

Evaluating the Influence of Sugary Drink Warning Labels on Beverage Perceptions, Purchases, and Consumption

Chinyere Anucha

Mentor: Dr. Christina Roberto



Background

- **Sugar sweetened beverage:** drinks with added sugar
- **“Sugar tax”:** Philadelphia beverage tax
 - Any non-alcoholic beverage with sugar OR sweetener as an ingredient (includes diet sodas)
 - Adds 1.5 cents per ounce
- **Warning label:** A label with a message alerting consumers to the risks of consuming sugary beverages

Penny's Market Online Store Research Study

Do sugary drink warning labels discourage purchasing of these drinks?

- Determine to what degree warning labels *in an online store* increase knowledge on potential harms of sugar sweetened beverages and reduce intake
- How repeated exposure to a warning label affects purchasing behavior among adults and consumption among adults and kids
- Target population
 - Primary caregiver of a child between 6-11 y/o
 - Primary grocery shopper
 - Lives in Philly and Jersey area
 - Oldest child drinks SSBs at least twelve times a month/three times a week
 - Caregiver purchases SSBs at least once per month

Significance

- Putting labels at the point of sale in order to reach people
- Reducing diet-related disease: **weight gain, obesity, type 2 diabetes, heart disease, tooth decay**
- Informing global policy debates on requiring warning labels for sugary drinks (currently limited evidence)

Study Overview



Recruitment

- **GOAL: 216 racially and ethnically diverse caregivers**
- Advertising the study
 - Facebook
 - Craigslist
 - Flyers
 - Clinical Trials at Penn Medicine (iConnect)
- Best place to display flyers?
 - Penn and Drexel
 - Wawa and grocery stores
 - Near SEPTA
 - Libraries
 - Parks



EARN MONEY SHOPPING ONLINE

Are you 18 years old or older?

Are you the primary caregiver of a child between the ages of 6-11?

Are you the primary grocery shopper for your family?

Do you have regular internet access?

Do you read and speak English?

You can earn up to \$84 by taking two surveys and ordering snacks and beverages online that will be delivered to your home.



To learn more about this voluntary consumer research study, please scan the QR code or call us at (215)-839-9806 and ask about the online store study.



Online Store Study
215-839-9806

Online Store Study
215-839-9806

Online Store Study
215-839-9806

Online Store Study
215-839-9806

Online Store Study
215-839-9806

Online Store Study
215-839-9806

Online Store Study
215-839-9806

Online Store Study
215-839-9806

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	ID	Condi tion	Week	Shopify Discount Code	Date Purchased	Date Order Placed	Shopify \$ Spent	Shopify Product s Purchas ed	Item \$ Amt	Shipping & Tax \$ Amt	Total Gift Card Amt	Amazon Gift Card Code	Date Gift Card Purchased	Order Number	Notes	Add to next week Gift Card Audit				
2		C	4		5/30/2022	5/31/2022	13.55	5	20.35	5.64	25.99	ET58-5VMWL7	6/1/2022		Replaced Deer Park and Santitas Chips					
3		C	4		5/31/2022	5/31/2022	12.65	6	23.85	4.73	28.58	R8GW-2ECLCR	6/1/2022		Replaced Capri Sun, Gatorade, and Honest Kids. Refunded Coke					
4		S	4		5/31/2022	5/31/2022	12.05	5	19.75	5.67	25.42	L4PQ-4WUQ86	6/1/2022		Replaced Honest Kids and both Capri Suns					
5		S	4		5/30/2022	5/31/2022	15.94	6	35.92	0.84	36.76	ZAFW-DFQGD6	6/1/2022		Replaced skinny pop, both honest kids, and diet coke					
6		S	4		5/30/2022	5/31/2022	11.75	5	19.83	6.3	26.13	M98M-VLA5LS	6/1/2022		Replaced Capri Sun					
7		S	3		5/30/2022	5/31/2022	7.18	2	19.73	7.15	26.88	R7BC-7DB3M3	6/1/2022		Replaced Diet coke					
8		C	2		5/30/2022	5/31/2022	14.85	5	31.45	9.72	41.17	E8LW-SRJV8Q	6/1/2022		Replaced capri sun					
9		C	1		5/31/2022	5/31/2022	10.67	3	13.47	5.16	18.63	9M9P-DPJMNC	6/1/2022		Replaced Deer Park and Gatorade G2					
10		C	1		5/30/2022	5/31/2022	8.97	3	15.57	5.67	21.24	EVUV-7KGED3	6/1/2022		Replaced Deer Park and Wheat Thins					

Enrollment

- Participant fills out interest form
- We try to get in contact with them **four** times (including through text)
- Recruitment screener
 - Eligibility questions
 - Household eating and grocery purchasing habits
 - Address eligibility
- Consent
- Walkthrough
- Welcome packet
- Demographic survey
- Randomization
- Start study!

