

Supplementary material

Table S1. Survey-weighted generalized linear models to evaluate the probability of having obesity in the Ecuadorian boys 5- to 17-year-old of the *Encuesta Nacional de Salud y Nutrición*, 2018.

<i>Predictors</i>	<i>Levels</i>	<i>Dependent variable (obesity)</i>	
		<i>Univariate analysis</i> <i>OR (95% CI, p value)</i>	<i>Multivariate analysis</i> <i>OR (95% CI, p value)</i>
Age group	Children (5 to 11 years)	Reference	Reference
	Adolescents (12 to 17 years)	0.40 (0.31-0.53, $p<0.001$)	0.49 (0.37-0.67, $p<0.001$)
Educational level of the main breadwinner	Primary education or lower	Reference	Reference
	Middle/high school or higher	0.25 (0.13-0.48, $p<0.001$)	0.38 (0.19-0.78, $p=0.008$)
Wealth family index status	Very rich	Reference	Reference
	Rich	0.99 (0.66-1.50, $p=0.969$)	0.98 (0.63-1.51, $p=0.921$)
	Medium	1.92 (1.28-2.89, $p=0.002$)	2.02 (1.29-3.16, $p=0.002$)
	Poor	1.86 (1.23-2.81, $p=0.003$)	1.98 (1.22-3.23, $p=0.006$)
	Very poor	1.91 (1.26-2.91, $p=0.003$)	2.23 (1.33-3.75, $p=0.002$)
Race/ethnicity	White	Reference	Reference
	Afro-Ecuadorian	0.81 (0.31-2.10, $p=0.659$)	0.78 (0.30-2.02, $p=0.602$)
	Mestizo	0.86 (0.39-1.93, $p=0.723$)	0.79 (0.35-1.75, $p=0.558$)
	Indigenous	0.64 (0.27-1.52, $p=0.311$)	0.78 (0.32-1.93, $p=0.595$)
	Montubio or other	0.68 (0.26-1.79, $p=0.437$)	0.76 (0.29-2.00, $p=0.575$)
Area of residence	Urban	Reference	Reference
	Rural	0.73 (0.55-0.97, $p=0.032$)	1.03 (0.74-1.43, $p=0.875$)
Region	Highlands	Reference	Reference
	Coast	1.02 (0.79-1.33, $p=0.874$)	1.24 (0.92-1.68, $p=0.155$)
	Amazon	0.66 (0.49-0.90, $p=0.009$)	0.84 (0.61-1.15, $p=0.278$)
	Insular region	1.74 (1.15-2.62, $p=0.008$)	1.98 (1.23-3.19, $p=0.005$)
Active commuting (days)	Per one additional day	1.00 (0.95-1.05, $p=0.897$)	1.02 (0.97-1.07, $p=0.547$)
Daily physical education (hour)	Per one additional hour	1.16 (0.90-1.50, $p=0.239$)	1.12 (0.85-1.46, $p=0.418$)

		<i>Dependent variable (obesity)</i>	
<i>Predictors</i>	<i>Levels</i>	<i>Univariate analysis OR (95% CI, p value)</i>	<i>Multivariate analysis OR (95% CI, p value)</i>
Weekly MVPA (days)	Per one additional day	0.95 (0.90-1.00, $p=0.072$)	0.96 (0.90-1.01, $p=0.124$)
Daily sedentary behavior (hours)	Per one additional hour	0.97 (0.88-1.06, $p=0.472$)	0.96 (0.86-1.06, $p=0.400$)
Daily fruit consumption status	0 servings	Reference	Reference
	1 serving	0.30 (0.07-1.22, $p=0.092$)	0.27 (0.07-0.99, $p=0.049$)
	2 servings	0.37 (0.10-1.47, $p=0.159$)	0.37 (0.11-1.24, $p=0.107$)
	3 or more servings	0.46 (0.12-1.75, $p=0.255$)	0.35 (0.11-1.13, $p=0.079$)
Daily vegetables consumption status	0 servings	Reference	Reference
	1 serving	0.83 (0.10-7.08, $p=0.865$)	0.85 (0.10-6.96, $p=0.880$)
	2 servings	0.77 (0.09-6.49, $p=0.810$)	0.67 (0.08-5.32, $p=0.704$)
	3 or more servings	1.16 (0.14-9.72, $p=0.888$)	1.05 (0.13-8.28, $p=0.965$)
Daily soft drinks consumption status	0 servings	Reference	Reference
	1 serving	2.09 (0.86-5.10, $p=0.104$)	1.82 (0.68-4.87, $p=0.235$)
	2 servings	1.87 (0.77-4.59, $p=0.169$)	1.56 (0.58-4.19, $p=0.377$)
	3 or more servings	1.56 (0.65-3.76, $p=0.323$)	1.41 (0.53-3.79, $p=0.490$)
Fast-food consumption (days)	Per one additional day	1.02 (0.93-1.13, $p=0.676$)	1.06 (0.96-1.17, $p=0.274$)
Processed-food consumption (days)	Per one additional day	1.03 (0.96-1.10, $p=0.393$)	1.02 (0.96-1.09, $p=0.501$)
Tooth brushing status	Nondaily	Reference	Reference
	Daily	0.96 (0.62-1.47, $p=0.835$)	0.93 (0.59-1.46, $p=0.741$)

