

California School Board Members' Perceptions of Factors Influencing School Nutrition Policy

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ABSTRACT: *Enactment and enforcement of school nutrition policies represent key components in adolescent overweight and obesity prevention. This study determined: 1) California school board members' attitudes, perceptions, and motivations related to enactment of policies that support healthy eating in schools; and 2) barriers to adopting school policies that support healthy eating. To understand board members' decision-making process, key informant interviews were conducted and a survey was administered to 404 school board members. Though school board members care about the well-being of pupils, competing priorities limit the extent to which nutrition issues get addressed at board meetings. Members' decisions center primarily around academic achievement issues, yet they are interested in nutrition's overall impact on children's health and academic achievement. (J Sch Health. 2004;74(2):52-58)*

Today's youth face risks for chronic diseases in adulthood due to many factors, including adolescent overweight and obesity.¹⁻⁴ Schools play a significant role in feeding children and contribute to lifetime dietary habits.^{5,6} Foods adolescents eat at school often are high in fat, sugar, sodium, and calories, and low in fiber.⁷⁻⁹ These foods are sold, in part, because they are popular, and thus create revenue for schools. School nutrition programs often are accountable to district management to sustain their operations financially. Fast food sales in particular generate revenue for food service operations with shrinking budgets. Some schools allow advertising on campus, including brand names on facilities and equipment, and sponsorship of school events in exchange for funds to support school food service operations,¹⁰ salaries of physical education teachers, and sport programs. Schools also enter into exclusive pouring rights contracts with soft drink companies that allow soda sales at school, and schools receive funds to support various activities.⁸ Eating practices influenced by such policies can contribute to poor diet and poor dietary habits.

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ROLES AND RESPONSIBILITIES

Role of Policy in School Health

Policy constitutes a major determinant of health behavior and of overall health. For example, the decline in mortality that occurred between 1900 and 1973 resulted generally from improvements in water supply, fluoridation, sanitation, housing, and food quality, including pasteurization of milk.¹¹ Today, policies that restrict venues for tobacco smoking have changed smoking behavior, generating favorable outcomes for smokers and nonsmokers.

In *Maximizing School Board Leadership: Policy*, The California School Boards Association (CSBA) defines policy as a "written guide for action adopted by the board to address a specific issue."¹² "Policies describe *what* the board wants done and *why* the board wants it done."¹² Policies are considered a guide to action and suggest that a school board has a choice; therefore, "matters that are already set through laws are usually relegated to administrative regulations for implementation."¹²

Policy plays an integral role in Coordinated School Health Programs (CSHP) as recommended by the Centers for Disease Control and Prevention (CDC), National Association of State Boards of Education (NASBE), and National School Boards Association (NSBA).^{13,14} Using this model, Neill and Allensworth¹⁵ developed strategies to promote 5-A-Day messages, with policy strategies essential for influencing youth eating behavior. Two policy strategies in the nutrition component included implementing policies to support US Department of Agriculture (USDA) recommendations for limiting consumption of competing foods in vending machines and as fund raisers.

Role of Schools and Nutrition

Bogden and Vega-Matos¹⁶ contend that schools can play a major role in influencing students' health behavior and communicating a healthy lifestyle message through programs and policies. A complete school health policy promotes health in multiple ways, emphasizes the value of

coordinating all components that deal with health issues, and addresses needs of staff and students. The CDC created the CSHP as an integrated approach comprised of eight components: health education, physical education, health services, nutrition services, health promotion for staff, counseling and psychological services, healthy school environment, and community/parent involvement.^{14,17}

With a grant from CDC, the California Department of Education and California Department of Health Services created a process to enhance CSHP infrastructure to enable California's children and adolescents to become healthy, successful students at school and contributing members in their communities.¹⁸ *The Building Infrastructure for Coordinated School Health: California's Blueprint* delineates a foundation for California children and adolescents to learn to lead rewarding and productive lives through a CSHP, and develop policies that support coordinated school health for California's diverse populations.

