

Did child obesity decline after 2016 food regulations in Chile?

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Suggested citation. von Hippel PT, Bogolasky Fliman F. Did child obesity decline after 2016 food regulations in Chile? *Rev Panam Salud Publica*. 2024;48:e16. <https://doi.org/10.26633/RPSP.2024.16>

ABSTRACT

We estimated trends in the prevalence of obesity and overweight among Chilean primary and secondary students before and after Chile's 2016 regulations on the marketing and availability of foods high in energy, total sugars, sodium, or saturated fat. We used data from Chile's Survey of Nutrition, which measured the body mass index (BMI) of students in government-funded schools. Using BMI thresholds defined by the World Health Organization, we calculated the prevalence of overweight and obesity for each year from 2013 to 2019 among students attending pre-kindergarten (age 4 years), kindergarten (age 5 years), first grade (6 years), and ninth grade (14 years). In ninth grade students, overweight and obesity prevalence rose by 2 percentage points over the 3 years after introduction of the 2016 regulations. In pre-kindergarten, kindergarten, and first grade, overweight and obesity fell 1 to 3 percentage points 1 year after the regulations were introduced, but rebounded to previous levels the next year. Chile's food regulations were not followed by a sustained decline in obesity in primary- and secondary-school students. Future research should examine whether and how children in Chile and other countries maintain high levels of overweight and obesity despite food regulations designed to reduce consumption of obesogenic foods and beverages.

Keywords

Nutrition policy; marketing; child; obesity; Chile.

Since the 1980s, the prevalence of overweight and obesity has increased dramatically in most countries, including Latin American countries such as Chile (1). Most evidence suggests that the main cause of the global obesity epidemic is not reduction in physical activity, but increase in consumption (2), especially of processed foods and beverages that are low in fiber and high in energy from fat and sugar (3).

Despite the important contribution of food and beverage consumption to the obesity epidemic, governments often find consumption challenging to regulate. Although laws meant to promote physical activity enjoy broad support, if limited compliance (4), laws intended to reduce consumption of processed foods and beverages often meet resistance from the processed food industry (5–7).

Even in the face of industry resistance, since June 26, 2016, Chile has enforced a law designed to reduce consumption of

unhealthy processed foods and beverages, especially among children younger than 14 years (8, 9). Chile's regulations set thresholds for energy, sodium, saturated fat, and total sugars per 100 g of food (or 100 mL of beverage), lowering limits in successive stages from 2016 to 2019. Stage 1 thresholds were enforced in 2016 and 2017, lower stage 2 thresholds were enforced in 2018, and lower stage 3 thresholds have been enforced since 2019. Foods and beverages that exceed the thresholds: (i) cannot be advertised on television or radio shows whose audience is more than 20% children; (ii) cannot be packaged or advertised with toys or cartoon characters; (iii) and must carry labels, shaped like stop signs, that feature the Spanish word *alto* – meaning both stop and high – warning that the contents are high in calories, sugars, sodium, or saturated fat. Schools cannot serve stop-sign foods and must provide nutrition education. A public relations campaign encouraged children, adolescents,

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and parents to avoid stop-sign foods in favor of foods without these signs (9).

Chile's reforms received international media attention (10). They were among the world's most sweeping restrictions on food marketing and showed that meaningful regulations could be implemented despite resistance from the processed food industry. Since 2016, Chile's reforms have served as a model for other countries, including Argentina, Israel, Mexico, Peru, and Uruguay (11).

Previous studies have shown that Chile's 2016 regulations were followed by substantial changes in food content and marketing. Some food brands stopped using toys and cartoon characters in packaging and advertisements; others continued using such characters, but reduced regulated ingredients to just below threshold levels (12, 13). Some products substituted non-caloric sweeteners, such as stevia, for sugar or corn syrup (11). The energy, sugar, sodium, and saturated fat density of foods and beverages served in schools (14), advertised on television (15), and purchased in grocery stores declined substantially (16). Consumers moved away from products with stop signs, especially if they had previously believed those products to be healthy (11).