CI, confidence interval; MVPA, moderate-to-vigorous physical activity; OR, odds ratio.

Table S2. Survey-weighted generalized linear models to evaluate the probability of having obesity in the Ecuadorian girls 5- to 17-year-old of the *Encuesta Nacional de Salud y Nutrición*, 2018.

<i>Predictors</i>	<i>Levels</i>	<i>Dependent variable (obesity)</i>	
		<i>Univariate analysis</i> <i>OR (95% CI, p value)</i>	<i>Multivariate analysis</i> <i>OR (95% CI, p value)</i>
Age group	Children (5 to 11 years)	Reference	Reference
	Adolescents (12 to 17 years)	0.55 (0.40-0.75, $p<0.001$)	0.51 (0.36-0.74, $p<0.001$)
Educational level of the main breadwinner	Primary education or lower	Reference	Reference
	Middle/high school or higher	0.68 (0.41-1.12, $p=0.128$)	0.97 (0.54-1.75, $p=0.925$)
Wealth family index status	Very rich	Reference	Reference
	Rich	1.24 (0.70-2.19, $p=0.461$)	1.28 (0.71-2.30, $p=0.407$)
	Medium	0.96 (0.56-1.64, $p=0.875$)	1.07 (0.61-1.87, $p=0.809$)
	Poor	1.13 (0.65-1.97, $p=0.665$)	1.32 (0.73-2.40, $p=0.364$)
	Very poor	1.47 (0.84-2.57, $p=0.175$)	1.78 (0.94-3.35, $p=0.075$)
Race/ethnicity	White	Reference	Reference
	Afro-Ecuadorian	0.66 (0.23-1.92, $p=0.451$)	0.73 (0.24-2.19, $p=0.576$)
	Mestizo	1.28 (0.54-3.02, $p=0.580$)	1.40 (0.58-3.35, $p=0.455$)
	Indigenous	0.82 (0.29-2.34, $p=0.713$)	1.08 (0.35-3.28, $p=0.897$)
	Montubio or other	0.81 (0.26-2.58, $p=0.728$)	0.90 (0.26-3.09, $p=0.863$)
Area of residence	Urban	Reference	Reference
	Rural	0.87 (0.60-1.26, $p=0.470$)	1.14 (0.74-1.75, $p=0.548$)
Region	Highlands	Reference	Reference
	Coast	1.27 (0.91-1.76, $p=0.166$)	1.56 (1.10-2.21, $p=0.013$)
	Amazon	0.94 (0.64-1.37, $p=0.739$)	1.18 (0.80-1.73, $p=0.406$)
	Insular region	2.15 (1.33-3.48, $p=0.002$)	2.20 (1.28-3.78, $p=0.004$)
Active commuting (days)	Per one additional day	0.96 (0.90-1.02, $p=0.189$)	0.96 (0.90-1.03, $p=0.286$)
Daily physical education (hour)	Per one additional hour	0.98 (0.73-1.31, $p=0.894$)	0.99 (0.72-1.35, $p=0.926$)
Weekly MVPA (days)	Per one additional day	0.95 (0.88-1.02, $p=0.190$)	0.95 (0.88-1.02, $p=0.179$)
Daily sedentary behavior (hours)	Per one additional hour	1.01 (0.90-1.14, $p=0.826$)	1.05 (0.93-1.18, $p=0.459$)