Schools must demonstrate an interest in what adolescents eat. A nutritious diet promotes development, prevents childhood and adolescent health problems, and reduces risks for heart disease, stroke, diabetes, and cancer as well as or in addition to related health care costs.^{19,20} Nutrition also influences mental performance.²¹

Yet, youth still face barriers to acquiring healthy foods at school. The cafeteria environment may not be conducive to healthy eating. In some schools, lunch is served as early as 10 am and as late as 1:30 pm, no longer at midday for all students. Cafeteria lines are rushed, leaving children with little time to make healthy choices.²²

School Nutrition Policies

Nutrition interventions include personal factors (attitudes, values) and environmental influences (family, school, community, media).²³ Nutrition policy should emphasize the primary goal of nutrition education to influence students' eating behavior and not just teach food facts.¹⁶ Dietary behaviors are complex; adopting a sound policy is not sufficient. For example, environmental and policy approaches to preventing cardiovascular disease through nutrition cite schools as a key component of policy interventions.²⁴

Craypo and Samuels²⁵ suggest that policy addressing nutrition problems focus on availability of low-cost healthy foods and promoting nutrition education and positive food messages. Of the many school nutrition programs developed, implemented, and evaluated, the Child and Adolescent Trial for Cardiovascular Health (CATCH) was the largest multisite, school-based health promotion program ever funded. Eat Smart School Nutrition Program, one component of CATCH, was tested for effectiveness in reducing total fat, saturated fat, and sodium in school meals.²⁶ The program focused primarily on food service providing healthier meals.

School food service staff play a critical role in promoting healthy eating through foods they provide daily and their interactions with students.^{27,28} The School Health Policies and Programs Study (SHHPS), which assessed school food services, revealed the importance of collaboration between school food service programs/staff and other community/school programs. Data also suggested school food service programs were expected to make a profit. The 2000 California High School Fast Food Survey^{10(p. iv)}

concluded that "Food service directors are hard pressed to find a balance between providing adolescents with healthy food choices that meet their nutritional needs, satisfying their student customers, and running a financially stable business."

School districts are also establishing contracts with fast food vendors, including restaurants and companies that lease vending machines. In the 2000 California High School Fast Food Survey, more than one-half of districts reported selling brand-name products such as Taco BellTM, SubwayTM, DominosTM, and Pizza Hut.^{TM,8,10}

McGraw et al²⁹ reviewed approaches for measuring implementation of school-based programs and policies to promote healthful eating and physical activity among youth. Many means exist for measuring program implementation and adoption, but measures of policy adoption can include documenting the written policies and key decisions made at meetings (eg, school board meetings) or other events leading to policy decision (eg, parental input, community involvement).

A social marketing framework can analyze factors affecting consumer-oriented health decisions. A social marketing framework has been used to study nutrition behavior,³⁰ mammography use,³¹ and student health services.³² Little information exists regarding factors that influence school board members in relation to nutrition policy,³³⁻³⁵ so this study determined: 1) California school board members' attitudes, perceptions, and motivations related to enacting policies that support healthful eating in high schools; and 2) mitigating barriers to adopting school policies that support healthful eating. The study involved collaboration with California Project LEAN (Leaders Encouraging Activity and Nutrition) (CPL), 10 California communities, the California School Boards Association, and the Florida Prevention Research Center at the University of South Florida. Members comprising the Community Research Collaborative (CRC) have a history of conducting community-based health communications research. The University of South Florida Institutional Review Board approved the study during the 2001-2002 calendar years.

METHODS

Interviews

Key informant interviews were conducted with school board members and other stakeholders such as superintendents, principals, assistant principals, and state and national education leaders. The interviews promoted understanding of school board members' decision-making processes, including how policies are made and decisions reached.³⁶

Interviews were conducted with 57 policymakers. Coordinators from the CRC interviewed a minimum of five key informants in their respective regions. A *California Chefs Cook Lean Cookbook* was provided to interviewees as an incentive. Fifty-four interviewees (48% school board members) completed demographic profiles. Gender distribution was 52% male and 48% female. Among respondents who reported ethnicity, more than one-half (61%) were Caucasian and 15% Hispanic. Other policymakers interviewed included superintendents (15%), principals (15%), assistant superintendents (6%), and state and national education leaders (16%). Eighteen (33%) had school-aged

children, and 17 of those with children (94%) enrolled them in public schools.

