

Nevada School Wellness Practices

CARSON CITY SCHOOL DISTRICT

Introduction

- Schools play a pivotal role in the promotion of students' health, well-being, and ability to learn.
- School districts participating in the National School Lunch Program and/or School Breakfast Program are required to develop a local school wellness policy that promotes the health of students and addresses the growing problem of childhood obesity¹.
- The Nevada State School Wellness policy has been in place since 2007 and was revised and reissued in 2014.
- A progressive and more collaborative school/health interagency partnership is emerging to optimize school wellness programming outcomes in Nevada. As a beginning point, a 36-item survey to assess the school wellness practices in NV was disseminated to NV K-12 public schools through NV superintendents' offices in the Fall of 2014.
- The partnership will use the results of the survey to develop statewide priorities for improving school wellness in Nevada.

Methodology

The purpose of this brief report is to provide district superintendents with aggregated information about physical activity and nutrition practices of elementary, middle, and high schools in their districts. In this report we focus on one universal wellness practice - the presence of a school wellness coordinator, three specific physical activity (PA) practices, and four specific nutrition practices.

We selected these items because they (a) had the greatest variability throughout the state AND (b) were perceived to be feasibly modifiable. The PA practices are 1) minutes of required physical education: at least 150 minutes per week and at least 90 minutes per week; 2) minutes of recess provided: at least 100 minutes per week and at least 60 minutes per week (elementary schools only); and 3) school support of active transportation through the existence of an active travel plan (e.g., Safe Routes to Schools). Nutrition practices are 1) student access to a salad bar/traveling salad bar; 2) school participation in a fresh fruit and vegetable snack program; 3) scheduling of daily nutrition breaks; and 4) identification of nutrition education goals. A complete report of all survey items is in the Appendix.

Because Carson City has a small number of schools, we are unable to provide statistical comparisons between Carson City and the rest of the state. Instead, we provide the total number of schools in Carson City that reported having each practice. For comparison purposes, we also provide figures that identify the percentage of schools in Clark County and the percentages of schools from the rest of the state that indicated affirmatively for each policy. We separate Clark County from the rest of the schools in the state because Clark County schools comprised 65% of all schools responding. We present error bars

indicating 95% confidence intervals around the percentages. Note that overlapping confidence intervals indicate that the difference between Clark County and the rest of the state is not statistically significant at the $p < 0.05$ level.

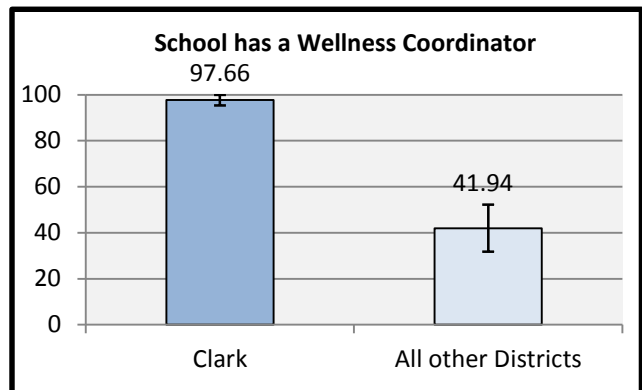
Findings

We received a total of eight surveys from Carson City schools, including five elementary schools, one middle school, and both high schools².

