

Examining Chile's Unique Food Marketing Policy: TV Advertising and Dietary Intake in Preschool Children, a pre- and post- policy study

Online Supporting Information

Melissa L. Jensen ^{1,2,3}
Francesca Dillman Carpentier ⁴
Linda Adair ¹
Camila Corvalán ⁵
Barry M. Popkin ^{1,2}
Lindsey Smith Taillie ^{1,2}

Author details

¹ Department of Nutrition, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC, USA

² Global Food Research Program, Carolina Population Center, Chapel Hill, NC, USA.

³ School of Nutrition, University of Costa Rica, San José, Costa Rica

⁴ Hussman School of Media and Journalism, University of North Carolina, Chapel Hill, NC, USA

⁵ Instituto de Nutrición y Tecnología de Alimentos, Universidad de Chile, Macul, Chile

⁶ Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC, USA

Correspondence to:

Lindsey Smith Taillie
123 W Franklin St, Chapel Hill, NC, 27516
e-mail: taillie@unc.edu
Phone: (919) 962-6092
Fax: (919) 445-0740

Table S1. Cut-offs¹ for defining regulated foods and beverages in the Chilean Law of Food Labelling and Advertising

	Implementation Phase		
	1 st Phase (2016)	2 nd Phase (2018)	3 rd Phase (2019)
Per 100 g of solids			
Energy (kcal)	350	300	275
Sodium (mg)	800	500	400
Total sugars (g)	22.5	15	10
Saturated fats (g)	6	5	4
Per 100 mL of liquids			
Energy (kcal)	100	80	70
Sodium (mg)	100	100	100
Total sugars (g)	6	5	5
Saturated fats (g)	3	3	3

¹Cut-offs apply to foods with an added ingredient that increases the natural content of the nutrients of concern. Foods without additions are not subject to the thresholds.

Table S2. Sample products included in each food group of analyses

GROUP	INCLUDES	SAMPLE PRODUCTS
READY-TO-EAT BREAKFAST CEREALS		Chocapic Nestlé, Milo Nestlé, Trix Nestlé
SALTY SNACKS	Crackers	Selz mini Arcor, Crackelet Costa, Cracker Selz
	Chips	Lays Evercrisp, Cheetos Evercrisp, Original Kryspo
SWEETS AND DESSERTS	Sweet bakery products	Queque envasado sin relleno Queque envasado Chocman Costa Queque envasado Mankeke Marinela
	Sweet cookies	Mini Kuky McKay Morocha McKay Mini Triton McKay
	Bars	Chocolate - Cereal Bar Costa Frutas y yogurt - Cereal Bar Costa Frutos rojos - Cereal Bar Costa
	Gelatin	Jalea tradicional, Jalea de frambuesa Nestlé Jalea de frutilla Kids Colun
	Chocolate and candy	Gomitas Frugele Ambrosoli, Super 8 Nestlé, Dos en Uno Arcor
	Dairy-based desserts	Chiquitin Nestlé de Frutilla, Mousse Manjarate Soprole, Mousse ChandeLe Nestlé
	SUGAR SWEETENED BEVERAGES	Sodas
Industrial flavored waters		Naranja Sprim, Zuko Durazno, Zuko Frambuesa
Sports drinks		Gatorade Cool Blue
Energy drinks		Dark dog
MILKS AND YOGURT	Plain milk	Nido Nestlé, Leche entera Soprole / Colun, Leche semidescremada Soprole / Colun
	Flavored milk	Leche con chocolate Soprole, Leche JUNAEB chocolate, Leche JUNAEB frutilla
	Yogurt	Yogurt 1+1 Zucaritas Soprole, Yogurt batido Soprole Frutilla, Yogurt batido Soprole Frutilla Danone

Table S3. Comparison of baseline sample (2016) with and without post-policy (2017) implementation data