		<i>Dependent variable (obesity)</i>	
<i>Predictors</i>	<i>Levels</i>	<i>Univariate analysis OR (95% CI, p value)</i>	<i>Multivariate analysis OR (95% CI, p value)</i>
Daily fruit consumption status	0 servings	Reference	Reference
	1 serving	1.51 (0.31-7.45, $p=0.612$)	4.23 (0.94-19.10, $p=0.061$)
	2 servings	1.52 (0.31-7.43, $p=0.606$)	3.87 (0.88-16.97, $p=0.073$)
	3 or more servings	1.39 (0.30-6.53, $p=0.676$)	3.16 (0.78-12.72, $p=0.106$)
Daily vegetables consumption status	0 servings	Reference	Reference
	1 serving	0.23 (0.06-0.85, $p=0.027$)	0.13 (0.03-0.50, $p=0.003$)
	2 servings	0.26 (0.07-0.96, $p=0.043$)	0.16 (0.04-0.61, $p=0.007$)
	3 or more servings	0.23 (0.06-0.82, $p=0.023$)	0.16 (0.04-0.57, $p=0.005$)
Daily soft drinks consumption status	0 servings	Reference	Reference
	1 serving	1.08 (0.37-3.19, $p=0.883$)	1.16 (0.40-3.39, $p=0.785$)
	2 servings	1.36 (0.45-4.13, $p=0.583$)	1.53 (0.52-4.53, $p=0.438$)
	3 or more servings	0.91 (0.31-2.69, $p=0.864$)	0.99 (0.33-2.93, $p=0.986$)
Fast-food consumption (days)	Per one additional day	0.99 (0.89-1.10, $p=0.816$)	1.06 (0.93-1.20, $p=0.377$)
Processed-food consumption (days)	Per one additional day	0.97 (0.88-1.08, $p=0.586$)	0.97 (0.88-1.08, $p=0.616$)
Tooth brushing status	Nondaily	Reference	Reference
	Daily	1.73 (0.99-3.04, $p=0.056$)	1.81 (0.96-3.42, $p=0.066$)

CI, confidence interval; MVPA, moderate-to-vigorous physical activity; OR, odds ratio.

Table S3. Survey-weighted generalized linear models to evaluate the probability of having obesity in the Ecuadorian 5- to 11-year-old population of the *Encuesta Nacional de Salud y Nutrición*, 2018.

<i>Predictors</i>	<i>Levels</i>	<i>Dependent variable (obesity)</i>	
		<i>Univariate analysis</i> <i>OR (95% CI, p value)</i>	<i>Multivariate analysis</i> <i>OR (95% CI, p value)</i>
Sex	Boys	Reference	Reference
	Girls	0.63 (0.50-0.78, $p<0.001$)	0.58 (0.46-0.72, $p<0.001$)
Educational level of the main breadwinner	Primary education or lower	Reference	Reference
	Middle/high school or higher	1.00 (1.00-1.00, $p=1.000$)	1.00 (1.00-1.00, $p=1.000$)
Wealth family index status	Very rich	Reference	Reference
	Rich	1.34 (0.91-1.96, $p=0.141$)	1.35 (0.90-2.02, $p=0.152$)
	Medium	1.98 (1.36-2.89, $p<0.001$)	1.98 (1.31-2.99, $p=0.001$)
	Poor	1.80 (1.24-2.63, $p=0.002$)	1.74 (1.12-2.70, $p=0.014$)
	Very poor	2.43 (1.63-3.62, $p<0.001$)	2.35 (1.45-3.80, $p=0.001$)
Race/ethnicity	White	Reference	Reference
	Afro-Ecuadorian	0.60 (0.24-1.46, $p=0.259$)	0.63 (0.25-1.54, $p=0.307$)
	Mestizo	0.82 (0.38-1.76, $p=0.605$)	0.78 (0.36-1.71, $p=0.534$)
	Indigenous	0.54 (0.23-1.30, $p=0.171$)	0.66 (0.26-1.65, $p=0.369$)
	Montubio or other	0.61 (0.24-1.57, $p=0.306$)	0.71 (0.27-1.86, $p=0.487$)
Area of residence	Urban	Reference	Reference
	Rural	0.78 (0.61-0.99, $p=0.042$)	1.01 (0.76-1.34, $p=0.938$)
Region	Highlands	Reference	Reference
	Coast	0.93 (0.74-1.17, $p=0.537$)	1.16 (0.89-1.53, $p=0.273$)
	Amazon	0.77 (0.58-1.00, $p=0.053$)	1.04 (0.78-1.38, $p=0.790$)
	Insular region	2.18 (1.46-3.25, $p<0.001$)	2.49 (1.58-3.93, $p<0.001$)
Active commuting (days)	Per one additional day	0.95 (0.91-0.99, $p=0.020$)	0.97 (0.93-1.02, $p=0.263$)
Daily physical education (hour)	Per one additional hour	1.01 (0.79-1.28, $p=0.961$)	0.95 (0.73-1.23, $p=0.711$)
Weekly MVPA (days)	Per one additional day	0.93 (0.89-0.98, $p=0.005$)	0.94 (0.89-0.98, $p=0.008$)
Daily sedentary behavior (hours)	Per one additional hour	1.04 (0.95-1.14, $p=0.407$)	1.01 (0.91-1.11, $p=0.877$)