It is tempting to jump to the conclusion that Chile's food regulations were also followed by reductions in overweight and obesity, but this has yet to be shown. In this report, we estimate trends in overweight and obesity prevalence among school-aged children and adolescents, before and after Chile's regulations were implemented in 2016.

METHODS

Data came from the Survey of Nutrition (*Mapa Nutricional*) (17), which Chile's National Board of School Aid and Scholarships (*Junta Nacional de Auxilio Escolar y Becas* (JUNAEB)) required all government-funded schools to conduct. In Chile, government-funded schools include private as well as public schools, since 90% of private schools receive government funding under Chile's universal school voucher system. Despite its name, the Survey of Nutrition does not collect information on students' diets or foods available in school. Instead, physical education and class teachers measure the height (in meters) and weight (in kilograms) of children in pre-kindergarten (when most children are aged 4 years), kindergarten (5 years), first grade (6 years), and ninth grade (14 years). Since 2018, teachers have also measured fifth graders, but our study does not include this grade since it was not included before the 2016 food reforms.

We used data from 3 years before Chile's food regulations (2013) to 3 years after (2019). We stopped before 2020 when many Chilean schools closed because of the coronavirus disease 2019 (COVID-19) pandemic when children gained weight. Over this 7-year period, measurements were recorded for 85% of children in participating schools and grades—an annual average of 185 169 children per grade in 9 006 schools. Chile's National Board of School Aid and Scholarships did not report the reason for non-participation, but most appeared to be at the school level; that is, 15% of schools did not respond to the survey, but within responding schools nearly all students participated in the target grades.

Reports published by the National Board summarized the percentage of girls and boys whose body mass index (BMI) exceeded the World Health Organization (WHO) thresholds

for overweight and obesity. WHO defines obesity as a BMI at least two standard deviations above the age- and sex-specific median for a reference population of non-obese United States children measured between 1963 and 1970 (18). Overweight was defined, similarly, as a BMI one standard deviation above the age- and sex-specific median. To reduce recording errors, survey administrators discarded heights, weights, and BMIs that were so extreme as to be biologically implausible according to cut-offs defined by WHO. For example, weights and BMIs were discarded if they were more than five standard deviations from the mean of an age- and sex-specific distribution that had been transformed to normality (19).

We report trends in the percentage of participants in the Survey of Nutrition who were overweight or obese. We have not reported the confidence intervals because the Survey aimed to measure the whole population and not to make population inferences from a random sample.

In Chile, the school year begins in early March and ends in mid-December, with a break through February, which are summer months in the Southern hemisphere. BMI was measured between May and October, that is, from 2 months before to 4 months after the implementation of Chile's food reforms on June 26, 2016. Because the 2016 BMI measurements would not be much affected, if at all, by the food reforms, we treated 2016 as a baseline from which to measure the trends that followed the reforms.

RESULTS

Table 1 shows the percentage prevalence of overweight and obesity, by year and sex. Figure 1 graphs the trends in overweight and obesity prevalence for girls and boys separately. In no grade was there a sustained decline in overweight or obesity after Chile's 2016 regulations were introduced.

Among children in pre-kindergarten, overweight and obesity prevalence fell in the year after the 2016 regulations were introduced, but then rebounded to previous levels thereafter. For example, among pre-kindergarten girls, obesity prevalence fell by 2.1 percentage points in the year after the reforms – from 21.5% in 2016 to 19.4% in 2017 – but then rebounded to 2016 levels in 2018 (21.5%) and 2019 (21.7%). Likewise, among pre-kindergarten boys, obesity prevalence fell by 3.1 percentage points in the year after the reforms – from 26.2% in 2016 to 23.1% in 2017 – but then rebounded to 2016 levels in 2018 (25.8%) and 2019 (26.2%). Overweight prevalence showed similar trends in pre-kindergarten children.

Kindergarten trends were similar to pre-kindergarten trends for both boys and girls, except that the initial drop in overweight and obesity was larger. Among kindergarten boys, for example, obesity prevalence fell by 3.2 percentage points and overweight prevalence by 3.0 percentage points between 2016 and 2017. However, both had returned to within 0.4 percentage points of 2016 levels by 2019.

