The Strength of School Wellness Policies: One State's Experience

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ABSTRACT

BACKGROUND: This study examines the results of federal legislation on the content and quality of policies written in 2005-2006 by Utah school districts (n = 30).

METHODS: Policies were gathered by phone call requests to school districts or obtained on district Web pages. Content was compared to requirements outlined in the Child Nutrition Reauthorization Act (CNRA) of 2004 and recommendations made by a state coalition of health and education agencies. The strength of the language was assessed (mandate vs recommendation), and characteristics of school districts that adopted strong policies were identified.

RESULTS: The majority of Utah school districts (78%) complied with the federal guidelines, and a variety of state recommended nutrition and physical activity policy statements were included. The strength of the language used in the policies revealed that districts were more likely to mandate items already required by other entities or well established in the district. School districts with high participation in free- and reduced-price programs had significantly more mandatory policies (mean = 9.2) versus low (mean = 7.1) and medium enrollment (mean = 4.7). Urban school districts were more likely to indicate mandatory competitive food policies than rural and suburban (mean = 2.3 vs 0.93, 0.83). There were no differences in policy language between school districts based on race or size.

CONCLUSIONS: Compliance with the CNRA may be a positive step toward improving the school nutrition and physical activity environment, but it does not ensure a comprehensive or powerful policy. Schools and community partners must continue to work together to strengthen wellness policies and programs.

Keywords: school wellness; wellness policy; childhood obesity; school health.

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Children obtain about one third of their total daily energy requirements from school lunch and should expend about 50% of their daily energy expenditure while at school.[1] The importance of establishing a comprehensive school environment that supports a good overall diet and adequate physical activity is recognized by several Healthy People 2010 objectives.[2] However, school food and activity environments have transitioned from fairly simple to more complex, making achievement of these national goals difficult.[3] Participation in the school lunch program has declined, while competing foods and beverages have emerged. In 2000, food and beverage items were sold to children from vending machines, school stores, and à la carte lines in 98% of high schools, 74% of middle schools, and 43% of elementary schools.[4] Not surprising, the nutritional quality of these foods is poor—mostly high in fat and sugar. Current physical activity recommendations for children advocate a minimum of 60 minutes of moderate to vigorous physical activity each day.[5] Since children spend most of their day in school, experts recommend that 30 minutes (half of the overall recommended amount) be accrued during the school day. However, only 8% of elementary schools and 6% of middle and senior high schools provide daily physical education. About one third of schools provide physical education 3 days a week with a steady decline after the elementary grades.[6] These changes in the school environment coincide with a dramatic increase in childhood overweight and obesity. Among 6 to 11-year-olds, obesity has tripled during the past 20 years. Between 1963 and 2000, average weights increased 11 pounds among both 10-year-old girls (from 77 to 88 pounds) and boys (from 74 to 85 pounds) and increased 10 pounds among 15-year-old girls (from 124 to 134 pounds) and boys nearly 15 pounds (from 136 to 150 pounds).[7]

In response to the growing awareness of the school environment's influence on nutritional intake and physical activity of the majority of the nation's students, the Child Nutrition Reauthorization Act (CNRA) of 2004 included a school wellness component requiring school districts to develop a wellness policy by July 1, 2006. This federal law outlines 5 content areas to include in the wellness policy: (1) goals for nutrition education, physical activity, and other school wellness programs, (2) nutrition guidelines for foods provided at school, (3) assurance that guidelines for school meals meet United States Department of Agriculture (USDA) guidelines, (4) a plan for monitoring the policy, and (5) involvement of parents, students, representatives of the school food authority, the school board, school administrators, and the public in development of school wellness policy content.[8]

Several health organizations, such as the School Nutrition Association, Action for Healthy Kids, Alliance for a Healthier Generation, National Governor's Association, and the National Alliance for Nutrition and Activity, have established and disseminated recommendations for wellness policy content under these broad categories.[9-13] Recommendations typically include items that have been established in the literature or suggested by expert panels. Examples include nutritional guidelines for foods provided in vending machines, guidelines for the number of recesses provided each day in elementary school, statements outlining physical education frequency and content, and recommendations to prohibit rewarding students with food or punishing them by withholding recess.