School board members became board members out of concern for the well-being of children and youth, and a desire to give back to their community. School health issues, in particular healthy food choices, were not necessarily issues of concern or brought to their attention. Board members believe parents need to learn more about board operations to exert greater influence over the policies developed. Parents also need to appreciate the importance of health and nutrition in well-being of their children.²

Instrument Development

Using the literature review and interview data, a draft survey was developed regarding board members and school nutrition issues. Using a social marketing framework, survey questions were developed focusing on product, price, place, and promotion.³¹

The survey was reviewed for content validity by CPL regional coordinators and state staff, CSBA staff, and six individuals involved at the national level in nutrition, school health issues, school boards, academia, and survey development.^{37,38} For each question, the panel indicated: 1) if the question was appropriate or inappropriate, 2) if the question was stated clearly, and 3) if response options were adequate or inadequate. The survey was revised and sent for a second panel review.

The final survey consisted of 41 questions. The format varied according to subject matter. Some domains employed Likert-type items, "select from the following," and other close-ended response options. After content decisions were made, the survey was reformatted into a booklet. One page included definitions to assist respondents with terms in the survey.

Sample

California has 404 school districts with high schools. The population of board members in these districts was 2,212 in 2001-2002. Based on an effect size of .20, a confi-

dence interval of 95%, and a power of 90%, total number of respondents needed per cell was 130.³⁹ Oversampling by a factor of three brought the total to 390. Because the CSBA randomly selected one board member from each school district, all 404 districts were solicited. Board members were assigned a number to assist in identifying who returned a survey. These numbers were recorded on the back cover of the survey.

Procedures

The questionnaire was administered using a modified version of the Total Design Method,⁴⁰ based on a series of contacts with potential respondents designed to maximize quality and quantity of responses. The survey included a cover letter on CSBA letterhead signed by the CSBA executive director and the CPL program chief, and a self-addressed, stamped envelope (SASE). The letter explained the purpose of the study and that the survey was voluntary and confidential. It also included the approval number from the University of South Florida Institutional Review Board, the time required to complete the survey, and how to receive a free *California Chefs Cook Lean Cookbook* for participation.

One week following the first mailing, all board members received a reminder postcard requesting they complete the survey if they had not done so, and thanking them if they had done so. Three weeks following the first mailing, a revised signed cover letter, second survey, and second SASE were sent to those who had not responded. Five weeks following the first mailing, a signed cover letter, third survey, and third SASE were sent to those who had not responded. The outside envelope indicated "Last Chance to Reply."

The survey was administered using a cross-sectional study design. Data coding and entry were facilitated by SPSS 8.0 software. Descriptive statistics were calculated for all variables, and chi-square analyses were performed on variables related to the desired terminal behavior (eg, pre-existing policy, perceived support by school personnel).

Table 1
Support for School Board Members Stated Selected School Nutrition Practices (N = 174)

Nutrition-Related School Practice	Yes % (N)	No % (N)	Non-Response % (N)
Providing healthy food options (ie, fruits, vegetables, low-fat milk)	96.6 (168)	1.7 (3)	1.7 (3)
Establishing minimum nutritional standards for fast foods sold in school	87.9 (153)	9.2 (16)	2.9 (5)
Limiting and monitoring food and soda advertisements in school	83.3 (145)	13.8 (24)	2.9 (5)
Restricting hours of <i>a la carte</i> food availability	62.6 (109)	35.1 (61)	2.3 (4)
Soda vending machine locations are not in heavily trafficked areas	57.5 (100)	37.4 (65)	5.2 (9)
Banning fast-food sales in elementary schools	52.9 (92)	42.5 (74)	4.6 (8)
Banning food and soda advertisements in school	52.3 (91)	44.8 (78)	2.9 (5)
Manipulating vending machine prices so that unhealthy foods cost more and healthy foods cost less	38.5 (67)	58.6 (102)	2.9 (5)
Banning <i>a la carte</i> food sales in elementary schools	33.9 (59)	61.5 (107)	4.6 (8)
Banning fast-food sales (cannot be sold)	21.8 (38)	74.7 (130)	3.4 (6)
Banning <i>a la carte</i> food sales (cannot be sold)	10.3 (8)	85.1 (148)	3.4 (6)

RESULTS

Of 404 board surveys, five were undeliverable, for an actual distribution of 399. Among deliverable surveys, 181 were returned for a response rate of 45.4%. Of 181 returned surveys, 174 were used for data analysis for a 43.6% effective response rate. Descriptive statistics and statistically significant chi-square relationships are reported.