First grade trends were similar to pre-kindergarten and kindergarten trends, except that the 1-year drop in overweight and obesity prevalence was smaller in the first grade. For example, among first grade boys, both overweight and obesity prevalence declined by just 0.7 percentage points between 2016 and 2017, before recovering to 2016 levels in 2018.

Among adolescents in the ninth grade, obesity prevalence did not display even a transitory drop. Instead, the prevalence

TABLE 1. Prevalence and change in of obesity and overweight (including obesity), by sex, grade, and year, Chile

Weight status/grade	Prevalence, %							Change in prevalence, %	
	2013	2014	2015	2016	2017	2018	2019	2016 to 2017	2016 to 2019
GIRLS									
Obese									
Pre-kindergarten	20.3	21.6	20.9	21.5	19.4	21.5	21.7	-2.1	0.2
Kindergarten	21.2	22.7	21.5	22.3	19.8	22.2	22.1	-2.5	-0.2
First grade	22.3	22.3	21.5	21.9	21.2	21.7	22.1	-0.7	0.2
Ninth grade	11.0	11.2	11.4	12.5	15.2	14.0	14.7	2.7	2.2
Overweight									
Pre-kindergarten	47.7	47.4	47.2	48.1	46.6	47.8	48.0	-1.5	-0.1
Kindergarten	48.9	49.3	48.9	50.1	46.7	49.3	49.0	-3.4	-1.1
First grade	50.0	50.1	49.4	49.7	48.6	49.1	49.2	-1.1	-0.5
Ninth grade	41.4	42.4	42.8	44.2	47.1	46.3	46.9	2.9	2.7
BOYS									
Obese									
Pre-kindergarten	24.4	26.3	24.7	26.2	23.1	25.8	26.2	-3.1	0.0
Kindergarten	26.0	27.9	26.8	27.5	24.3	27.0	27.4	-3.2	-0.1
First grade	28.3	27.9	26.9	27.1	26.4	27.1	27.5	-0.7	0.4
Ninth grade	13.6	13.9	13.7	14.3	16.9	15.3	16.5	2.6	2.2
Overweight									
Pre-kindergarten	52.4	52.5	51.4	52.4	50.8	51.8	52.4	-1.6	0.0
Kindergarten	53.1	53.9	52.6	53.9	50.9	53.2	53.5	-3.0	-0.4
First grade	53.7	53.5	52.8	52.6	51.9	52.6	52.7	-0.7	0.1
Ninth grade	45.7	46.9	46.2	46.2	45.2	46.5	48.2	-1.0	2.0

Note: Pre-kindergarten: age 4 years; kindergarten: age 5 years; first grade: age 6 years; ninth grade: age 14 years.
Source: Survey of Nutrition, 2023 (17).

of obesity rose 2.7 percentage points among girls and 2.6 percentage points among boys in the year after the reforms, and remained higher than the 2016 levels until 2019. Overweight prevalence also rose by 2.9 percentage among the girls between 2016 and 2017, and remained high through to 2019. Among ninth grade boys, overweight prevalence fell by 1.0 percentage point between 2016 and 2017, but had risen to 2.0 percentage points higher than the 2016 level by 2019.

To summarize these results, we averaged the prevalence across both sexes, all grade levels, and both weight statuses (overweight and obesity). This average prevalence was 1.0 percentage points lower in 2017 than in 2016, but returned to 2016 levels in 2018 and rose to 0.5 percentage points higher than the 2016 levels by 2019.