To date, there has not been a systematic evaluation of these wellness policies to see whether recommendations have been incorporated into procedural documents. This article will analyze policies written in response to the federal wellness policy requirement in Utah, including: (1) compliance with the 5 general federal requirements, (2) compliance with state recommendations developed by a community coalition, and (3) strength of the language used in writing the policies.

METHODS

The Strength of School Wellness Policies study (SOSW) used a descriptive design to assess the influence of national and state recommendations on local school district wellness policies written in response to the CNRA of 2004.

Sample Selection

Utah consists of 40 public school districts consisting of 884 buildings serving 510,012 students (2005-2006) with the majority being Caucasian (82%) and Hispanics being the largest ethnic minority group (12%). The majority of districts reside in rural areas (55%) with the remaining in suburban (25%) and urban (20%). The State Office of Education reports that 34% of students enrolled in school nutrition programs receive free- and reduced-price lunches,[14] which is lower than the national average (59%).[15]

Data Collection

Wellness policies were collected from all Utah school districts that developed a policy addressing school nutrition and physical activity by the federal deadline of July 1, 2006. The telephone collection process took place over an 8-week period (July 10 to August 11, 2006). School districts that had written a policy prior to the CNRA were included if they had updated their policy based upon the requirements listed in the 2004 Act. Phone calls were made to each school district to assess whether or not a policy had been written and approved by the school

board. If the answer was yes, the wellness policies and any related procedural documents were requested by e-mail, facsimile, or standard mail delivery. Policies not received after 3 phone calls were accessed via the school district Web site when available. This resulted in the collection of 30 policies. Twenty-four were obtained by telephone request and 6 accessed via the school district Web site.

Measurement

Federal Compliance. To assess compliance with the federal guidelines, policies and procedures were compared to each category required by the CNRA (nutrition education and physical activity, guidelines for foods provided at school, monitoring, and inclusion of parents and community members). If at least 1 statement was present in the policy or procedures that addressed the subject of the category in any manner, compliance was noted. Since the CNRA does not require specific wording, any written evidence of that topic was considered compliance with the federal guideline. For example, under "nutrition education," compliance was noted if any reference to nutrition education in the school district was made in the policy.

State Compliance. Since content was not specified by the CNRA, further examination was made using guidelines developed by Utah Action for Healthy Kids, a coalition that includes representatives from public health, education, nutrition, physical education, health promotion, medicine, public policy, nursing, and social work. This group developed the guidelines based upon review of the literature, a review of state-level legislation across the country, and knowledge of the current state of the issue in their own communities. These guidelines were disseminated to school administrators in wellness policy training sessions that reached 65% of districts and by mail to 100% of school administrators, school board members, and school nutrition directors. These training activities were part of an awareness campaign during the 2 years between the passage of the CNRA and the deadline for district wellness policies. The guidelines are listed by category in Table 2. Once compiled, each wellness policy was reviewed and compared to the state-level recommendations using a checklist format.

Policy Language

The third part of the analysis addressed the varying types of language used in the policies since it was noted that many items were written using weak language that implied the statement was suggested or recommended but not required. For example, verbs used in stating the policy items ranged from weak constructs such as "if desired," "when possible," "is encouraged," "suggest," and "will attempt" to stronger constructs using words such as "shall," "will," "must," "required," and "will exceed." Wording was divided into 2 categories: recommendations and mandates. All language suggesting the item was recommended (weaker constructs such as those listed above) was given a score of 0 (not mandated) and strong language was given the score of 1 (mandated). Mandatory policy summary scores were be created for each policy category and total combined.

Data Analysis

Counts and percents were used to describe district federal and state compliance. One-way analysis of variance was performed using SPSS version 14[16] where mean number of mandated policies (dependent variable) were reported for each of the categorical independent variables (district size, geographic location, and free/reduced lunch enrollment). All independent variables were categorized into 3 equal levels. Eta squared was reported to describe the strength of relationships for significant associations ($p < .05$).

