

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Multivariable Linear Regression Model Examining the Association of State-Level Smart Snacks Policy With Students' Daily Energy Intake From Solid Fats in Kilocalories

Variable	All Students (n = 1959)				Students who Consumed Snacks Purchased at School (n = 528)			
	Coefficient (95% CI)	P Value	Adjusted Mean	95% CI	Coefficient (95% CI)	P Value	Adjusted Mean	95% CI
State Law Requires Smart Snacks Standards to Be Followed in All School Venues								
No	0 [Reference]	--	295.3	280.5, 310.2	0 [Reference]	--	300.6	272.1, 329.1
Yes	-37.70 (-62.78, -12.62)	.004	257.6	237.1, 278.1	-53.50 (-97.03, -9.97)	.02	247.1	208.2, 286.0
Student Grade (continuous)	2.89 (-1.44, 7.21)	.19	--		2.53 (-4.77, 9.83)	.49	--	
Student Gender								
Male	0 [Reference]	--	312.7	295.7, 329.8	0 [Reference]	--	346.3	306.1, 386.6
Female	-52.69 (-71.87, -33.50)	<.001	260.1	245.4, 274.7	-105.18 (-147.42, -62.95)	<.001	241.1	217.5, 264.7
Student Race/Ethnicity								
White, non-Hispanic	0 [Reference]	--	290.5	274.2, 306.7	0 [Reference]	--	299.0	258.9, 339.0
Black, non-Hispanic	-0.88 (-39.88, 38.13)	.96	289.6	252.0, 327.1	1.20 (-79.18, 81.58)	.98	300.2	236.7, 363.6
Hispanic	-12.68 (-43.87, 18.51)	.42	277.8	251.2, 304.4	-22.30 (-103.22, 58.61)	.59	276.7	209.9, 343.4
Other	-3.03 (-44.80, 38.74)	.89	287.4	246.6, 328.3	-55.31 (-136.96, 26.33)	.18	243.7	182.5, 304.8
School Urbanicity								
Urban	0 [Reference]	--	303.5	272.4, 334.6	0 [Reference]	--	315.1	275.5, 354.6
Suburban	-27.30 (-65.23, 10.63)	.16	276.2	258.6, 293.8	-25.75 (-66.30, 14.81)	.21	289.3	258.4, 320.3
Rural	-11.71 (-47.52, 24.10)	.52	291.8	269.2, 314.4	-49.27 (-99.02, 0.47)	.052	265.8	223.1, 308.4
School Size								
Large (≥1000 students)	0 [Reference]	--	286.3	264.5, 308.1	0 [Reference]	--	303.3	252.4, 354.1
Medium (500 to 999 students)	-3.21 (-34.03, 27.61)	.84	283.1	263.8, 302.4	-36.51 (-95.59, 22.57)	.22	266.8	233.0, 300.5
Small (< 500 students)	8.26 (-20.81, 37.33)	.57	294.6	270.5, 318.7	5.07 (-55.97, 66.12)	.87	308.3	271.3, 345.3
Race/Ethnicity (District)								
≥66% White	0 [Reference]	--	291.8	272.4, 311.3	0 [Reference]	--	281.8	237.3, 326.4
≥50% Black	4.12 (-46.44, 54.68)	.87	296.0	247.7, 344.3	-3.94 (-93.84, 85.96)	.93	277.9	198.5, 357.3
≥50% Hispanic	-5.37 (-55.79, 45.06)	.83	286.5	243.6, 329.4	25.27 (-38.73, 89.27)	.44	307.1	260.9, 353.4
Other	-10.47 (-36.30, 15.35)	.42	281.4	264.6, 298.1	7.38 (-46.65, 61.41)	.79	289.2	257.3, 321.2
Child Poverty Rate (District)								
<20%	0 [Reference]	--	289.0	269.5, 308.6	0 [Reference]	--	292.0	256.6, 327.4
≥20%	-6.63 (-36.77, 23.51)	.66	282.4	264.1, 300.7	-8.99 (-58.32, 40.34)	.72	283.0	248.2, 317.9
Region								
West	0 [Reference]	--	298.4	274.1, 322.7	0 [Reference]	--	288.4	248.0, 328.7
Midwest	10.20 (-21.83, 42.23)	.53	308.6	291.8, 325.4	41.15 (-13.56, 95.86)	.14	329.5	293.0, 366.0