Elementary Schools

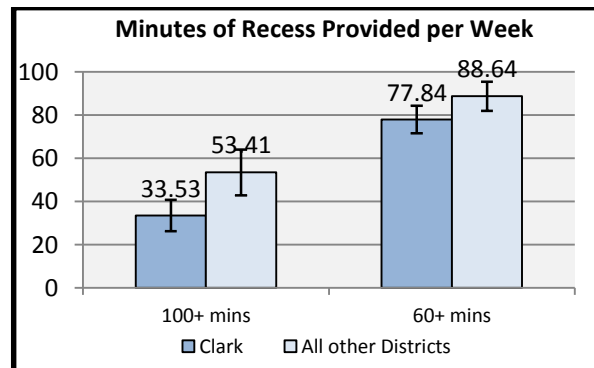
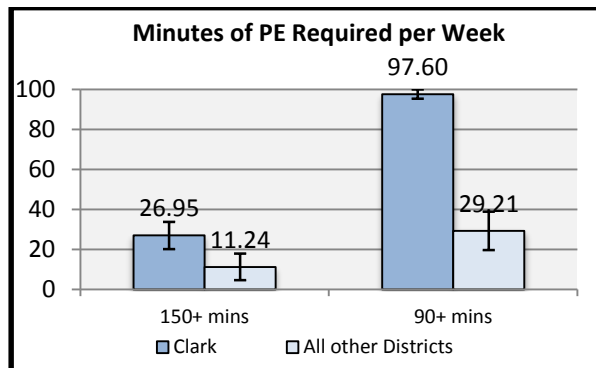
School Wellness Coordinator

School wellness coordinators play an important role in implementing strong physical activity and nutrition programs in schools. Out of the five Carson City elementary schools completing a survey, four reported having a school wellness coordinator. An overwhelming majority and significantly more Clark County elementary schools also reported having a school wellness coordinator relative to the rest of the schools in the state.



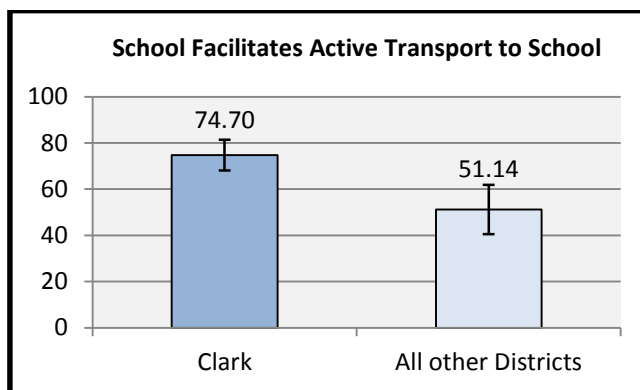
Physical Education and Recess Minutes

The national recommendation for the number of weekly PE minutes elementary students should receive is 150. Only one Carson City elementary school reported requiring at least 150 minutes of PE per week. An additional three Carson City schools reported requiring at least 90 minutes of PE per week. Though significantly more Clark County elementary schools reported requiring 150 minutes of PE compared to the rest of the state, less than 30% of Clark County schools indicated doing so. In addition, the national recommendation is that schools provide elementary students with at least 20 minutes of recess each day, equivalent to 100 minutes per week. Two Carson City elementary schools reported meeting this recommendation. The other three reported providing at least 60 minutes of recess per week, equating to an average of 12 minutes or more per day. Compared to other NV elementary schools, significantly fewer Clark County schools reported providing 100 minutes of recess, but most Clark County elementary schools (over 77%) reported providing 60 minutes or more recess per week.



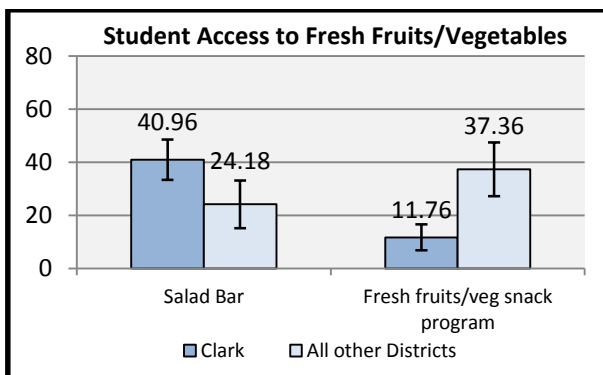
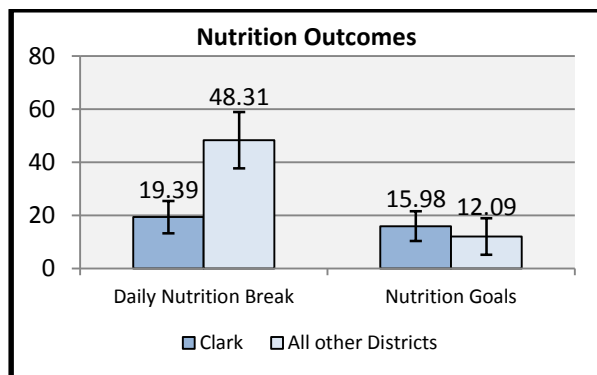
Active Transport