RESULTS

One hundred percent of wellness policies meeting the inclusion criteria were obtained (n = 30), representing 75% of Utah school districts. The demographics of the school districts included in the study are described in Table 1.

The majority of the district respondents were small in size (enrollment), located in rural areas, and represented a quarter to one-half low-income families as measured by percent receiving free or reduced meals. The 9 (22%) school districts that did not respond were all rural districts; the majority had enrollments less than 5000 and matched the respondents in the percent of students receiving free- or reduced-price meals. Results and analysis are presented by federal- and state-level compliance and strength of policy language.

Federal Compliance

Of those examined, 77% of school districts met all 5 components required by the federal CNRA, meaning they had at least 1 policy sentence addressing each requirement (nutrition education and physical activity, guidelines for foods provided at school, and monitoring and community/parent participation). There were no significant differences in compliance between districts based on school size, location, percent of students enrolled in the free- or reduced-priced meals, or race.

State Compliance

Among the 30 districts reporting a board-approved wellness policy (Table 2 shows incorporation of each state recommendation by school districts), the following

Table 1. **Demographic Characteristics of School Districts SOSW Policies, 2006 (N = 30)**

Characteristic	n (%)
Location	
Rural	14 (50.0)
Suburban	6 (20.0)
Urban	10 (30.0)
Total	30 (100)
Percent of free- and reduced-price meals	
0-25	8 (27.0)
25-50	18 (60.0)
50-75	4 (13.0)
75-100	0 (0)
Total	30 (100)
Size by enrollment	
<10,000	18 (60.00)
10,000-25,000	7 (23.33)
25,000-50,000	1 (3.33)
>50,000	4 (13.33)
Total	30 (100)
Race by percent Caucasian	
<50	1 (3.33)
50-75	2 (6.66)
75-100	27 (90.0)
Total	30 (100)

policy recommendations were most likely to be included in board-approved policy documents: approved contents for elementary vending machines, wellness promotion for parents, achieving USDA school lunch and breakfast nutritional standards, and making physical education a core component of secondary schools.

The following policy recommendations were most likely to be excluded from board-approved policy documents: pricing that encourages the consumption of healthy foods, identifying safe walking and biking routes to schools, prioritizing recess during the elementary school day, participating in a state-sponsored incentive program titled "Gold Medal Schools," and having fruits and vegetables available where all foods are sold.

Policy Language

To evaluate the level of commitment displayed toward each guideline, the strength of the language used in the school wellness policies was categorized as either a recommendation or a mandate. The number of mandated policy items are listed in Table 3 and compared to district demographics. Of those policies reviewed, districts on average had 7 mandated policy statements of the potential 32 (22%). The range included 0 (1 district) to 15 (2 districts) mandated policy statements. In the nutrition education category, having nutrition as part of the core curriculum was most often mandated (48%, n = 15). In the physical activity arena, having physical education as part of the core curriculum was most often mandated (54%, n = 17). Among the competitive food recommendations, restrictions on competitive foods in elementary schools and specifics for contents in elementary vending (52%, n = 16) were most likely adopted. Of the 5 "other wellness" policies recommended for adoption by the state coalition, the most likely to be included in a policy was having a yearly evaluation of the school wellness policy (36%, n = 11).

Overall, school districts with high participation in free- and reduced-price programs (45-72%) had significantly more mandatory policies (mean = 9.2 ± 4.8, $F = 3.8$, $df = 2$, $p < .05$) versus low (mean = 7.1 ± 3.1) and medium enrollment (mean = 4.7 ± 2.8). Urban school districts were more likely to indicate mandatory competitive food policies than rural and suburban (mean = 2.3 ± 1.7 vs 0.93 ± 1.1, 0.83 ± 1.0, $F = 3.9$, $df = 2$, $p < .05$). In our model, free- and reduced-price school lunch enrollment ($\eta^2 = 0.778$) and district geography ($\eta^2 = 0.781$) each accounted for 22% of the variance in having mandatory policy language. There were no differences in mandates by racial makeup or total student enrollment, although the ability to identify differences by ethnic or racial diversity was limited in this state.