South	-11.23 (-52.63, 30.16)	.59	287.2	263.7, 310.6	-1.92 (-59.55, 55.72)	.95	286.4	246.8, 326.1
Northeast	-67.30 (-110.47, -24.13)	.003	231.1	193.2, 269.0	-75.12 (-150.74, 0.50)	.052	213.2	148.3, 278.2

eTable 2. Multivariable Linear Regression Model Examining the Association of State-Level Smart Snacks Policy With Students' Daily Energy Intake From Added Sugars in Kilocalories

Variable	All Students (n = 1959)				Students who Consumed Snacks Obtained at School (n = 528)			
	Coefficient (95% CI)	P Value	Adjusted Mean	95% CI	Coefficient (95% CI)	P Value	Adjusted Mean	95% CI
State Law Requires Smart Snacks Standards to Be Followed in All School Venues								
No	0 [Reference]	--	267.2	248.4, 286.0	0 [Reference]	--	281.4	259.8, 303.0
Yes	-16.17 (-51.28, 18.95)	.36	251.1	219.4, 282.7	-10.04 (-56.92, 36.85)	.67	271.4	224.1, 318.7
Student Grade (continuous)	1.87 (-2.63, 6.37)	.41	--	--	1.25 (-6.73, 9.24)	.76	--	--
Student Gender								
Male	0 [Reference]	--	280.9	258.3, 303.5	0 [Reference]	--	304.2	273.6, 334.8
Female	-35.22 (-56.92, -13.52)	.002	245.7	228.7, 262.6	-45.93 (-80.19, -11.67)	.009	258.3	234.3, 282.3
Student Race/Ethnicity								
White, non-Hispanic	0 [Reference]	--	262.5	242.7, 282.4	0 [Reference]	--	275.0	246.3, 303.7
Black, non-Hispanic	38.16 (-1.24, 77.55)	.06	300.7	261.4, 339.9	49.02 (0.05, 97.99)	.050	324.0	275.5, 372.5
Hispanic	-8.31 (-38.56, 21.93)	.59	254.2	227.2, 281.2	-7.13 (-67.43, 53.16)	.82	267.9	220.7, 315.0
Other	-21.35 (-60.73, 18.03)	.29	241.2	201.4, 280.9	-31.00 (-106.20, 44.20)	.42	244.0	177.2, 310.8
School Urbanicity								
Urban	0 [Reference]	--	296.8	267.3, 326.2	0 [Reference]	--	332.3	297.0, 367.6
Suburban	-50.57 (-81.13, -20.02)	.001	246.2	227.4, 264.9	-77.17 (-116.39, -37.96)	<.001	255.1	230.6, 279.6
Rural	-30.28 (-71.16, 10.59)	.15	266.5	233.9, 299.1	-56.79 (-107.13, -6.45)	.03	275.5	233.2, 317.8
School Size								
Large (≥1000 students)	0 [Reference]	--	268.2	238.8, 297.6	0 [Reference]	--	300.2	259.7, 340.8
Medium (500 to 999 students)	-10.39 (-42.32, 21.54)	.52	257.8	235.0, 280.6	-46.11 (-90.86, -1.36)	.04	254.1	227.0, 281.3
Small (< 500 students)	0.30 (-39.92, 40.53)	.99	268.5	244.4, 292.6	-7.86 (-84.18, 68.45)	.84	292.4	244.1, 340.6
Race/Ethnicity (District)								
≥66% White	0 [Reference]	--	310.5	280.8, 340.2	0 [Reference]	--	330.1	297.1, 363.0
≥50% Black	-66.29 (-116.43, -16.15)	.01	244.2	201.8, 286.6	-91.41 (-161.69, -21.12)	.01	238.7	172.8, 304.6
≥50% Hispanic	-84.82 (-130.14, -39.51)	<.001	225.7	195.6, 255.8	-95.20 (-156.03, -34.37)	.002	234.9	185.6, 284.2
Other	-71.54 (-109.09, -33.98)	<.001	239.0	217.0, 261.0	-75.26 (-117.77, -32.76)	.001	254.8	223.7, 285.9
Child Poverty Rate (District)								
<20%	0 [Reference]	--	262.5	240.3, 284.7	0 [Reference]	--	270.9	242.4, 299.4
≥20%	3.40 (-23.97, 30.77)	.81	265.9	246.5, 285.3	25.45 (-15.46, 66.36)	.22	296.4	266.6, 326.2
Region								
West	0 [Reference]	--	260.6	235.4, 285.7	0 [Reference]	--	291.8	259.9, 323.6
Midwest	9.21 (-25.59, 44.00)	.60	269.8	245.9, 293.6	5.28 (-40.81, 51.36)	.82	297.1	262.2, 331.9
South	16.91 (-17.99, 51.82)	.34	277.5	251.8, 303.2	-1.47 (-47.08, 44.15)	.95	290.3	260.2, 320.4
Northeast	-50.13 (-102.23, 1.98)	.06	210.4	161.3, 259.6	-112.70 (-168.44, -56.96)	<.001	179.1	128.7, 229.4