Facilitating active transport (e.g., walking and biking) to school has been shown to help students accrue important minutes in moderate to vigorous physical activity. Four Carson City elementary schools reported engaging in this practice. Compared to other NV elementary schools, significantly more Clark County elementary schools reported facilitating active transport to school. Examples of such efforts include the Safe Routes to School and Walking School Bus programs. Schools also work with their local municipalities to take traffic calming measures such as school zone flashing lights, speed bumps, traffic lights, narrower streets, medians, and well-placed and well-marked cross walks with crossing guards.



Nutrition

Providing students with daily access to fresh fruits and vegetables, implementing daily nutrition breaks, and identifying nutrition goals can facilitate healthier eating, potentially contributing to reductions in childhood obesity and increases in attention and cognition. Four Carson City elementary schools reported providing daily nutrition breaks, but only one reported having nutrition goals. Four Carson City schools also reported having a salad bar for students, but none reported participating in the fresh fruits and vegetables program. Compared to elementary schools in the rest of Nevada, significantly fewer Clark County elementary schools reported providing students with a daily nutrition break, and similar to their NV elementary school counterparts, few Clark County elementary schools reported having school nutrition education goals. In addition, though significantly more Clark County elementary schools reported having a salad bar compared to elementary schools in the rest of the state, significantly fewer Clark County elementary schools reported participating in the fresh fruits and vegetable snack program compared to the rest of elementary schools in the state.

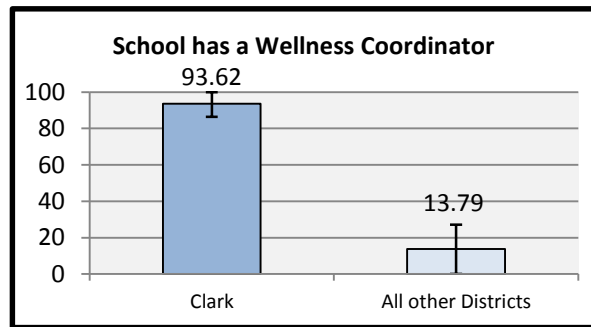


Middle Schools

We received a survey from only one Carson City middle school, so the report below details the outcomes for that one school.

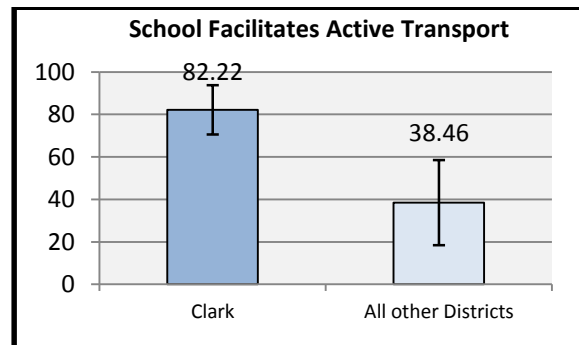
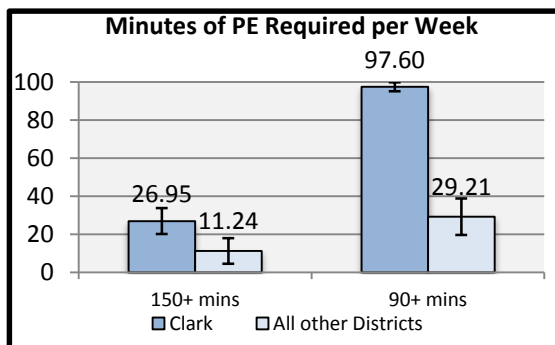
School Wellness Coordinator

The school with the completed survey did not report having a school wellness coordinator. Wellness coordinators are essential for facilitating effective physical education and nutrition programs in schools. The overwhelming majority of Clark County middle schools reported having a wellness coordinator, but a very low percentage of the rest of Nevada reported having a school wellness coordinator.