DISCUSSION

A high percentage (78%) of Utah school districts complied with federal guidelines outlined in the CNRA. However, despite minimal requirements for compliance with the CNRA, some school districts (22%) did not meet the requirement to address each required topic area, and the most frequently missed category—guidelines for competitive foods—is considered essential in creating a supportive environment for instilling healthy eating behaviors.[17] A variety of state-level policies were chosen by school districts, but food guidelines such as altering pricing to encourage healthy food consumption or offering fruits and vegetables where all foods are sold were rarely incorporated, indicating school districts are not able or ready to make this type of change even though they are shown to be effective.[18] Overall, school districts were not ready to suggest that recess should be prioritized as an important part of a child's daily schedule, a core tenet of the state recommendations, and commonly addressed in national recommendations. The examination of the language of the policies revealed a relatively high number of mandates, but these did not represent new content. Rather, mandate language was typically used to describe curricula required by the Utah State Board of Education or elementary school vending practices already in place. While their inclusion seems redundant, it may signify that school districts are more likely to act upon items mandated by another agency.

Table 2. **State Guidelines by District Use, Percent Recommended, and Percent Mandated SOSW Policies, 2006**

Policy Guideline	Number of Districts N (%)	Percent Recommend	Percent Mandate
Nutrition			
Implement the nutrition core curriculum at each school	25 (81)	60	40
Limit food used for celebrations and rewards	24 (80)	59	41
Achieve the federal standards for school meal programs	26 (84)	99	01
Allow at least 10 minutes for breakfast and 20 minutes for lunch	16 (52)	45	55
Assure adequate facilities for students to eat sitting down in the cafeteria	12 (39)	68	32
No vending foods sold during meal times	11 (36)	56	44
Establish guidelines for competitive foods sales	21 (68)	72	28
Incorporate pricing that encourages the consumption of healthy foods	7 (23)	74	26
Include fruits, vegetables, whole grain products, and low-fat dairy products	19 (62)	64	36
Restrict frequency of breaded and fried items in school meals and a la carte	11 (36)	73	27
Physical activity			
Implement the physical education core curriculum in elementary schools	22 (72)	22	78
Implement the physical education core curriculum in secondary schools	23 (74)	80	20
Aim for daily physical education instruction and activity for each elementary school child, with a goal of 150 minutes per week	18 (58)	67	33
Include at least 2 recess periods with active play each day in elementary school	16 (52)	14	86
Restrict the use of recess as a reward or withholding recess as punishment	15 (49)	66	33
Establish recess as an important time of day	9 (29)	55	45
Alter school schedules to allow for recess before lunch	14 (35)	80	20
Prioritize instruction that emphasizes lifelong fitness	20 (64)	50	50
Include and promote intramural sports and fitness activities	18 (58)	62	38
Establish and promote safe routes for walking and biking to school	8 (26)	50	50
Guidelines for foods provided at school			
No vending or competitive foods in elementary school	19 (62)	85	15
If vending is present in elementary school, it may contain only water, low-fat/nonfat milk, 100% fruit juice or fresh, dried or canned fruits, or vegetables	22 (72)	27	73
Competitive food guidelines are written for secondary schools	21 (68)	100	0
Beverages will include those listed for elementary school	12 (39)	92	8
Fruits and vegetables should be offered for sale at any location on the school site where foods are sold	10 (32)	80	20
All snacks, sweets, or side dishes sold or served outside of the school meal program shall meet specific standards	21 (68)	86	14
Standards for portion sizes will be set for all foods served	14 (35)	68	32
Other wellness topics			
Schools will use the Utah Gold Medal School Program, which provides guidelines, resources, and incentives to schools that make changes in physical activity and nutrition	17 (55)	46	54
Restrict fund-raising activities that rely on the sales of unhealthy foods	18 (58)	79	21
Establish wellness promotion for school staff	20 (64)	70	30
Establish wellness promotion for parents	26 (84)	78	22
Include a yearly evaluation of the wellness policy, identifying implementation rates, results, and plans for revision	22 (72)	50	50

There were no differences in participation by the location of the school districts, their ethnicity, or sizes, suggesting the majority of districts were aware of the CNRA requirement and had received information from the state coalition or other sources. Urban schools were more likely to include guidelines for foods sold at school, possibly due to characteristics not defined in this study (more resources, past attention to issue, and administrator experience). Notably, schools that serve the highest number of low-income students (as identified by free and reduced meals participation) were most likely to mandate wellness policy items. This suggests that Utah school districts serving students who may be most vulnerable to obesity and its related health complications have the strongest wellness policies.