		<i>Dependent variable (obesity)</i>	
<i>Predictors</i>	<i>Levels</i>	<i>Univariate analysis OR (95% CI, p value)</i>	<i>Multivariate analysis OR (95% CI, p value)</i>
Daily fruit consumption status	0 servings	Reference	Reference
	1 serving	0.48 (0.12-1.89, $p=0.297$)	0.75 (0.21-2.71, $p=0.666$)
	2 servings	0.50 (0.13-1.90, $p=0.306$)	0.80 (0.24-2.68, $p=0.716$)
	3 or more servings	0.61 (0.16-2.27, $p=0.459$)	0.83 (0.26-2.61, $p=0.751$)
Daily vegetables consumption status	0 servings	Reference	Reference
	1 serving	0.24 (0.07-0.77, $p=0.017$)	0.16 (0.05-0.54, $p=0.003$)
	2 servings	0.24 (0.07-0.76, $p=0.016$)	0.16 (0.05-0.51, $p=0.002$)
	3 or more servings	0.30 (0.09-0.96, $p=0.043$)	0.17 (0.05-0.57, $p=0.004$)
Daily soft drinks consumption status	0 servings	Reference	Reference
	1 serving	1.41 (0.52-3.84, $p=0.496$)	1.76 (0.63-4.95, $p=0.284$)
	2 servings	1.99 (0.73-5.37, $p=0.176$)	2.39 (0.85-6.69, $p=0.098$)
	3 or more servings	1.44 (0.53-3.95, $p=0.476$)	1.63 (0.58-4.61, $p=0.356$)
Fast-food consumption (days)	Per one additional day	1.04 (0.96-1.12, $p=0.394$)	1.05 (0.95-1.15, $p=0.351$)
Processed-food consumption (days)	Per one additional day	1.04 (0.97-1.11, $p=0.238$)	1.04 (0.98-1.12, $p=0.209$)
Tooth brushing status	Nondaily	Reference	Reference
	Daily	1.18 (0.80-1.74, $p=0.396$)	1.14 (0.76-1.69, $p=0.524$)

CI, confidence interval; MVPA, moderate-to-vigorous physical activity; OR, odds ratio. [†] Given that 100% of the participants included had “Primary Education or lower”, this variable was not included in the model.

Table S4. Survey-weighted generalized linear models to evaluate the probability of having obesity in the Ecuadorian 12- to 17-year-old population of the *Encuesta Nacional de Salud y Nutrición*, 2018.