Data Collection Instrument	Recruitment	Shop 1	Shop 2	Shop 3	Shop 4	Final Survey
Pennys Market Interest Form (survey)	<input type="radio"/>					
Recruitment Contact Log	<input type="radio"/>					
Recruitment Screener	<input type="radio"/>					
Consent & Required Info	<input type="radio"/>					
Participant Walkthrough	<input type="radio"/>					
Initial Survey (Baseline Survey) (survey)	<input type="radio"/>					
Randomization	<input type="radio"/>					
Participant Profile	<input type="radio"/>					
Study Progress Tracker	<input type="radio"/>					
Online Store Participation		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Participant Payment Tracking		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Final Survey (survey)						<input type="radio"/>

Initial Pctpt Contact Method:
* must provide value

Live phone call where participant calls us
 Participant called us and left a voicemail
 Live phone call where we call the participant
 Participant emailed us
 Participant completed the REDCap Interest Form

*Mark FORM STATUS as complete, SAVE, move to RECRUITMENT SCREENER [reset](#)

Date of initial contact
(e.g. when they called us, when we receive a list of contact info, when they left a voicemail, when they emailed us, when they filled out the interest form)
* must provide value

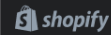
08-09-2022 31 Today M-D-Y

Name: Chinyere Anucha

Phone
* must provide value
(555) 555-5555
xxx-xxx-xxxx

Callback 1: Date
08-09-2022 31 Today M-D-Y

Time of Callback #1
10:23 Now H:M



Unsaved discount

Discard

Save

Penny's Market

- Home
- Orders 1,432
- Products
- Customers
- Finances
- Analytics
- Marketing
- Discounts**
- Sales channels >
- Online Store
- Apps >
- + Add apps

Settings

Create order discount

Amount off order

Order discount

METHOD

- Discount code
- Automatic discount

Discount code

12345667890

Generate

Customers must enter this code at checkout.

Value

Percentage Fixed amount

\$ 15.00

Minimum purchase requirements

No minimum requirements

Summary

12345667890

TYPE AND METHOD

- Amount off order
- Code

DETAILS

- Available on online sales channels
- \$15.00 off entire order
- No minimum purchase requirement
- All customers
- One use per customer
- Active from today until Aug 21

PERFORMANCE

Discount is not active yet.

Beverages



60
CALORIES
PER POUCH

Capri Sun Fruit Punch Ready-to-Drink
Juice (10 count)

\$1.79



60
CALORIES
PER POUCH

Capri Sun Strawberry Kiwi Ready-to-
Drink Juice (10 count)

\$1.79

Beverages



60
CALORIES
PER POUCH

Capri Sun Fruit Punch Ready-to-Drink
Juice (10 count)

\$1.79



60
CALORIES
PER POUCH

Capri Sun Strawberry Kiwi Ready-to-
Drink Juice (10 count)

\$1.79

WARNING

9 PACKETS OF SUGAR
PER BOTTLE



Drinking beverages with added sugar contributes to obesity, type 2 diabetes, and tooth decay.

WARNING

10 TEASPOONS OF SUGAR
PER CAN



Drinking beverages with added sugar contributes to obesity, type 2 diabetes, and tooth decay.

WARNING

15 CUBES OF SUGAR
PER BOTTLE



Drinking beverages with added sugar contributes to obesity, type 2 diabetes, and tooth decay.

Shopping Period

- Monday: Updating warning labels weekly and sending discount codes, store link, and password
- **4 weeks** (1 week in control store, then either control OR study) through Shopify
- Placing orders on Amazon throughout week
- Putting shopping data into REDCap
- Friday: Create new discount codes and draft emails





Event: Shop 2	
Record ID	1
Time/Date RA Entry	
08-09-2022 10:44:09 <input type="text" value="01"/> <input type="button" value="Now"/> M-D-Y H:M:S <small>(last updated time/date)</small>	
Participant purchase date	
* must provide value	
08-09-2022 <input type="text" value="01"/> <input type="button" value="Today"/> M-D-Y	
What type of item was the purchase?	<input checked="" type="radio"/> Beverage <input type="radio"/> Snack
* must provide value	reset
What type of beverage is the purchase?	<input type="text" value="Pepsi, 16.9 oz"/>
* must provide value	
Did the participant get the purchase that they wanted?	<input type="radio"/> Yes <input checked="" type="radio"/> No - Replacement <input type="radio"/> No - Refund
* must provide value	reset
<small>Note: Replacements will be for same type of purchase (snack/beverage; same bev/snack categorization e.g. soda or chips); Refunds can be any beverage/snack, could be something else in store</small>	
What type of beverage replacement is the purchase?	<input type="text" value="Pepsi Cola, 7.5 oz, 6 ct cans, x2"/>
* must provide value	Replacement items - to add to as necessary

Post Shopping

- Send final survey (asking about different types of labels based on randomly assigned condition)
- Mail final packet with ClinCard (includes any unused discount credit)
- Participant is done!

Checkout details

From Online Store

 1	Coca Cola (12 count)	\$3.79 × 1	\$3.79
 1	Honest Kids Berry Berry Good Organic Lemonade Juice Drink (8 count)	\$2.49 × 1	\$2.49
 1	Kellogg's Rice Krispies Treats, Crispy Marshmallow Squares, Original (8 count)	\$2.29 × 1	\$2.29
Discount			-\$8.57
Subtotal	3 items		\$0.00
Shipping	Standard Shipping (0.41 lb)		\$0.00
Tax			\$0.00
Total			\$0.00
To be paid by customer			\$0.00

Data Analysis

- What we'll be looking for:
 - Change in beverage calories/100 mL
 - Change in beverage added sugars/100 ml purchased from Week 1 vs Weeks 2-4
 - Changes in oz of sweetened beverages (added sugar) consumed per day by the child and by the adult for Week 1 vs Weeks 2-4
- Assessing SSB-related knowledge and beliefs and reactions to the warning labels (emotional response)

Conclusions

- **From 9 participants shopping in a week to 44** — recruitment success
- Research is fun (for the participants too!)
- Gaining communication, organization, time management, strategic thinking, customer service, and other skills

Thank You!