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

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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



REDCap

+ Add new record

Displaying: Instrument status only | Lock status only | All status types

	Recruitment									Shop 1		Shop 2		Shop 3		Shop 4		Final Survey
Record ID	Pennys Market Interest		Recruitment	Consent &	Participant	Initial Survey (Baseline		Participant	Study	Online Store Participation	Participant Payment	Final Survey						
1	۲	۲	۲	۲	۲	0) +	۲				\bigcirc			
2	۲	\bigcirc	۲		0		0				\bigcirc	0	\bigcirc	۲	\bigcirc	۲		
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4	۲	۲	۲	۲	۲		0	۲		\odot		0		0	\bigcirc	0		
5	۲	۲	۲	۲														
<u>6</u>	۲	۲	۲	۲	۲			۲		\odot		0		0	\bigcirc			
Z		۲	۲	۲	۲													
8		۲			۲		0	۲		\odot		0		0		0		
9	0	۲	۲	۲	۲													
<u>10</u>		۲	۲	۲			\bigcirc			\odot		0		\odot		\odot		
<u>11</u>		۲										0		0		0		
<u>12</u>		0										0		0	\bigcirc	\odot		
<u>13</u>		۲					0			\odot		0		\odot	\bigcirc	\odot		
<u>14</u>		۲	۲	۲	۲		0					0	\bigcirc	0	\bigcirc	0	\bigcirc	\odot
15		۲	۲	۲	۲	0				\bigcirc		0				\odot		

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.





	Α	В	С	D	E	F	G	Н	I	J	K	L	Μ	Ν	0	Р	Q	R	S	Т
																Add to				
								Shopify								next				
								Product			Total					week				
								s		Shipping	Gift		Date Gift			Gift				
		Conditi			Date	Date Order	Shopify	Purchas	ltem \$	& Tax \$	Card	Amazon Gift	Card	Order		Card				
1	ID	on	Week	Shopify Discount Code	Purchased	Placed	\$ Spent	ed	Amt	Amt	Amt	Card Code	Purchased	Number	Notes	Audit				
2		С	4		5/30/2022	5/31/2022	13.55	5	20.35	5.64	25.99	ET58-5VMWL7	6/1/2022		Replaced	Deer Parl	k and Santi	tas Chips		
3		С	4		5/31/2022	5/31/2022	12.65	6	23.85	4.73	28.58	R8GW-2ECLCR	6/1/2022		Replaced	Capri Sur	, Gatorade	, and Hone	st Kids. Ref	unded Coke
4		S	4		5/31/2022	5/31/2022	12.05	5	i 19.75	5.67	25.42	L4PQ-4WUQ8	6/1/2022		Replaced	Honest K	ids and bot	h Capri Sur	IS	
5		S	4		5/30/2022	5/31/2022	15.94	6	35.92	0.84	36.76	ZAFW-DFQGD	6/1/2022		Replaced	skinny po	p, both ho	nest kids, a	nd diet cok	e
6		S	4		5/30/2022	5/31/2022	11.75	5	i 19.83	6.3	26.13	M98M-VLA5LS	6/1/2022		Replaced	Capri Sur	1			
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		С	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		С	1		5/31/2022	5/31/2022	10.67	3	13.47	5.16	18.63	9M9P-DPJMN0	6/1/2022		Replaced	Deer Par	k and Gato	rade G2		
10		с	1		5/30/2022	5/31/2022	8.97	3	15.57	5.67	21.24	EVUV-7KGED3	6/1/2022		Replaced	Deer Par	k and Whea	at Thins		
4.4																				