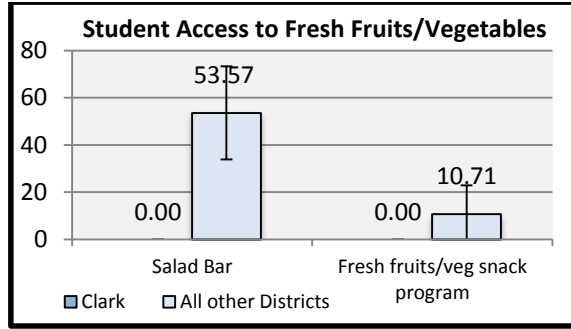
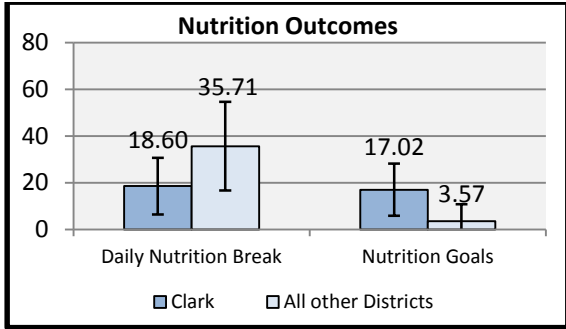
Physical Education Minutes and Active Transport

The national recommendation for middle schools is that students should receive at least 225 minutes of PE per week³. Our results suggest that most middle schools throughout the state of Nevada are not meeting that recommendation. The one Carson City middle school that supplied a survey reported providing at least 150 minutes of PE per week. In terms of active transport to school, the one Carson City middle school that completed a survey reported having an active transport plan.



Nutrition

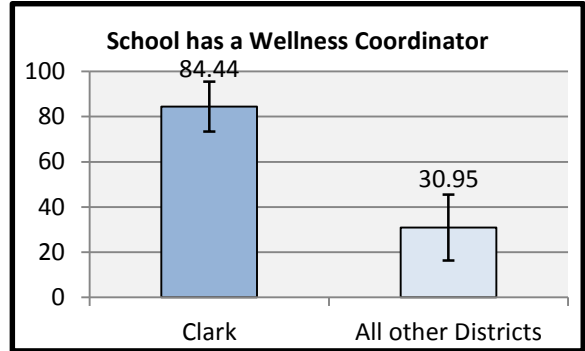
In terms of nutrition, the Carson City middle school that completed a survey did not report providing daily nutrition breaks. Instead, nutrition breaks are scheduled for special occasions. This particular school also did not report having nutrition goals, and the school does not participate in a fresh fruits and vegetables program, but students do have access to a salad bar.



High Schools

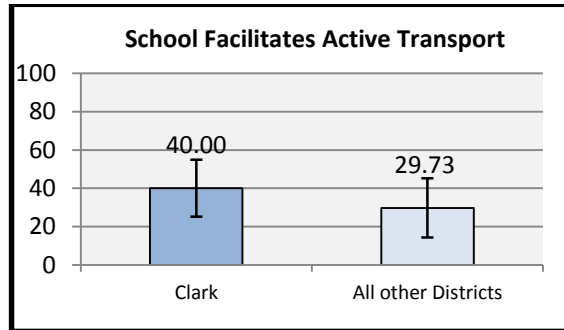
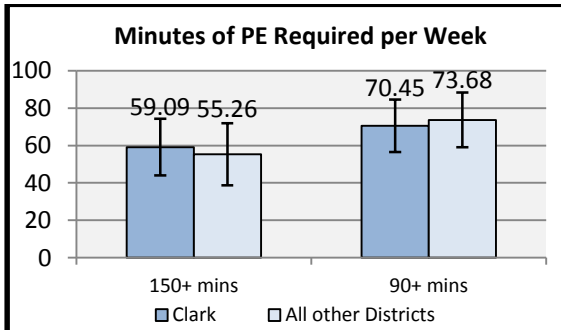
School Wellness Coordinator