Demographics. Of 174 analyzed surveys, approximately 60% of respondents were between ages 36 and 55, and 35% were aged 56 or older. Modal years of service as a board member were three to five years. Among participants who reported gender, 48% were female and 52% were male. Most board members considered themselves Anglo/European (75%), whereas 9% described themselves as Latino. Slightly more than one-third (35%) became a board member to be involved in their community. Approximately one-half (49%) categorized their school as rural.

Nutrition School Health Policies. Board members were asked "During the past school year, have any of the following school nutrition issues been brought before the school board for review?" Respondents indicated issues concerning the school lunch program (53%) and the school break-

fast program (43%) were brought before the school board. Issues related to exclusive soda distribution contracts, nutrition education, and branded food contracts were less frequently cited.

One-third (33%) of board members reported a nutrition policy in their school district. Almost one-half (45%) were not sure if they had a nutrition policy in their district. Chi-square analyses determined if a relationship existed between reporting the existence of a nutrition policy and 1) support received from food service directors, or 2) awareness of nutrition events in their district. A statistically significant relationship existed between those who reported supportive food service directors and those who reported a nutrition policy ($\chi^2 (2, N = 152) = 9.773, p = .008$). A statistically significant relationship also existed between those very aware of nutrition events in their district and those who reported nutrition policies in their district ($\chi^2 (4, N = 164) = 19.588, p = .001$).

Nearly one-third (32%) reported that beverage vendors held an exclusive contract with their district. Approximately one-half (48%) reported that beverage vendors held an exclusive contract with at least one school in their district.

School Board Member Opinions. Among respondents

Table 2
School Board Members' Perceptions of Selected Factors Influencing School Nutrition Issues (N = 174)

	Very Significant % (N)	Significant % (N)	Not Significant % (N)	No Response % (N)
Community/Family Factors				
Student food preferences	47.1 (82)	39.7 (69)	5.2 (9)	8.0 (14)
Active community mobilization	37.4 (65)	32.8 (57)	20.1 (35)	9.8 (17)
Cultural issues	24.1 (42)	44.8 (78)	23.0 (40)	8.0 (14)
Personal/family health issues	22.4 (39)	52.3 (91)	14.9 (26)	10.3 (18)
Parent Factors				
Apathy among parents	34.5 (60)	36.8 (64)	18.4 (32)	10.3 (18)
Parents are uninformed about health issues	33.3 (58)	42.0 (73)	16.1 (28)	8.6 (15)
Lack of school board policy education among parents	19.5 (34)	43.1 (75)	26.4 (46)	10.9 (19)
School Staff Factors				
Lack of nutritionist/dietitian	25.9 (45)	29.9 (52)	33.9 (59)	10.3 (18)
Lack of food service coordinator	24.1 (42)	18.4 (32)	47.1 (82)	10.3 (18)
Lack of school nurse	19.5 (34)	33.9 (59)	38.5 (67)	8.0 (14)
Lack of qualified teachers	14.9 (26)	33.3 (58)	43.1 (75)	8.6 (15)
Food Service Factors				
Impact of food program on budget	36.8 (64)	40.8 (71)	14.4 (25)	8.0 (14)
Inadequate food service facilities (ie, satellite food preparation)	36.8 (64)	29.9 (52)	24.7 (43)	8.6 (15)
Complicated reimbursement application (ie, school breakfast and lunch program)	34.5 (60)	39.1 (68)	17.2 (30)	9.2 (16)
School Board Factors				
Nutrition is not considered priority	35.6 (62)	40.8 (71)	15.5 (27)	8.0 (14)
Pressure from state leaders to focus on other matters	28.7 (50)	35.6 (62)	26.4 (46)	9.2 (16)

who said beverage vendors held an exclusive contract with their district or at least one school in their district, 31% did not agree with the practice, and 26% said they agreed with the practice. Seventy-six percent did not believe their district was doing all it could to foster healthy eating behavior among its students.