	A B	С	D	E	F	G	н	I	J	K L	М	Ν	0 P	Q	R	S	т	U	V	w	х	Y
13	с	3		8/8/2022	8/10/2022	16.44	6	15.45	6.61	22.06 Q3D9-BWR	X 8/11/2022		Refund Diet coke,	Replaced Sar	ntitas						9	32.54
14	с	3		8/8/2022	8/9/2022	11.65	5	21.15	3.64	24.79 VS9B-RP44	48 8/11/2022		Replaced Dasani,	Replaced wh	eat thins, R	efund Skini	ny pop				10	32.77
15	с	3		8/8/2022	8/8/2022	16.34	6	28.53	5.98	34.51 U8TP-T578	4A 8/9/2022		Refund Skinnypop	, Refund Coc	a-cola Repl	laced diet C	oca-Cola, F	Replaced So	our patches		11	34.51
16	s	3		8/8/2022	8/8/2022	15.44	6	35.64	3.52	39.16 9Y9Y-BBD6	5 8/9/2022		6 Refunded Santitas	, Refund Coc	a-cola						12	39.16
17	s	3		8/9/2022	8/10/2022	12.65	5	17.97	5.81	23.78 2AXA-XNV	VV 8/11/2022		Refund Oreo's, Re	placed Gator	ade G2						13	44.86
18	s	3		8/8/2022	8/12/2022	6.97	3	18.57	7.49	26.06			8 Replace pepsi, fig	Newtons, Sk	innypop						14	18.2
19	с	3		8/10/2022	8/11/2022	16.63	7	33.64	7.37	41.01			Refund Capri sun								15	17.01
20	s	3		8/9/2022	8/10/2022	12.36	4	20.16	11.49	31.65 WRZF-4ZC	Y? 8/11/2022		Replaced Gatorad	e, Replaced H	Celloggs						16	18.99
21	с	3		8/9/2022	8/10/2022	4.78	2	7.78	5.72	13.5 ZSEA-E26Z	U 8/12/2022		Replaced Capri Su	n							17	35.28
22	s	3		8/8/2022	8/10/2022	5.78	2	14.77	5.15	19.92 STJB-YL97.	X7 8/11/2022		Replaced Diet cok	e							18	35.67
23	s	3		8/8/2022	8/9/2022	6.37	4	19.06	7.19	26.25 NJGT-ZKQ	7D 8/11/2022		Replaced Capri Su	n Strawberry	Kiwi. Even	tually had t	to refund 1	capri sun l	because the	y did not n	19	12.78
24	с	2		8/8/2022	8/10/2022	4.18	2	10.28	6.54	16.82 TG4K-3LD9	H 8/11/2022		Replaced Oreo co	okies							20	23.39
25	s	2		8/8/2022	8/8/2022	14.95	5	34.14	10.72	44.86 Y9T3-5WX	2X 8/9/2022		Replaced Gatorad	e G2, Dasani,	, sour patch	hes					21	28.24
26	с	2		8/8/2022	8/9/2022	14.83	7	18.44	6.71	25.15 VTCX-9HV	K(8/11/2022		Replaced Kelloggs	, Replaced W	/heat thins,	Replaced S	SkinnyPop p	popocm, R	efund Oreo'	s, Refund cap	ori sun stra	wberry Kiwi
27	с	2		8/8/2022	8/8/2022	6.88	2	12.28	5.92	18.2 HNZR-LWI	N7 8/9/2022		78-1710602									592.81
28	с	2		8/9/2022	8/10/2022	13.05	5	20.94	4.54	25.48 DJNA-X8C	Q6 8/11/2022		Replaced Gatorad	e, Santitas, V	Vheat thins	, skinnypop)					
29	s	2		8/8/2022	8/8/2022	5.18	2	11.48	5.53	17.01 XTL8-457G	Y(8/9/2022		7-0817858									
30	с	2		8/8/2022	8/8/2022	7.58	2	13.28	5.71	18.99 YEBW-F9K	N: 8/9/2022		Replaced Deer pa	rk								
31	с	2		8/8/2022	8/8/2022	14.55	5	28.74	6.54	35.28 5NJN-EWD	8F 8/9/2022		Replaced Capri su	n and Diet Co	oca-Cola, R	efund coca-	cola					
32	с	2		8/8/2022	8/9/2022	6.18	2	11.38	6.77	18.15 Q2MA-3MV	N 8/11/2022		Replaced Kelloggs	, Replace Gat	torade							
33	с	1		8/8/2022	8/9/2022	14.75	5	21.66	4.01	25.67 33EN-X52Z	FE 8/11/2022		Replaced Gatorad	e, Replaced S	Santitas, Re	placed Terr	a chips, Re	fund Diet o	oke			
34	с	1		8/12/2022	8/12/2022	7.47	3	13.27	4.19	17.46			EReplaced F YES									
35	с	1		8/8/2022	8/9/2022	9.56	4	24.26	4.29	28.55 9BXQ-V9X	HI 8/12/2022		Replaced Dasani									
36	s	1 (C)		8/8/2022	8/10/2022	13.75	5	16.16	5.01	21.17 MYXE-EW	HF 8/11/2022		Replaced Deer pa	rk, Refund Ba	ire natural	apple chips						
37	S	1 (C)		8/8/2022	8/9/2022	11.55	5	22.35	4.99	27.34 ZJ9F-7GD7	F4 8/12/2022		4-8549065									
38	s	1 (C)		8/9/2022	8/10/2022	12.25	5	14.46	3.12	17.58 C244-HG52	JR 8/11/2022		Replaced Wheat t	hins, Refund	Pepsi, Refu	nd Capri su	in					
39	s	1 (C)		8/8/2022	8/8/2022	13.34	6	27.84	7.83	35.67 4FCA-QL5F	SI 8/9/2022		Replaced Santitas	Replaced Ca	pri sun Str	awberry kiv	vi					
40	s	1 (C)		8/8/2022	8/8/2022	5.48	2	7.78	5	12.78 9LUY-CV7.	JS 8/9/2022		96-1595457									
41	с	1		8/9/2022	8/10/2022	6.38	2	18.57	8.06	26.63 3H7Y-9ZY8	R1 8/11/2022		Replaced Coca-Co	la								
42	s	1 (C)		8/8/2022	8/9/2022	5.68	2	15.97	8.85	24.82 MB4G-FTE	7L 8/11/2022		Replaced Coca-co	a, Replaced	Santitas							
43	s	1 (C)		8/8/2022	8/8/2022	7.97	3	16.07	7.32	23.39 9XFR-M5N	BU 8/9/2022		Replaced Gatorad	e G2, Replace	ed Capri su	n						
44	с	1		8/8/2022	8/8/2022	14.83	7	22.32	5.92	28.24 P4YK-R79S	7 8/9/2022		Refund Oreo cook	ies, Replaced	Wheat th	ins, replace	d Santitas,	replaced C	apri sun			
45	c	1		8/8/2022		14.15	5	21.15	3.43	24.58 S4D8-S6M6			Replaced Gatorad									
45	C .	-		0/0/2022	6/10/2022	14.15		21.15	3,43	24.30 34D8-30010	02 0/11/2022		r Replaced Gatorad	e, nepraced i	ierra chips,	Nerunu aki	myr op po	pcom				