eTable 3. Multivariable Linear Regression Model Examining the Association of State-Level Smart Snacks Policy With Students' Daily Intake of Sodium in Milligrams

Variable	All Students (n = 1959)				Students who Consumed Snacks Obtained at School (n = 528)			
	Coefficient (95% CI)	P Value	Adjusted Mean	95% CI	Coefficient (95% CI)	P Value	Adjusted Mean	95% CI
State Law Requires Smart Snacks Standards to Be Followed in All School Venues								
No	0 [Reference]	--	3162.7	3056.0, 3269.5	0 [Reference]	--	3223.3	3006.6, 3440.1
Yes	13.55 (-238.71, 265.81)	.92	3176.3	2927.8, 3424.8	-280.60 (-634.20, 72.99)	.12	2942.7	2648.4, 3237.0
Student Grade (continuous)	45.36 (19.14, 71.58)	.001	--		46.24 (-10.86, 103.33)	.11	--	
Student Gender								
Male	0 [Reference]	--	3453.5	3297.1, 3609.9	0 [Reference]	--	3636.9	3337.3, 3936.6
Female	-585.56 (-764.04, -407.09)	<.001	2867.9	2754.8, 2981.0	-871.15 (-1206.22, -536.08)	<.001	2765.8	2591.9, 2939.7
Student Race/Ethnicity								
White, non-Hispanic	0 [Reference]	--	3106.9	2948.1, 3265.6	0 [Reference]	--	3154.7	2883.3, 3426.0
Black, non-Hispanic	102.52 (-186.59, 391.63)	.48	3209.4	2968.9, 3449.9	3.83 (-435.40, 443.05)	.99	3158.5	2843.4, 3473.5
Hispanic	121.85 (-113.02, 356.71)	.31	3228.7	3058.2, 3399.3	-87.23 (-575.70, 401.23)	.72	3067.4	2684.9, 3449.9
Other	164.08 (-181.47, 509.62)	.35	3271.0	2938.6, 3603.3	350.48 (-629.38, 1330.34)	.48	3505.1	2543.5, 4466.8
School Urbanicity								
Urban	0 [Reference]	--	3213.8	2914.2, 3513.3	0 [Reference]	--	3105.1	2836.5, 3373.6
Suburban	-102.26 (-453.36, 248.84)	.57	3111.5	2980.1, 3242.9	79.71 (-330.56, 489.99)	.70	3184.8	2890.1, 3479.4
Rural	9.06 (-343.47, 361.59)	.96	3222.8	3010.2, 3435.5	70.14 (-396.44, 536.73)	.77	3175.2	2705.3, 3645.1
School Size								
Large (≥1000 students)	0 [Reference]	--	3368.0	3168.6, 3567.3	0 [Reference]	--	3393.9	2954.5, 3833.2
Medium (500 to 999 students)	-303.83 (-553.41, -54.26)	.02	3064.2	2925.2, 3203.2	-425.93 (-911.23, 59.38)	.09	2967.9	2748.2, 3187.7
Small (< 500 students)	-272.92 (-521.95, -23.90)	.03	3095.1	2917.6, 3272.5	-242.22 (-864.42, 379.99)	.44	3151.6	2835.6, 3467.7
Race/Ethnicity (District)								