DISCUSSION

It is encouraging that young children’s overweight and obesity prevalence declined in the first year after Chile’s regulations were introduced, but disheartening that the decline was not sustained into later years. Yet transitory weight loss is common for dietary interventions. Although it is tempting to suggest that our 3-year follow-up did not give Chile’s policies long enough to work, a longer follow-up was not possible because the trajectory of obesity was altered by the COVID-19 pandemic that began in year 4 (2020). In addition, the literature on dietary interventions suggests that a 3-year period is more than long enough to detect effects. Effective dietary interventions, when they work, typically reduce weight in the first 6 to 12 months, after which weight plateaus or rebounds (20). In other words,

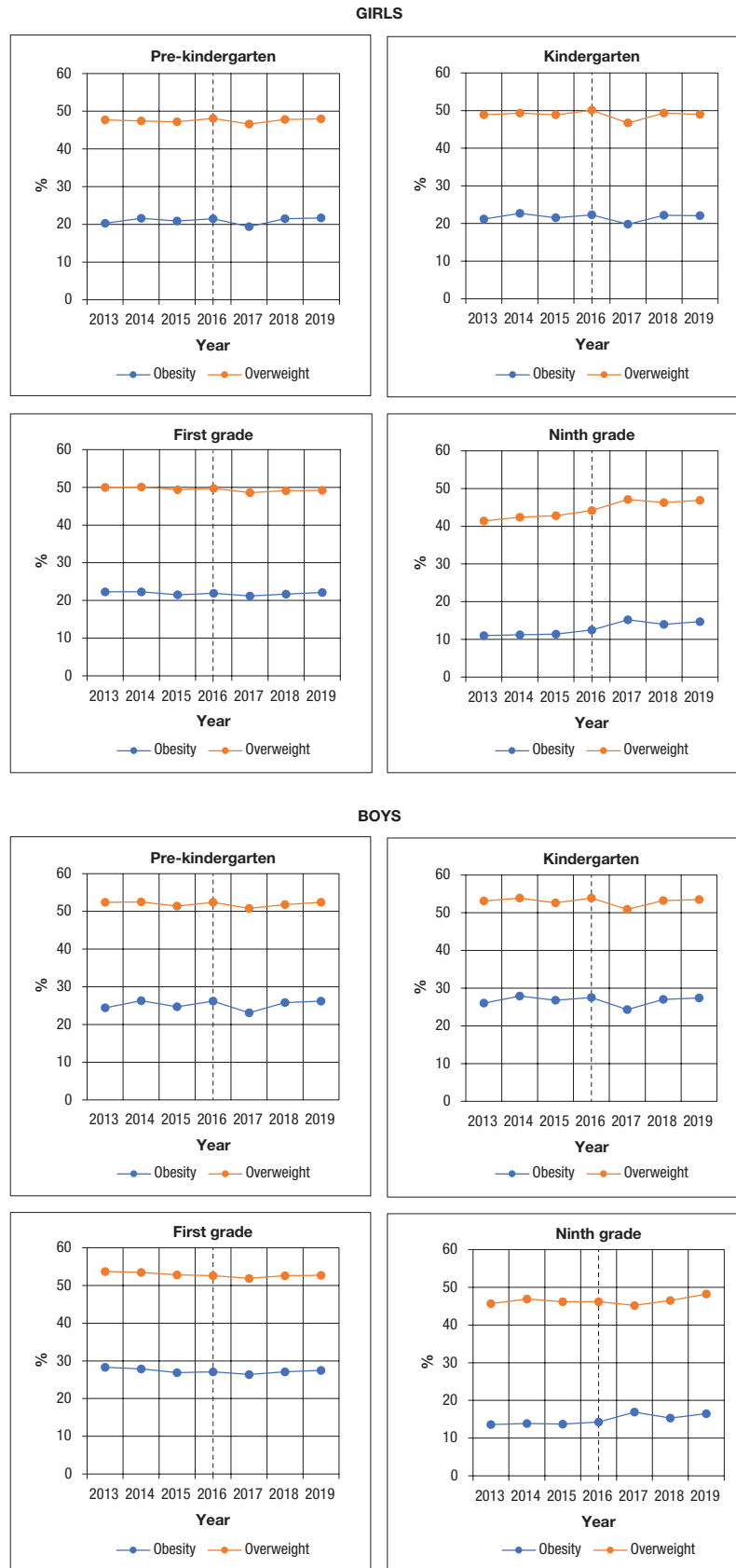
the rebound we observed after 12 months among young children in Chile is not unprecedented, except that it occurred in an entire population after a policy change, rather than among individual participants in a program or intervention.