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)						
Recruitment Contact Log						
Recruitment Screener						
Consent & Required Info	0					
Participant Walkthrough						
Initial Survey (Baseline Survey) (survey)	۲					
Randomization						
Participant Profile	0					
Study Progress Tracker						
Online Store Participation						
Participant Payment Tracking						
Final Survey (survey)						

nitial Ptcpt Contact Method: must provide value	Live phone call where participant calls us Participant called us and left a voicemail Eive 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
Date of initial contact e.g. when they called us, when we recieve a list of contact info, when hey left a voicemail, when they emailed us, when they filled out the nterest form) must provide value	○ 08-09-2022 11 Today M-D-Y
Name:	💬 Chinyere Anucha
Phone must provide value	(555) 555-5555 xxx-xxxx
Callback 1: Date	─ 08-09-2022 3 Today M-D-Y
Time of Callback #1	☐ 10:23 Now H:M



Shopify

*
,432

finances

III Analytics 🚱 Marketing

Ø Discounts

Sales channels

😭 Online Store

Apps + Add apps

Settings

Unsaved discount

Create order discount ←

111

Amount off order

Discount code

Automatic discount

>

oreate	oraci	alscount	

METHOD

Discount code

12345667890

Value

Percentage

Customers must enter this code at checkout.

Minimum purchase requirements No minimum requirements

Fixed amount

\$ 15.00

Order discount

Generate

· All customers One use per customer

• \$15.00 off entire order

Active from today until Aug 21

Available on online sales channels

No minimum purchase requirement

Save

Discard

PERFORMANCE

Summary

Code

DETAILS

12345667890

TYPE AND METHOD

· Amount off order

Discount is not active yet.

Beverages



60 CALORIES PER POUCH





Beverages

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

\$1.79

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

\$1.79







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

\$1.79

\$1.79







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	B (P)
08-09-2022 10:44:09 33 Now M-D-Y H:M:S (last updated time/date)	
Participant purchase date	Θ
* must provide value	(φ)
08-09-2022	
What type of item was the purchase?	🛞 🖲 Beverage
* must provide value	O Snack reset
What type of beverage is the purchase?	
* must provide value	Pepsi, 16.9 oz
	○ Yes
Did the participant get the purchase that they wanted?	No - Replacement
* must provide value	O No - Refund reset
	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
What type of beverage <i>replacement</i> is the purchase?	🕒 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!

Checko	From Online Store		
1	<u>Coca Cola (12 count)</u>	\$3.79 × 1	\$3.79
1	<u>Honest Kids Berry Berry Good Organic</u> Lemonade Juice Drink (8 count)	\$2.49 × 1	\$2.49
1	<u>Kellogg's Rice Krispies Treats, Crispy</u> <u>Marshmallow Squares, Original (8 count)</u>	\$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 pai	d 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!