Of the two Carson City high schools completing surveys, one reported having a school wellness coordinator. As shown in the figure to the right, though a substantial proportion of Clark County high schools report having a school wellness coordinator, that practice is not standard across the rest of the state, suggesting a major area for intervention.



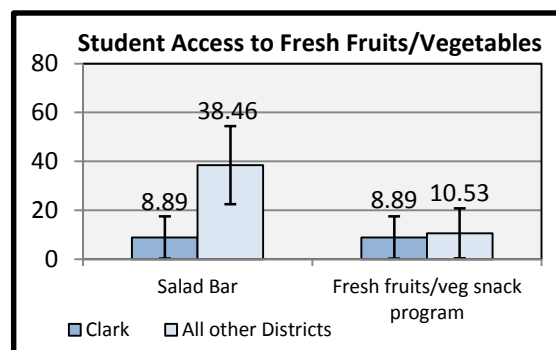
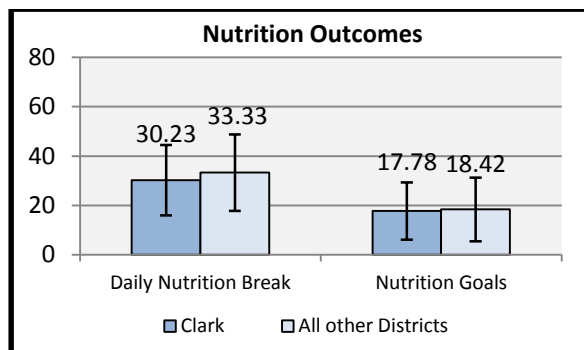
Physical Education Minutes and Active Transport

The national recommendation for high schools is that students should receive at least 225 minutes of PE per week³. No Carson City high schools reported providing even 150 minutes of PE per week, and only one reported providing at least 90 minutes per week. One school also reported having an active transport plan.



Nutrition

One Carson City high school reported providing a daily nutrition break, and one school reported having nutrition goals. Both schools reported that students have access to a salad bar, but only one reported participating in a fresh fruits and vegetables program.



This report has provided the Carson City School District with a detailed account of select aspects of school wellness practices within Carson City schools and additionally for comparative purposes provided Clark County Schools’ data and data from schools in the rest of the state. Overall, this report showed inconsistent physical activity and nutrition wellness practices among reporting schools and that no school participates in all existing school nutrition programs nor invests in all opportunities for students to accrue physical activity either during the school day or before or after school. This report clearly suggests there is opportunity for all Carson City schools to improve school wellness practices. District level leadership can be the catalyst for improvement and can be influential in broader school participation in all existing state nutrition programs and pursuit of district level strategies for improving school physical activity programs.

Recommendations

Comprehensive school wellness programs provide a healthy school environment where the promotion and reinforcement of healthful dietary behaviors and physical activity can be fostered. In 2014, the Centers for Disease Control and Prevention released a comprehensive report summarizing the evidence-based linkages between student physical activity, nutrition, and overall health and academic achievement.⁵ This report provides salient rationale for school investment in improving school wellness programming as an investment in the whole child and in improving student academic performance. Based on the findings detailed in this report, we provide the following recommendations for school wellness practice improvement in physical activity and nutrition areas.

Physical Activity⁴

By in large, Nevada schools do not meet national recommendations for recess or physical education. Through superintendent leadership and strong interagency partnerships, improvement in both physical education and recess is possible.