A challenge to sustaining weight loss is that metabolic energy expenditure often declines to balance reduction in energy intake (21). Another challenge is that compliance with dietary restrictions often declines (22), in part because hormone secretions change in ways that increase appetite and the reward value of food, so that participants find ways to increase energy intake to previous levels (23). In Chile’s new food environment, for example, it might be possible for children and adolescents to increase energy intake by increasing portion sizes, increasing meal frequency, adding table sugar to food, or supplementing school meals with food from home. Future research should examine whether these responses occurred in Chile or other countries implementing similar reforms.

Among Chilean adolescents, the failure to achieve even transitory weight loss is concerning, but also familiar. Adolescents commonly resist authority and may respond to health warnings by asserting their independence. Messages that appeal to adolescent values such as autonomy and justice may be needed to improve adolescent eating habits (20). In general, effective messaging is needed because although Chile’s government changed the food marketing and availability, ultimately the decision of what to eat and drink lies with consumers.

It is not clear whether similar results can be expected in other countries, but given the number of countries that have passed laws similar to Chile’s in recent years, there will be several opportunities to find out whether the effect of those laws on

FIGURE 1. Trends in prevalence of obesity and overweight (including obesity) by sex and grade, 2013–2019, Chile



Notes: Food regulations were introduced in 2016 (dashed vertical line). Pre-kindergarten: age 4 years; kindergarten: age 5 years; first grade: age 6 years; ninth grade: age 14 years. Confidence intervals are not reported because the survey enrolled a population, not a sample.
Source: Survey of Nutrition, 2023 (17).

obesity and overweight is similarly transient. We would suggest that evaluators working in other countries track trends in overweight and obesity prevalence, as well as changes in food availability, food composition, and consumer behavior.

The main limitation of this study is that there was no comparison group of children who were not subject to Chile's food regulations. But this limitation is common to studies of Chile's food regulations, including studies of school meals (14), advertising (15), and consumer purchases (16). Because food regulations were implemented simultaneously throughout Chile, evaluations commonly use a before-after design with no control group. Such designs can show that changes occurred after the 2016 regulations, but cannot prove (at least not statistically) that the regulations caused the changes. In principle, it would be informative to compare Chile's trends to trends in similar countries, but the data to make such comparisons are lacking; for example, Argentina, the country most comparable to Chile, did not measure the heights and weights of early elementary students during the years covered by our study (2013 to 2019), and only measured 12-to-15 year-olds (similar to Chile's ninth graders) in 1 year (2018) (24). In short, single-country trends may be the best evidence available. We note that, in the United States, national obesity trends are regularly tracked to gauge the effectiveness of public health policies, without making comparisons with other countries, such as Canada.

It is possible, therefore, that, although overweight and obesity did not show a sustained decline after Chile's 2016 regulations, they might have increased, or increased more, if no regulations had been enacted. However, Table 1 and Figure 1 show about a 1 percentage point increase in overweight and obesity prevalence in the 3 years before Chile's 2016 regulations, which is not much different from the 0.5 percentage point increase that occurred in the 3 years after 2016. In addition, the purpose of the regulations was to reduce overweight and obesity prevalence absolutely, not just relative to what would have happened otherwise.

A possible source of bias in this study was incomplete participation by government-funded schools. Although the average participation rate was high (85%), it varied across the years from a low of 76% to a high of 93%. Varying levels of participation might have biased the estimated trends, particularly if the decision to participate was correlated with the prevalence of overweight or obesity (25). However, practically every survey has incomplete response and the participation rate in the Survey of Nutrition was high compared with other available

sources. For example, 65% of heights, weights, and waist measurements were missing from a survey of eighth graders conducted by Chile's Ministry of Education – the National Study of Physical Education (*Estudio Nacional de Educación Física*). Trends in this physical education study were similar to those reported in our study, but we chose not to report them because the data on these measurements were incomplete. Future research should examine whether and how children in Chile and other countries maintain high levels of overweight and obesity despite food regulations designed to reduce consumption of obesogenic foods and beverages. Future campaigns might use different messages for adolescents, and might consider broadening the nutrients that are targeted by regulations. For example, regulations might try to encourage consumption of whole fiber and discourage consumption of other refined carbohydrates (not just sugar) and unsaturated (as well as saturated) fats. Even broader regulations might push consumers away from processed foods entirely and toward whole foods.