Variables	With follow-up (n=853)		Missing follow-up (n=87)		p-value ¹
	Mean	SD	Mean	SD	
Overall HEFSS foods					
Absolute quantity (energy)	346	258	390	275	0.13
Energy adjusted (% kcal)	28.6	17.6	30.5	16.8	0.33
Nutrients					
Energy (kcal)	1180	375	1224	377	0.30
Total sugars (% energy)	28.9	8.8	28.8	8.2	0.91
Saturated fat (% energy)	10.4	3.3	10.4	3.4	0.99
Sodium (mg/1000 kcal)	1282	475	1294	449	0.81
High-in ad exposure					
Any high-in product	2.7	3.2	2.4	2.9	0.52
High in calorie	1.4	1.6	1.2	1.4	0.25
High in total sugars	1.6	2.1	1.5	2.0	0.67
High in saturated fat	0.9	1.1	0.8	0.9	0.32
High in sodium	0.2	0.3	0.2	0.2	0.32
Child characteristics					
Sex (% female)	438	51.3	46	52.9	0.83
Age (years)	4.79	0.51	4.77	0.49	0.78
Weekly screen time	11.65	9.62	9.72	7.37	0.19
Primary caregiver characteristics					
Education level (n, %)					
Less than high school	145	17.0	25	28.7	0.01*
High school complete	414	48.5	40	46.0	
More than high school	294	34.5	22	25.3	
Owns home (n, % yes)	461	54	48	55.2	0.84
Lives with spouse or partner	475	55.7	47	54	0.77
Day of week of interview (n, % week)	730	85.6	75	86.2	0.87

¹ Obtained via two-sample t-test for continuous variables and X² test for categorical variables.

Table S4. Associations between policy implementation (2017 vs 2016) and consumption of overall high-in accounting for mediation by advertising exposure (n=853), and adjusting for children's weight status.

	a-coefficient ⁴ (policy=> advertising)			b-coefficient (advertising=> consumption)			c'-coefficient (policy=> consumption)			ab (mediation effect)			ab/[(ab)+c'] *100
	β^3	99% CI		β	99% CI		β	99% CI		β	99% CI		%
		LL	UL		LL	UL		LL	UL		LL	UL	
Absolute intake (kcal)^{1,5}													
Any high-in ad	-2.2*	-2.6	-1.8	4	-3	10	-86*	-132	-40	-9	-23	6	9.1
High calorie ads	-1.5*	-1.7	-1.3	7	-7	21	-84*	-132	-35	-11	-31	10	11.3
High sugar ads	-1.2*	-1.5	-1.0	6	-4	15	-87*	-133	-42	-7	-19	5	7.4
High saturated fat ads	-0.9*	-1.0	-0.8	3	-18	24	-92*	-139	-44	-3	-22	16	2.7
High sodium ads	-0.1*	-0.1	0.0	16	-41	73	-93*	-137	-48	-2	-7	4	1.7
Energy adjusted (% kcal)^{2,5}													
Any high-in ad	-2.2*	-2.6	-1.8	0.2	-0.2	0.6	-9.2*	-12.1	-6.3	-0.5	-1.4	0.4	4.9
High calorie ads	-1.5*	-1.7	-1.3	0.3	-0.5	1.2	-9.2*	-12.3	-6.2	-0.5	-1.8	0.8	5.0
High sugar ads	-1.2*	-1.5	-1.0	0.3	-0.3	0.9	-9.3*	-12.2	-6.4	-0.4	-1.1	0.4	3.9
High saturated fat ads	-0.9*	-1.0	-0.8	0.4	-1.0	1.7	-9.4*	-12.4	-6.3	-0.3	-1.5	0.9	3.5
High sodium ads	-0.1*	-0.1	0.0	1.7	-1.9	5.3	-9.5*	-12.3	-6.7	-0.2	-0.5	0.2	1.8

¹ Total effect of policy implementation on absolute consumption of high-in products = -95 kcal [99CI: -138, -50]

² Total effect of policy implementation on energy adjusted consumption of high-in products = -9.7% kcal [99CI: -12.5, -6.9]

³ Represents unstandardized regression coefficient.