Physical Education

Numerous authorities recommend that elementary children receive PE daily and for a total of at least 150 minutes per week and secondary students receive PE for a total of 225 minutes per week. In most cases, Carson City schools fall far short of these recommendations.

Strategies for Improvement

- Consider hiring additional PE specialists and/or providing staff development for classroom teachers so they can implement evidence-based PE programs under the supervision of a PE specialist.
- National physical education and health authorities recommend PE be taught by certified specialists. Compared to classroom teachers, specialists conduct longer lessons and cancel them less. In addition, their students are more likely to engage in high intensity physical activity, resulting in increased physical fitness and skills.
- Employing more PE specialists may not be economically feasible now. In the interim, consider staff development for classroom teachers or part-time teachers who implement an evidence-based PE program (e.g., SPARK-PE, CATCH PE, or planet health) under the direction of a PE specialist.

Recess

Besides providing physical activity, recess may increase academic attentiveness and on-task classroom behavior. National physical education and health authorities recommend that elementary schools provide all students with at least 20 minutes of recess each day. Two Carson City elementary schools reported meeting the national recommendation. It is important to note that students don't always receive recess even when it is scheduled because teachers withhold it for disciplinary or academic reasons.

Strategies for Improvement

- Require that elementary schools make morning and afternoon recess part of the formalized schedule.
- Provide recess-related staff development for classroom teachers, supervisors, and recess volunteers.
- Implement policies that ensure students have access to recess time.

Nutrition

Deficits in dietary nutrients found in fruits in vegetables have been found to be associated with lower academic performance. This report found variable school participation in salad bar and overall low participation in the fresh fruits and vegetables program (only one high school).

Salad Bar and Fruit and Vegetable Participation

Based on the results from this report, salad bar access and fruit and vegetable program participation should be examined and targeted for improvement.

Strategy for Improvement

- Work with the district food services director and the NV Department of Agriculture to develop strategies for school adoption of salad bar access and participation in the fruits and vegetable snack program.

APPENDIX: Report of All Survey Items

OVERALL WELLNESS

	Elementary Schools				Carson (N=1)	Middle Schools				Carson (N=2)	High Schools			
	Carson (N=5)	Clark	Others	t value		Clark	Others	t value	Clark		Others	t value		
School has a school wellness coordinator	4	97.7	41.9	10.57***	0	93.6	13.8	10.72***	1	84.4	31.0	5.96***		
School wellness policy is disseminated to staff annually	2	89.4	54.4	6.10***	0	69.6	39.3	2.60*	1	77.8	47.6	3.03**		

PHYSICAL ACTIVITY

	Elementary Schools				Carson (N=1)	Middle Schools				Carson (N=2)	High Schools			
	Carson (N=5)	Clark	Others	t value		Clark	Others	t value	Clark		Others	t value		
School requires all students to participate in PE at least 150 mins/week	1	27.0	11.2	3.26**	1	76.1	53.9	1.88	0	59.1	55.3	0.35		
School requires all students to participate in PE at least 90 mins/week	3	97.6	29.2	13.7***	1	84.8	76.9	0.79	1	70.5	73.7	-0.32		
PE taught by certified PE teacher during all PE lessons	5	99.4	54.6	8.35***	1	100.0	88.9	1.80	1	97.8	86.8	1.83		
Recess is provided at least 100 mins/week	2	33.5	53.4	-3.07**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Recess is characterized by the provision of loose balls	5	99.4	95.5	1.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Recess is characterized by the provision of strategic playground or game markings	5	97.0	93.2	1.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Recess is characterized by the training of	3	66.1	44.3	3.39***	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