When asked "How effective are you in influencing nutrition-related school health decisions/policies?" 23% reported "very effective," 9% "not effective at all," and 22% indicated "they had not had the opportunity." Chi-square analyses determined if any relationships existed between perceived effectiveness at influencing decisions/policies and how adequately prepared school board members considered themselves in developing nutrition policies, community leadership, and monitoring, reviewing, and revising nutrition policies. A statistically significant relationship existed between those who believed themselves adequately prepared to develop nutrition policies and those who identified themselves as effective at influencing policies (χ^2 (3, N = 170) = 14.165, p = .003). A statistically significant relationship also existed between those who believed themselves adequately prepared to provide community leadership regarding nutrition issues and those effective at influencing policies (χ^2 (3, N = 169) = 10.456, p = .015). A statistically significant relationship also was found between those who believed themselves adequately prepared in monitoring, reviewing, and revising nutrition issues and those who identified themselves as effective at influencing policies (χ^2 (3, N = 170) = 14.714, p = .002).

When asked if board policies supporting proper nutrition on school campuses can reduce student cancer and heart disease risks in the future, 63% responded "yes." Likewise, two-thirds (66%) believed board policies supporting proper nutrition on school campuses could help reduce the number of overweight or obese students in the future.

When asked "How aware are district school board members of the relationship between nutrition and academic performance?" 40% responded "very aware," and 45% responded "aware." Almost one-half (47%) were "aware" of recent nutrition news and events in their district. However, 73% were "not aware" of nutrition policies in other districts.

Support for School Practices. Most board members supported practices that provide more health-promoting food choices for children in their districts (Table 1). Most supported banning food and soda advertisements in school (52%), and banning fast food sales in elementary schools (53%). Most (88%) supported establishing minimum nutrition standards for fast foods sold at their schools, and 83% supported limiting and monitoring food and soda advertisements at schools. When asked if they supported manipulating vending machine prices so popular but less nutritious foods cost more and healthy foods cost less, more than one-third (39%) said "yes." Almost all (97%) supported providing healthy food options in their districts. Restricting hours of a la carte food availability was supported by 63%. More than one-half (58%) believed soda vending machines should not be located in heavy traffic areas. Most did not support banning fast food sales (75%), banning a la carte foods (85%), or banning a la carte foods in elementary schools (62%).

Factors Influencing Decision-Making. Community, family, parent, school staff, food service, and school board

factors all are salient when addressing school nutrition issues (Table 2). Parents lack of knowledge about the policy-making process was reported as a "significant" factor for 75 (43%) of respondents; however, 46 (26%) did not consider this factor "significant." Board members believed lack of school staff most directly related to the health professions (ie, food service coordinator, nutritionist) also were significant factors when addressing school nutrition issues. Most (67%) believed inadequate food service facilities were "very significant" or "significant" with respect to school nutrition issues at their school.

The concept of nutrition not being a priority was considered "very significant" (36%) or "significant" (41%) among responding board members. Some (64%) considered pressure from state leaders to focus on matters other than school nutrition a "very significant" or "significant" factor in overall absence of nutrition issues from school board agendas.

Professional Development and Training. Board members reported a need for training and skills to better prepare them to advocate for school nutrition policies. Most board members (56%) felt inadequately prepared to develop sound nutrition policies. Similarly, more than one-half (51%) did not feel adequately prepared to provide community leadership in communicating and supporting nutrition policies at their school. Finally, when asked if they believed themselves adequately prepared to monitor, review, and revise nutrition policies to ensure effectiveness, more than one-half said "no" (53%).

Approximately 70% indicated their district provided professional development for board members. Twelve percent said training was provided only when a new member joined the school board. Nearly one-fifth (18%) said training was not offered. Most members (64%) would like to receive training on school nutrition issues.

When board members were asked to identify two methods they would like to use to learn about school nutrition issues, the most frequently cited responses included the Internet (33%), school board publications (21%), email (17%), school board conferences (16%), and school board seminars (9%).