Availability of data. All code and data used to produce the results in this article are available at <https://osf.io/3zx26/>.

Author contributions. PTvH conceived the study. FBF collected data from government sources. Both authors analyzed the data, interpreted the results, wrote the manuscript, and revised the manuscript. Both authors reviewed and approved the final version.

Conflicts of interest. None declared.

Funding. FBF was supported at first by a grant to PTvH from the Policy Research Institute, LBJ School of Public Affairs, University of Texas, Austin, and later by a grant from the National Agency of Research and Development at the Chilean Ministry of Science, Technology, Knowledge and Innovation (grant number ANID/FONDAP/1513009 and COES ANID/FONDAP/1523A0005).

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REFERENCES

1. Rio FV del. The nutrition transition in Chile. In: Pinstrup-Andersen P, Cheng F, editors. Case studies in food policy for development countries [internet]. Cornell University Press; 2013 [cited 2023 May 16]. p. 115–24. Available from: <https://www.degruyter.com/document/doi/10.7591/9780801466366-013/html?lang=de>
2. Bleich SN, Cutler D, Murray C, Adams A. Why is the developed world obese? *Annu Rev Public Health*. 2008;29(1):273–95. <https://doi.org/10.1146/annurev.publhealth.29.020907.090954>
3. Ambrosini G, Johns D, Northstone K, Jebb S. Fat, Sugar or both? A prospective analysis of dietary patterns and adiposity in children. *FASEB J*. 2015;29(S1):746.4. https://doi.org/10.1096/fasebj.29.1_supplement.746.4
4. von Hippel PT, Frisvold DE. Have states reduced obesity by legislating more physical activity in elementary school? *Milbank Q*. 2023;101(1):204–48. <https://doi.org/10.1111/1468-0009.12604>
5. Kelly PM, Davies A, Greig AJM, Lee KK. Obesity prevention in a city state: lessons from New York City during the Bloomberg Administration. *Front Public Health*. 2016;4:60. <https://doi.org/10.3389/fpubh.2016.00060>
6. Crosbie E, Pomeranz JL, Wright KE, Hooper S, Schmidt L. State preemption: an emerging threat to local sugar-sweetened beverage taxation. *Am J Public Health*. 2021;111(4):677–86. <https://doi.org/10.2105/AJPH.2020.306062>
7. Mialon M, Charry DAG, Cediel G, Crosbie E, Scagliusi FB, Tamayo EMP. 'I had never seen so many lobbyists': food industry political