⁴ Expressed in minutes of advertising per week.

⁵ Model adjusted for age (months) and sex of child, interview day, mother's education level, home ownership, marital state, and children's weight status.

* p<0.01

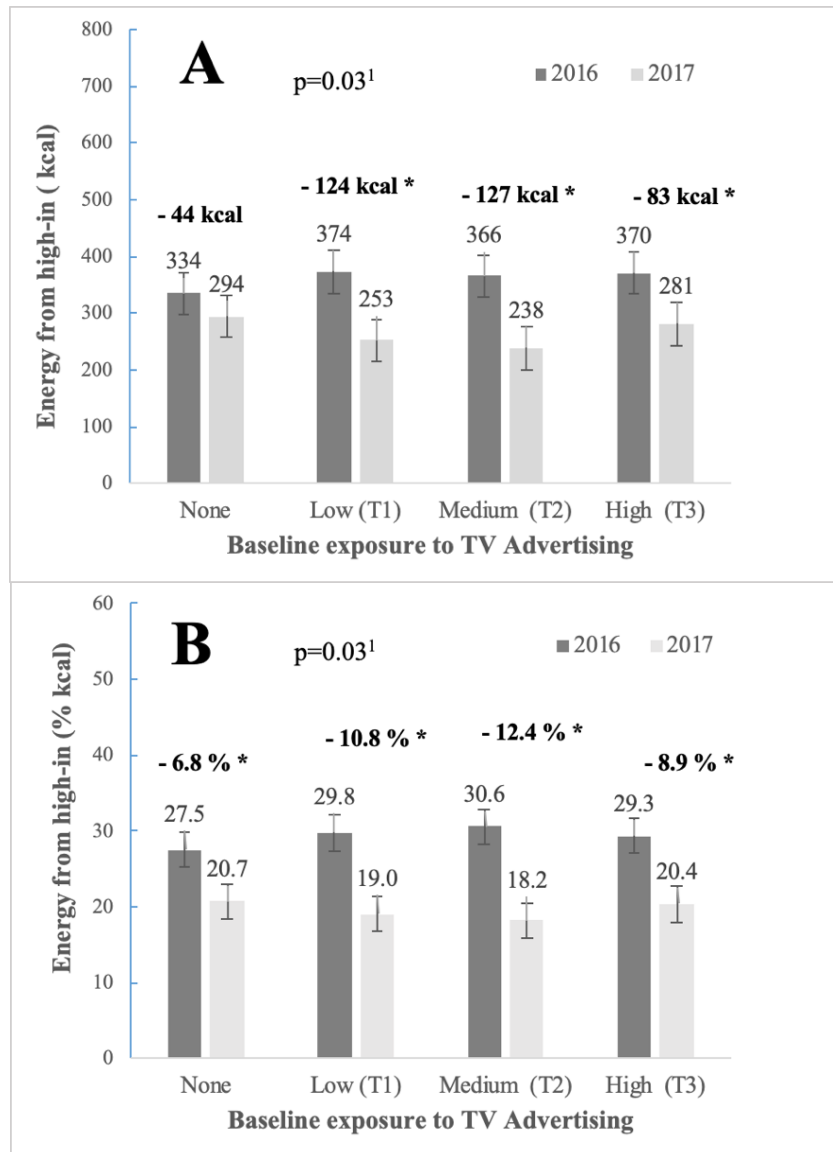


Figure S1. Participants (n=853) consumption of high-in foods (A: absolute intake, B: energy adjusted) pre- and post-policy by baseline levels of high-in TV advertising. Estimated using mixed model with individuals as a random effect, adjusting for study covariates and additionally, for children's weight status. ¹Wald test for interaction (year*baseline ad exposure). *indicates $p < .05$.