≥66% White	0 [Reference]	--	3232.4	3067.2, 3397.6	0 [Reference]	--	3278.1	2968.3, 3587.8	
≥50% Black	246.10 (-59.99, 552.19)	.11	3478.5	3211.0, 3746.0	292.15 (-653.02, 1237.33)	.54	3570.2	2624.7, 4515.7	
≥50% Hispanic	-89.25 (-395.08, 216.58)	.56	3143.2	2923.3, 3363.0	-249.37 (-775.86, 277.13)	.35	3028.7	2701.1, 3356.2	
Other	-153.82 (-393.28, 85.65)	.21	3078.6	2908.0, 3249.1	-225.96 (-645.90, 193.99)	.29	3052.1	2770.1, 3334.1	
Child Poverty Rate (District)									
<20%	0 [Reference]	--	3193.8	3051.6, 3336.0	0 [Reference]	--	3103.2	2909.9, 3296.6	
≥20%	-85.41 (-271.30, 100.47)	.36	3108.4	2978.1, 3238.7	182.96 (-89.88, 455.80)	.19	3286.2	3010.1, 3562.2	
Region									
West	0 [Reference]	--	3273.5	3036.8, 3510.3	0 [Reference]	--	3396.9	2820.7, 3973.1	
Midwest	46.15 (-269.95, 362.24)	.77	3319.7	3103.9, 3535.4	-227.81 (-815.22, 359.60)	.44	3169.1	2929.0, 3409.1	
South	-127.52 (-408.46, 153.42)	.37	3146.0	3027.1, 3264.9	-179.26 (-838.28, 479.75)	.59	3217.6	2951.5, 3483.7	
Northeast	-464.44 (-794.67, -134.22)	.006	2809.1	2532.9, 3085.3	-787.78 (-1458.21, -117.35)	.02	2609.1	2066.6, 3151.6	

eTable 4. Multivariable Logistic Regression Model Examining the Association of State-Level Smart Snacks Policy With Student Consumption of Snacks Obtained at School Among 1959 Students

Variable	Odds Ratio (95% CI)	P Value	Adjusted Prevalence	95% CI
State Law Requires Smart Snacks Standards to Be Followed in All School Venues				
No	1 [Reference]	--	26.9	23.8, 30.0
Yes	0.82 (0.59, 1.15)	.25	23.3	18.3, 28.4
Student Grade (continuous)	1.06 (1.02, 1.11)	.007	--	
Student Gender				
Male	1 [Reference]	--	23.3	19.7, 27.0
Female	1.35 (1.03, 1.75)	.03	28.9	25.3, 32.6
Student Race/Ethnicity				
White, non-Hispanic	1 [Reference]	--	23.8	19.9, 27.8
Black, non-Hispanic	1.82 (1.22, 2.71)	.004	36.0	28.4, 43.7
Hispanic	1.13 (0.80, 1.61)	.48	26.1	21.1, 31.2
Other	1.08 (0.65, 1.77)	.77	25.2	17.7, 32.6
School Urbanicity				
Urban	1 [Reference]	--	27.0	18.9, 35.0
Suburban	0.93 (0.56, 1.53)	.77	25.6	21.7, 29.4
Rural	0.97 (0.60, 1.55)	.89	26.3	22.5, 30.1
School Size				
Large (≥ 1000 students)	1 [Reference]	--	27.4	22.3, 32.5
Medium (500 to 999 students)	0.90 (0.64, 1.28)	.57	25.5	21.4, 29.6
Small (< 500 students)	0.90 (0.57, 1.42)	.64	25.4	18.8, 31.9
Race/Ethnicity (District)				
$\geq 66\%$ White	1 [Reference]	--	28.4	23.6, 33.1
$\geq 50\%$ Black	0.94 (0.57, 1.56)	.82	27.3	19.1, 35.4
$\geq 50\%$ Hispanic	0.98 (0.51, 1.89)	.95	27.9	17.2, 38.7
Other	0.76 (0.53, 1.08)	.12	23.2	19.3, 27.0
Child Poverty Rate (District)				
$< 20\%$	1 [Reference]	--	26.6	22.3, 30.8
$\geq 20\%$	0.93 (0.63, 1.37)	.70	25.2	20.5, 29.8
Region				
West	1 [Reference]	--	25.5	16.6, 34.4
Midwest	1.05 (0.60, 1.86)	.86	26.4	21.5, 31.4
South	1.08 (0.61, 1.92)	.79	27.0	22.8, 31.1
Northeast	0.89 (0.44, 1.80)	.74	23.3	14.8, 31.8