Limitations

This analysis is limited by the districts that were not included due to incomplete or inaccessible wellness policies. This may have affected the external validity of the findings. Based upon the lack of predictive characteristics collected, other school demographics such as superintendent experience, previous wellness initiatives, school board or wellness committee composition (ie, health professional, coach), or size may have been helpful in more fully understanding the results of this study.

Table 3. **Wellness Categories With Mandatory Policy Language by District Characteristics**

	Nutrition Education (n = 10)	Physical Activity (n = 10)	Competitive Foods (n = 7)	Wellness (n = 5)	Combined Total (n = 32)
	MN ± SD (n)	MN ± SD (n)	MN ± SD (n)	MN ± SD (n)	MN ± SD (n)
District size	p = .11	p = .83	p = .47	p = .93	p = .23
Small (≤2200)	2.75 ± 2.25 (8)	2.63 ± 1.92 (8)	1.38 ± 1.77 (8)	1.13 ± 0.99 (8)	7.88 ± 4.82 (8)
Medium (2201-11,000)	1.18 ± 1.25 (11)	2.10 ± 1.27 (10)	1.00 ± 1.18 (11)	1.09 ± 0.83 (11)	5.20 ± 2.86 (10)
Large (>11,000)	2.33 ± 1.50 (12)	2.42 ± 2.23 (12)	1.75 ± 1.42 (12)	1.25 ± 1.42 (12)	7.75 ± 3.79 (12)
District location	p = .26	p = .79	p = .03	p = .71	p = .27
Rural	1.64 ± 1.29 (14)	2.62 ± 1.55 (13)	0.93 ± 1.13 (14)	1.07 ± 0.88 (14)	6.15 ± 3.33 (13)
Suburban	1.67 ± 1.63 (6)	2.33 ± 2.58 (6)	0.83 ± 0.98 (6)	1.00 ± 1.26 (6)	5.83 ± 4.22 (6)
Urban	2.73 ± 2.20 (11)	2.09 ± 1.79 (11)	2.27 ± 1.70 (11)	1.36 ± 1.07 (11)	8.46 ± 4.27 (11)
Free/reduced lunch program enrollment	p = .06	p = .37	p = .58	p = .17	p = .03
Low (≤30%)	1.82 ± 1.14 (11)	2.64 ± 2.00 (11)	1.34 ± 1.16 (11)	1.27 ± 1.06 (11)	7.09 ± 3.07 (11)
Medium (31-44%)	1.36 ± 1.16 (11)	1.70 ± 1.27 (10)	1.09 ± 1.11 (11)	0.73 ± 0.97 (11)	4.70 ± 2.84 (10)
High (≥45%)	3.11 ± 2.42 (9)	2.78 ± 2.11 (9)	1.78 ± 2.05 (9)	1.56 ± 0.88 (9)	9.22 ± 4.76 (9)

MN, average number of policies; SD, standard deviation; n, number of school district.

CONCLUSIONS

The SOSW study provides a model for assessing school wellness policies that addresses specifics of policy content, including mandate language. This state's experience indicates that compliance with the CNRA may be a positive step toward improving the school nutrition and physical activity environment, but it does not ensure a comprehensive or powerful policy. Overall participation in the CNRA wellness initiative was high. However, often the policy statements districts chose to mandate were already mandated by the state school board or already in place. Additionally, the strength of the language used in the policy documents was disappointing. This may limit the impact these statements have on childhood obesity in the state. Future research should focus on characterizing successful implementation strategies and follow-up.

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