Sources of Influence. Organizations and agencies presumed most influential for communicating school nutrition issues were the California Department of Health Services, American School Food Service Association, California School Food Service Association, Centers for Disease Control and Prevention, and California Department of Education. Board members were asked to indicate the extent to which they believed themselves influenced by these groups when making decisions related to nutrition and school health. Food service staff opinions were considered "very influential" by 63% of board members, followed by superintendent opinions (52%).

Most (75%) viewed advice from a health expert as "very important" when considering a school nutrition issue. Also deemed "very important" was being able to demonstrate a link between nutrition and academic performance (74%), showing practical benefits to students (73%), and demonstrating a relationship between nutrition quality and school attendance (72%).

DISCUSSION

School board members become involved with local schools because they are interested in children and educa-

tion, and committed to community involvement. Understanding issues they consider important, and issues about which they desire more information, are key to influencing their decision making regarding school nutrition issues.

A dramatic shift in performance of board members around nutrition issues begins with their awareness of existing nutrition policies in the district. In this study, nearly one-half (45%) were uncertain about the existence of such policies. Creating mechanisms for ensuring awareness seems a basic and necessary intervention.

Board members clearly see providing healthy food options, establishing minimum nutrition standards for fast foods, and limiting and monitoring food and soda advertisements in their districts as issues they support. Parents, community members, and school personnel have strong influence on these issues. Despite overall philosophical agreement to provide healthy food choices, board members still convey some inconsistencies in nutrition policy decision making. For instance, of those who knew they had an exclusive beverage vendor contract, just 31% did not agree with awarding such a contract, and 26% wholly supported it. Thus, many board members remain uncommitted on this issue, presumably either from lack of familiarity with the issue or lack of priority where it is concerned.

Board members did not support issues that suggested banning or manipulating food costs. Banning fast food or *a la carte* food sales was not supported by more than three-fourths of board members. Banning, which means not selling an item at all, requires board members to take a strong stance. Banning foods popular with students may upset students and parents, the latter group comprising a voting constituency. As the data suggest, board members acknowledged financial considerations when making school policy, despite the fact they support providing healthy food options. Supporting promotion of healthy foods without supporting banning of some fast foods represents another inconsistency on a critical issue.

Though banning may not be acceptable to some board members, restricting access and availability was supported at some level. Given their positive feelings toward providing healthy food choices, and that most do not believe their school district does all it can to foster healthy eating behavior, restricting access and availability to vending machines and *a la carte* food options offers one means for board members to see themselves as doing "something." Supporting access and availability issues may help ease the cognitive dissonance they feel.

Barriers to supporting school nutrition issues included factors in which the combined "significant" and "very significant" response categories was greater than 75% (Table 2) of board members. These factors include student food preferences, parents being uninformed about health issues, impact of the food program on the budget, and nutrition not being considered a priority. Board members who consider themselves prepared for developing sound nutrition policies, providing community leadership, and monitoring, reviewing, and revising nutrition policies, also believe themselves more effective at influencing school nutrition decisions and policies. Thus, it seems efficacious to promote a variety of ways for board members to augment their skills. Board members seem willing to learn more about nutrition issues and how they can use informa-

tion from state and federal agencies, as well as information from their own community, to make sound decisions. They indicate training is available but not necessarily about nutrition topics, and they would like to see school board association sponsored-nutrition policy-making workshops. Thus, this receptive audience and unmet need can be linked.

CONCLUSION

Policy development and implementation represent integral components of school nutrition issues. School board members as key decision-makers in school settings face critical decisions.⁴¹ Therefore, understanding factors that influence their decision-making is crucial. With the CSHP structure, school health professionals, community members, and parents can advocate to local policymakers for positive nutrition practices in schools. Bogenschneider et al⁴² suggest it is critical to connect high-quality, research-based information with policy decision-making, and share this information with policymakers. Results from this California school board member study led to the development of a social marketing plan⁴³ used to develop programs and training for school board members to enhance awareness of school nutrition policies and how they can be effective in developing and implementing policies that support healthy food choices in schools. Future research can include implementation studies (eg, interventions to enhance nutrition awareness), contextual studies (eg, unique situations in California and other states), and monitoring studies for sustainability of healthy food choice policies in schools. ■

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