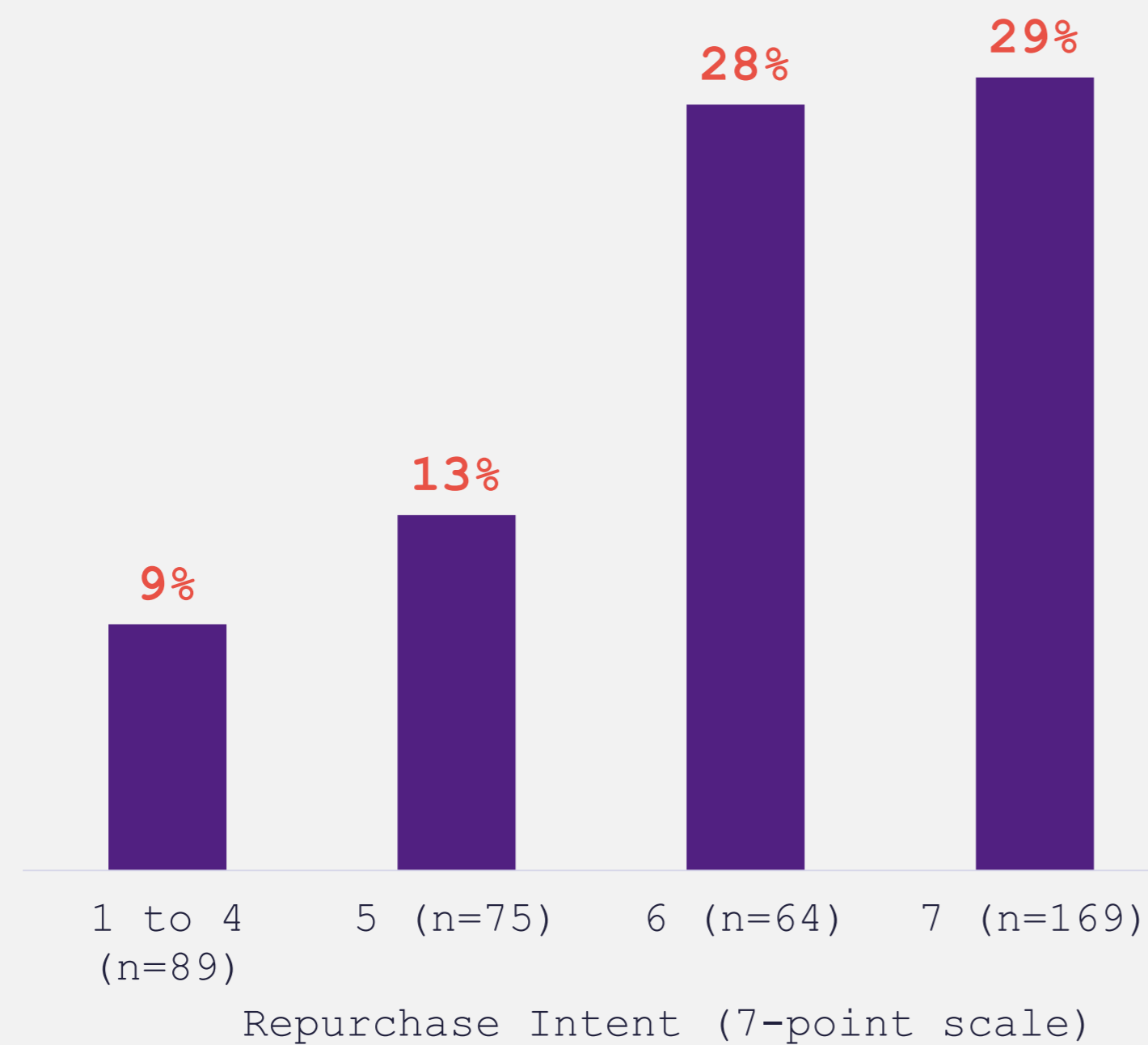
ACTUAL PURCHASE
BEHAVIOR MEASURED OVER
SUBSEQUENT MONTHS



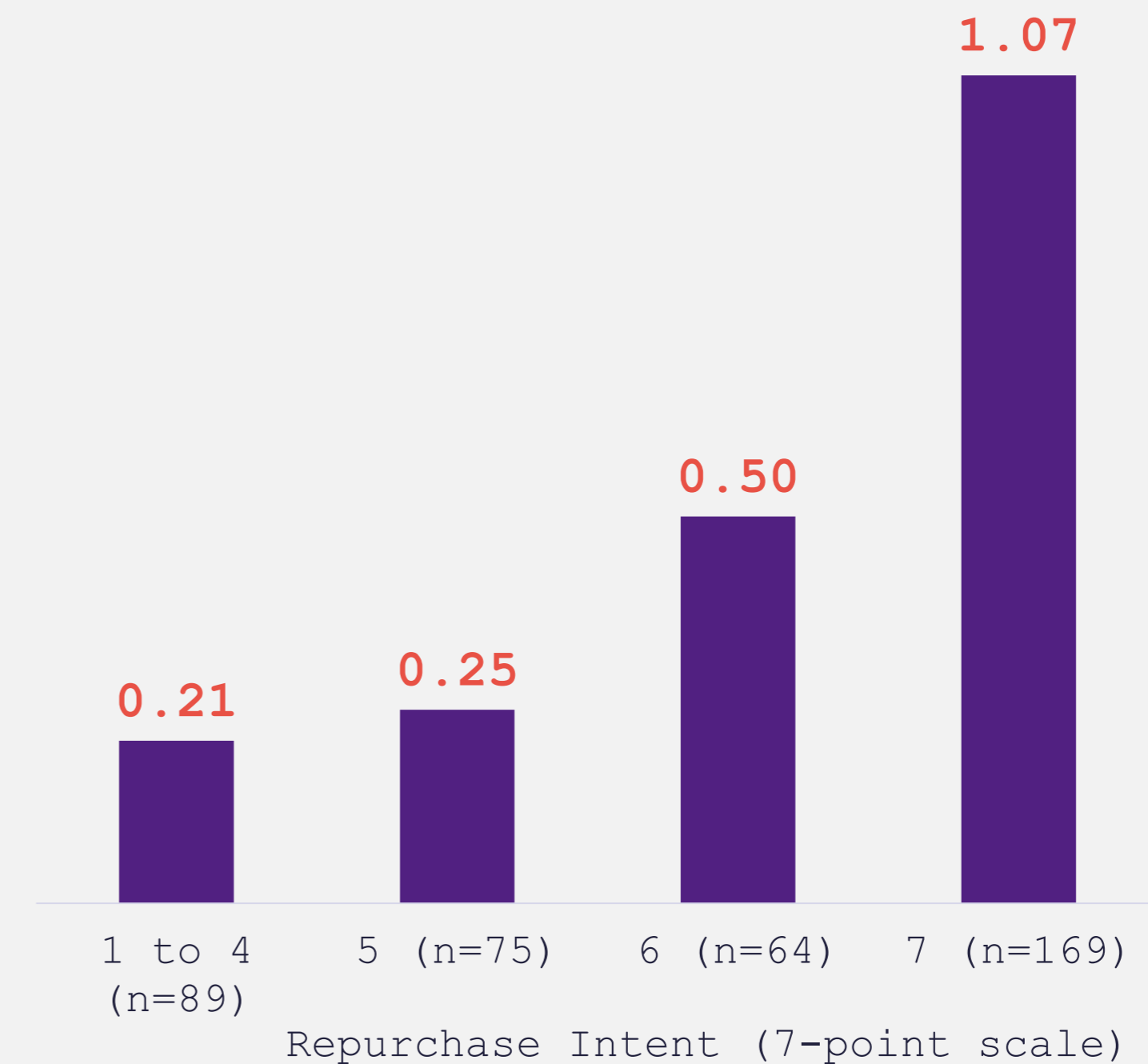
Consumers who say they will repurchase are more likely to do so

The common “top two box” proportion appears to be an appropriate metric for predicting repurchase, but “top box” may better predict volume.

Percent Repurchasing Within Six Months



Average HH Units Purchased Over Six Months Post-Survey



Benefits of behaviorally targeted sampling

It's often hard to remember what we did yesterday let alone what we purchased last month. Yet, much consumer research **relies on consumers' ability to recall their actual behavior.**

Behaviorally targeted sampling...



Creates **higher screening efficiency** which makes your research better and faster.



Gives you access to new, in-depth **complex behavioral profiles /segmentations** that traditional sampling can't.



Increases and **improves your research quality** by ensuring you're receiving the best research without fraudulent and unengaged respondents.



Enables **true longitudinal measurement** to better analyze households and consumer behavior over time.

Questions?



Find out more about
84.51° Consumer
Research

Thank you

John Seal

DIRECTOR, CONSUMER RESEARCH