<i>Predictors</i>	<i>Levels</i>	<i>Dependent variable (obesity)</i>	
		<i>Univariate analysis</i> <i>OR (95% CI, p value)</i>	<i>Multivariate analysis</i> <i>OR (95% CI, p value)</i>
Sex	Boys	Reference	Reference
	Girls	0.86 (0.59-1.25, $p=0.417$)	0.85 (0.57-1.25, $p=0.403$)
Educational level of the main breadwinner	Primary education or lower	Reference	Reference
	Middle/high school or higher	0.63 (0.41-0.98, $p=0.040$)	0.67 (0.42-1.05, $p=0.082$)
Wealth family index status	Very rich	Reference	Reference
	Rich	0.78 (0.38-1.58, $p=0.489$)	0.79 (0.39-1.58, $p=0.504$)
	Medium	0.84 (0.42-1.70, $p=0.635$)	0.92 (0.47-1.83, $p=0.821$)
	Poor	1.19 (0.61-2.32, $p=0.613$)	1.32 (0.68-2.55, $p=0.414$)
	Very poor	0.99 (0.52-1.89, $p=0.968$)	1.36 (0.66-2.83, $p=0.404$)
Race/ethnicity	White	Reference	Reference
	Afro-Ecuadorian	1.01 (0.32-3.15, $p=0.987$)	1.22 (0.39-3.85, $p=0.736$)
	Mestizo	1.51 (0.61-3.74, $p=0.370$)	1.64 (0.64-4.18, $p=0.299$)
	Indigenous	1.21 (0.44-3.35, $p=0.716$)	1.66 (0.55-5.05, $p=0.371$)
	Montubio or other	1.00 (0.28-3.57, $p=0.997$)	0.93 (0.24-3.55, $p=0.917$)
Area of residence	Urban	Reference	Reference
	Rural	0.90 (0.63-1.30, $p=0.583$)	1.15 (0.75-1.76, $p=0.526$)
Region	Highlands	Reference	Reference
	Coast	1.47 (1.02-2.10, $p=0.036$)	1.78 (1.19-2.67, $p=0.005$)
	Amazon	0.75 (0.48-1.15, $p=0.186$)	0.80 (0.52-1.25, $p=0.333$)
	Insular region	1.50 (0.82-2.75, $p=0.189$)	1.31 (0.69-2.50, $p=0.405$)
	Per one additional day	1.04 (0.97-1.12, $p=0.257$)	1.03 (0.96-1.11, $p=0.376$)
Daily physical education (hour)	Per one additional hour	1.35 (0.95-1.92, $p=0.093$)	1.22 (0.85-1.74, $p=0.279$)
Weekly MVPA (days)	Per one additional day	1.00 (0.91-1.10, $p=0.987$)	0.99 (0.90-1.09, $p=0.847$)
Daily sedentary behavior (hours)	Per one additional hour	0.99 (0.87-1.12, $p=0.839$)	1.01 (0.89-1.15, $p=0.885$)

<i>Predictors</i>	<i>Levels</i>	<i>Dependent variable (obesity)</i>	
		<i>Univariate analysis</i> <i>OR (95% CI, p value)</i>	<i>Multivariate analysis</i> <i>OR (95% CI, p value)</i>
Daily fruit consumption status	0 servings	Reference	Reference
	1 serving	0.52 (0.09-3.05, $p=0.468$)	0.43 (0.07-2.89, $p=0.388$)
	2 servings	0.75 (0.13-4.25, $p=0.745$)	0.68 (0.12-3.86, $p=0.662$)
	3 or more servings	0.64 (0.12-3.47, $p=0.601$)	0.43 (0.08-2.37, $p=0.335$)
Daily vegetables consumption status	0 to 1 serving [†]	Reference	Reference
	2 servings	1.08 (0.59-1.99, $p=0.803$)	1.00 (0.47-2.12, $p=0.995$)
	3 or more servings	1.16 (0.71-1.90, $p=0.560$)	1.48 (0.68-3.22, $p=0.325$)
Daily soft drinks consumption status	0 servings	Reference	Reference
	1 serving	1.62 (0.57-4.56, $p=0.363$)	1.39 (0.49-3.92, $p=0.534$)
	2 servings	0.87 (0.29-2.62, $p=0.798$)	0.76 (0.25-2.28, $p=0.621$)
	3 or more servings	0.93 (0.33-2.57, $p=0.882$)	0.76 (0.27-2.15, $p=0.608$)
Fast-food consumption (days)	Per one additional day	1.04 (0.91-1.20, $p=0.554$)	1.11 (0.97-1.27, $p=0.143$)
Processed-food consumption (days)	Per one additional day	0.90 (0.81-1.00, $p=0.047$)	0.91 (0.82-1.02, $p=0.091$)
Tooth brushing status	Nondaily	Reference	Reference
	Daily	1.05 (0.49-2.23, $p=0.908$)	1.12 (0.52-2.43, $p=0.769$)

CI, confidence interval; MVPA, moderate-to-vigorous physical activity; OR, odds ratio. [†] Given that the "0 servings" category presented a very low number of cases, this category was merged with the "1 serving" category.