- practices during the development of a new nutrition front-of-pack labelling system in Colombia. *Public Health Nutr.* 2021;24(9):2737–45. <https://doi.org/10.1017/S1368980020002268>
8. Biblioteca del Congreso Nacional. Sobre Composición Nutricional de los Alimentos y Su Publicidad. Ley número 20.606 Jul 6, 2012 [On nutritional composition of foods and their advertising. Law number 20.606 Jul 6, 2012] [Internet]. Santiago: Biblioteca del Congreso Nacional [cited 2023 May 16]. Available from: <https://www.bcn.cl/leychile>
 9. Food and Agriculture Organization of the United Nations, Pan American Health Organization. Approval of a new food act in Chile: process summary [Internet]. Santiago: FAO and PAHO; 2017 [cited 2023 May 16]. Available from: <https://www.fao.org/3/i7692e/i7692e.pdf>
 10. Jacobs A. In Sweeping war on obesity, Chile slays Tony the Tiger. *The New York Times.* 2018 Feb 7 [cited 2023 Dec 8]; Available from: <https://www.nytimes.com/2018/02/07/health/obesity-chile-sugar-regulations.html>
 11. Barahona N, Otero C, Otero S. Equilibrium effects of food labeling policies. *Econometrica.* 2023;91(3):839–68. <https://doi.org/10.3982/ECTA19603>
 12. Alé-Chilet J, Moshary S. Beyond consumer switching: supply responses to food packaging and advertising regulations. *Mark Sci.* 2022;41(2):243–70. <https://doi.org/10.1287/mksc.2021.1315>
 13. Reyes M, Smith Taillie L, Popkin B, Kanter R, Vandevijvere S, Corvalán C. Changes in the amount of nutrient of packaged foods and beverages after the initial implementation of the Chilean Law of Food Labelling and Advertising: a nonexperimental prospective study. *PLoS Med.* 2020;17(7):e1003220. <https://doi.org/10.1371/journal.pmed.1003220>
 14. Massri C, Sutherland S, Källestål C, Peña S. Impact of the food-labeling and advertising law banning competitive food and beverages in Chilean public schools, 2014–2016. *Am J Public Health.* 2019;109(9):1249–54. <https://doi.org/10.2105/AJPH.2019.305159>
 15. Correa T, Reyes M, Taillie LS, Corvalán C, Dillman Carpentier FR. Food advertising on television before and after a national unhealthy food marketing regulation in Chile, 2016–2017. *Am J Public Health.* 2020;110(7):1054–9. <https://doi.org/10.2105/AJPH.2020.305658>
 16. Taillie LS, Reyes M, Colchero MA, Popkin B, Corvalán C. An evaluation of Chile's Law of Food Labeling and Advertising on sugar-sweetened beverage purchases from 2015 to 2017: a before-and-after study. *PLoS Med.* 2020;17(2):e1003015. <https://doi.org/10.1371/journal.pmed.1003015>
 17. Junta Nacional de Auxilio Escolar y Becas. Mapa nutricional [Nutritional map]. Santiago: Junta Nacional de Auxilio Escolar y Becas; 2023 [cited 2023 May 16]. Available from: <https://www.junaeb.cl/mapa-nutricional>
 18. de Onis M, Onyango AW, Borghi E, Siyam A, Nishida C, Siekmann J. Development of a WHO growth reference for school-aged children and adolescents. *Bull World Health Organ.* 2007;85(9):660–7. <https://doi.org/10.2471/blt.07.043497>
 19. Freedman DS, Lawman HG, Skinner AC, McGuire LC, Allison DB, Ogden CL. Validity of the WHO cutoffs for biologically implausible values of weight, height, and BMI in children and adolescents in NHANES from 1999 through 2012. *Am J Clin Nutr.* 2015;102(5):1000–6. <https://doi.org/10.3945/ajcn.115.115576>
 20. Franz MJ, VanWormer JJ, Crain AL, Boucher JL, Histon T, Caplan W, et al. Weight-loss outcomes: a systematic review and meta-analysis of weight-loss clinical trials with a minimum 1-year follow-up. *J Am Diet Assoc.* 2007;107(10):1755–67. <https://doi.org/10.1016/j.jada.2007.07.017>
 21. Busetto L, Bettini S, Makaronidis J, Roberts CA, Halford JCG, Batterham RL. Mechanisms of weight regain. *Eur J Intern Med.* 2021;93:3–7. <https://doi.org/10.1016/j.ejim.2021.01.00>
 22. Denzer C, Reithofer E, Wabitsch M, Widhalm K. The outcome of childhood obesity management depends highly upon patient compliance. *Eur J Pediatr.* 2004;163(2):99–104. <https://doi.org/10.1007/s00431-003-1376-7>
 23. MacLean PS, Bergouignan A, Cornier MA, Jackman MR. Biology's response to dieting: the impetus for weight regain. *Am J Physiol Regul Integr Comp Physiol.* 2011;301(3):R581–600. <https://doi.org/10.1152/ajpregu.00755.2010>
 24. Secretaria de Gobierno de Salud. Encuesta Mundial de Salud Escolar [Global School Health Survey] [Internet]. Buenos Aires: Ministerio de Salud y Desarrollo Social; 2018 [cited 2023 May 16]. Available from: <https://bancos.salud.gob.ar/sites/default/files/2020-01/encuesta-mundial-salud-escolar-2018.pdf>
 25. Hippel PT von. Estimating learning when test scores are missing: the problem and two solutions [internet]. Providence, RI: Annenberg Institute at Brown University; 2023 [cited 2023 Dec 11]. Available from: <https://edworkingpapers.com/index.php/ai23-864>

Manuscript submitted 15 September 2023. Revised version accepted for publication on 19 December 2023.