playground supervisors to promote PA													
School provides classroom activity breaks	4	83.4	77.5	1.11	1	36.8	48.0	-0.86	1	38.6	44.4	-0.52	
School provides before school PA programs	0	51.5	26.7	4.00***	0	50.0	16.0	3.14**	0	39.5	14.7	2.55*	
School offers intramural programs before school	0	15.3	4.8	1.64	0	57.1	0.0	a	0	76.5	20.0	a	
School offers organized sports before school	0	15.5	19.1	-0.36	0	50.0	0.0	a	0	70.6	60.0	a	
School offers walking programs before school	0	58.8	22.7	3.37**	0	25.0	33.0	a	0	25.0	25.0	a	
School offers dance before school	0	12.3	4.8	1.23	0	57.1	0.0	a	0	47.1	0.0	a	
School provides after school PA programs	3	66.1	55.2	1.66	1	93.5	65.4	2.75**	2	77.3	71.4	0.59	
School offers intramural programs after school	1	45.8	32.6	1.47	1	93.0	46.7	3.33**	0	87.5	8.7	9.09***	
School offers organized sports after school	1	56.9	52.2	0.53	1	97.7	94.1	0.56	0	84.4	84.0	0.04	
School offers walking programs after school	0	22.6	21.4	0.15	0	11.1	13.3	-0.21	0	32.3	13.0	1.64	
School offers dance after school	1	42.9	21.4	2.63*	0	71.8	26.7	3.25**	0	93.8	39.1	4.84***	
<i>School physical activity programming offered during school</i>													
School offers intramural programs during school	0	21.6	19.1	0.41	0	33.3	45.5	-0.57	0	18.8	21.4	-0.18	
School offers organized sports during school	2	38.6	33.3	0.72	1	41.7	36.4	0.25	1	52.9	40.0	0.71	
School offers walking programs during school	2	42.9	37.5	0.71	0	27.3	18.2	0.49	0	37.5	21.4	0.94	
School offers dance during school	1	20.0	17.7	0.37	0	41.7	27.3	0.70	0	62.5	14.3	2.98**	
School supports active transport by providing bike rack storage	4	98.2	91.0	2.23*	1	97.8	96.3	0.36	2	84.4	79.0	0.64	

School supports active transport by having active travel plans (e.g., SRTS)	4	74.7	51.1	3.73***	1	82.2	38.5	3.87***	1	40.0	29.7	0.96
School supports active transport by implementing traffic calming mechanisms	5	80.7	67.4	2.39*	1	54.4	40.5	1.12	1	60.0	55.3	0.43
Student access to PA is compromised for disciplinary reasons	3	31.7	38.2	1.04	0	15.6	37.0	-2.11*	1	15.9	36.8	-2.16*
Student access to PA is compromised for academic reasons	3	15.3	36.0	-3.53***	1	20.0	37.0	-1.59	2	13.6	18.4	-0.58
Student access to PA is compromised due to space not being available	0	6.2	8.0	-0.51	0	11.1	7.4	0.51	1	22.2	21.1	0.13
Both indoor and outdoor PA facilities are available	4	82.6	69.3	2.31*	1	97.8	92.6	0.93	1	84.4	81.6	0.34
Either indoor or outdoor PA facilities are available	1	16.8	30.0	-2.25*	0	2.2	7.4	-0.93	0	6.7	2.6	0.85

NUTRITION

	Elementary Schools				Middle Schools				High Schools			
	Carson (N=5)	Clark	All Others	t value	Carson (N=1)	Clark	All Others	t value	Carson (N=2)	Clark	All Others	t value
Free breakfast is available to all students every day	2	47.1	40.0	1.09	0	51.1	40.7	0.85	1	60.0	33.3	2.51*
On typical school day, students are provided at least 15 mins to consume school breakfast	4	98.2	70.0	5.69***	1	100.0	78.6	2.71*	2	93.3	68.4	2.93**
School has a garden	2	30.6	22.5	1.43	0	6.4	14.3	-1.03	0	22.2	10.3	1.50
School garden is integrated into nutrition education program	1	58.0	47.4	0.77	0	b	b	b	0	40.0	25.0	a

Students are allowed to consume vegetables grown in school garden at school	2	76.9	80.0	-0.28	0	33.3	50.0	-0.38	0	66.7	100.0	a
Students have a salad bar/traveling salad bar	4	41.0	24.2	2.84**	1	0.0	53.6	5.58***	2	8.9	38.5	-3.29**
School participates in fresh fruit and vegetable snack program	0	11.8	37.4	-4.51***	0	0.0	10.7	-1.80	1	8.9	10.5	-0.25
School provides breakfast in the classroom	0	27.2	14.4	2.52*	0	0.0	7.1	-1.44	0	4.4	5.1	-0.15
Water is freely available to students throughout school day	5	98.2	97.8	0.24	1	97.9	100.0	-1.00	2	97.8	97.4	0.10
School schedules daily nutrition breaks	4	19.4	48.3	-4.70***	0	18.6	35.7	-1.63	1	30.2	33.3	-0.30
School schedules nutrition breaks during special occasions	5	89.4	76.9	2.33*	1	86.7	77.3	0.97	0	70.7	62.9	0.72
School encourages staff to use non-food incentives/rewards	5	97.0	91.2	1.78	1	89.4	77.8	1.35	2	63.6	74.4	-1.05
School participates in scripts, box tops, or labels for education	4	96.5	90.1	1.84	1	74.5	64.3	0.93	0	22.2	20.5	0.19
Scripts	0	4.3	11.1	-1.78	0	8.9	8.0	0.13	0	2.2	2.6	-0.10
Box tops	4	96.5	90.1	1.83	1	74.5	60.7	1.25	0	20.0	18.0	0.24
Labels	1	29.7	38.1	-1.31	0	13.3	8.0	0.66	0	6.7	7.7	-0.18
Nutrition education is integrated into curriculum	5	90.5	64.4	4.68***	1	78.7	71.4	0.71	2	84.4	79.5	0.59
School has identified nutrition education goals	1	16.0	12.1	0.87	0	17.0	3.6	2.04*	1	17.8	18.4	-0.07

NOTES

Not all schools provided responses for every item; sample sizes vary across items

*p<0.05; **p<0.01; ***p<0.001; two-tailed t-tests for differences in proportions/percentages;

t-values are from significance tests comparing Clark County to the rest of the state.

^a Sample is not large enough for statistical test

^b No responses provided

Author Information

Monica A.F. Lounsbery, Ph.D. is Associate Vice Provost for Faculty, Policy and Research and is Director of the Physical Activity Policy Research Program in the Department of Kinesiology and Nutrition Sciences at the University of Nevada, Las Vegas.

Shannon M. Monnat, Ph.D. is Assistant Professor of Rural Sociology, Demography, and Sociology and a Research Associate in the Population Research Institute at Penn State University, University Park, PA.

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Endnotes

¹ Established by Child Nutrition and Women, Infant, and Child Reauthorization Act of 2004; Reinforced by the Healthy, Hunger-Free Kids Act of 2010

² During data analysis we identified several cases of duplicate school surveys, often completed from different ip addresses (suggesting completion by different individuals), and often with discrepant responses across the duplicates. Because we could not include a school in the results more than once, we eliminated duplicates from our analysis. In the case of duplicates, we selected which survey to retain based on which survey contained fewer missing responses to survey items. In cases where the number of missing responses were similar, we selected the survey completed last under the assumption that the last survey completed was to correct erroneous information provided in an earlier survey.

³ The national recommendation for the number of PE minutes middle school students should receive per week is 225. However, because some middle school respondents completed the survey using the link for elementary schools, and the elementary school survey allowed for a maximum response of 150 minutes or more per week, we are unable to show the percentage of middle schools that require at least 225 minutes of PE per week.

⁴ Regular engagement in physical activity is important for children's growth, development, and health. The National Physical Activity Guidelines (2008) indicate children should engage in moderate and vigorous physical activity at least 60 minutes each day, but far too many children, including Nevada's children, do not.

⁵The Centers for Disease Control report can be found at:

<http://static.squarespace.com/static/53b1a843e4b0dcbabf4b4b85/t/53d15be7e4b0a7d1d7db0e7d/14062294799/98/health-academic-achievement.pdf>