¿Disminuyó la obesidad infantil en Chile después de la introducción de las regulaciones alimentarias en el 2016?

RESUMEN

Se estimaron las tendencias en la prevalencia de la obesidad y el sobrepeso en estudiantes chilenos de educación primaria y secundaria, antes y después de las regulaciones introducidas en Chile en el 2016 sobre la comercialización y disponibilidad de productos hipercalóricos, con un alto contenido de azúcares, sodio o grasas saturadas. Se utilizaron datos del Mapa Nutricional de Chile, una encuesta en la que se midió el índice de masa corporal (IMC) de la población estudiantil de las escuelas públicas. Tomando los umbrales de IMC definidos por la Organización Mundial de la Salud, se calculó la prevalencia del sobrepeso y la obesidad para cada año entre el 2013 y el 2019 en estudiantes de jardín de infancia (4 años), preescolar (5 años), primer grado (6 años) y noveno grado (14 años). En los estudiantes de noveno grado, la prevalencia del sobrepeso y la obesidad aumentó en 2 puntos porcentuales durante los 3 años posteriores a la introducción de las regulaciones del 2016. En el caso de los grupos de jardín de infancia, preescolar y primer grado, el sobrepeso y la obesidad disminuyeron entre 1 y 3 puntos porcentuales un año después de la introducción de las regulaciones, pero al año siguiente volvieron a los niveles anteriores. La introducción de las regulaciones alimentarias de Chile no estuvo seguida de una disminución continua de la obesidad en la población estudiantil de primaria y secundaria. En las investigaciones futuras se deberá examinar si la población infantil de Chile y otros países mantiene niveles altos de sobrepeso y obesidad a pesar de las regulaciones alimentarias diseñadas para reducir el consumo de productos y bebidas obesogénicos, así como las características específicas que adopta este problema de salud.

Palabras clave Política nutricional; mercadotecnia; niño; obesidad; Chile.

A obesidade infantil diminuiu após a regulamentação de alimentos de 2016 no Chile?

RESUMO

Foram estimadas tendências de prevalência da obesidade e do sobrepeso em alunos chilenos do ensino fundamental e médio antes e depois da regulamentação de 2016 da propaganda e disponibilidade de alimentos com alto teor calórico ou ricos em açúcares totais, sódio ou gorduras saturadas no Chile. Foram utilizados dados obtidos da Pesquisa em Nutrição do Chile, que aferiu o índice de massa corporal (IMC) de escolares da rede pública. Com base nos limiares de IMC definidos pela Organização Mundial da Saúde (OMS), calculou-se a prevalência anual de sobrepeso e obesidade em crianças na pré-escola (4 anos), no jardim da infância (5 anos), no primeiro ano (6 anos) e no nono ano (14 anos) em cada ano no período entre 2013 e 2019. Entre os alunos do nono ano, a prevalência de sobrepeso e obesidade aumentou 2 pontos percentuais nos 3 anos que se seguiram à introdução da regulamentação de 2016. Entre os alunos da pré-escola, do jardim de infância e do primeiro ano, ocorreu uma redução de 1 a 3 pontos percentuais na prevalência de sobrepeso e obesidade um ano após a introdução da regulamentação, mas os níveis voltaram a subir no ano seguinte. A regulamentação de alimentos não resultou em um declínio sustentado da obesidade nos alunos do ensino fundamental e médio do Chile. Pesquisas futuras devem ser realizadas para avaliar se, e como, a prevalência de sobrepeso e obesidade nas crianças chilenas e de outros países se mantém alta a despeito da regulamentação de alimentos visando à redução do consumo de alimentos e bebidas obesogênicos.

Palavras-chave Política nutricional; marketing; criança; obesidade; Chile.