

IMPACT OF THE CALIFORNIA PROJECT LEAN SCHOOL BOARD MEMBER SOCIAL MARKETING CAMPAIGN

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ABSTRACT

The prevalence of overweight youth in the United States has increased remarkably over the last two decades. Overweight and obese youth are at elevated risk for chronic diseases and other adverse health conditions. The foods and beverages that youth access at school (e.g., in a la carte food lines, in vending machines, and in school stores) contribute to overweight and obesity. Enacting policy to ban or restrict unhealthy food and beverage products at school can play a role in managing the epidemic of obesity. School board members are, therefore, a priority audience for introducing healthier food and beverage alternatives through articulation of specific policy initiatives. Under the leadership of California Project LEAN (Leaders Encouraging Activity and Nutrition), a social marketing campaign was directed at California school board members to motivate them to advance nutrition-related policy issues at school board meetings, and to enact and enforce school policies that support healthy eating. In less than two years after implementing the campaign, a significant increase in nutrition-related issues on school board meeting agendas occurred, more favorable nutrition-related policies became enacted, and school board members reported greater readiness to support school nutrition-related issues. Details of campaign development, implementation, and impact are reported.

INTRODUCTION

Youth who are overweight or obese are at elevated risk for developing chronic diseases such as cardiovascular disease and stroke, diabetes, some forms of cancer and other threats to health (Sothorn, 2004). The prevalence of overweight youth in the United States has increased by two to three times over the last two decades (Ogden, Flegal, Carroll, & Johnson, 2002). Approximately 15% of youth between ages 6 and 19 years and 10% of children between ages 2 and 5 years are overweight (Ogden et al., 2002). Furthermore, nearly 12% of babies and toddlers between 6 and 23 months of age are overweight (Ogden et al., 2002).

The increased prevalence of overweight youth has sparked concern not only because of its relationship with disease in later life, but also because of increased risk factors and illness during childhood (Dietz, 1998). A report of the Office of the U.S. Surgeon General (n.d.) indicates that overweight adolescents have a 70% chance of being overweight or obese as an adult. Overweight children exhibit more health problems such as elevated cholesterol and blood pressure levels than those with a "normal" or "healthy" weight. In addition, the rise in incidence of type 2 (adult-onset) diabetes has paralleled the rise in being overweight or obese in this same age group (Office of the U.S. Surgeon General, n.d.).

Whereas overweight and obesity are most notably associated with physical health problems, the psychosocial problems associated with these conditions are also a reality. Overweight is associated with poor self-esteem, especially among youth 13 years of age or older (French, Story, & Perry, 1995). Body dissatisfaction is a mediating factor in the development of poor self-esteem among overweight youth (Wardle, Waller, & Fox, 2002), and

has been associated with overweight in girls as young as 5 years of age (Davison & Birch, 2001). Numerous factors can be attributed to the cause of obesity, but it is generally understood that obesity is the end product of expending fewer calories than are consumed, that is, engaging in too little physical activity while eating too many calorie-dense foods. Whereas schools are not the only place to address some of these factors, they are necessary venues inasmuch as children and youth spend a major proportion of their day at school. The type of foods and beverages that children access at school (e.g., in a la carte food lines, in vending machines, and in school stores) is related to decreased fruit, low-fat vegetable, and milk consumption, as well as increased sweetened beverage, fat, and high-fat vegetable intake at lunchtime (Cullen & Zakeri, 2004; Kubik, Lytle, Hanna, Perry, & Story, 2003). Thus, the pattern of food and beverage consumption facilitated in many schools also contributes to overweight and obesity. In addition, sweetened beverages may also be a factor in dental caries and early onset osteoporosis (American Academy of Pediatrics, 2004).

Nutrition, overweight, and educational achievement also may be linked. One report suggests the existence of a relationship between weight problems and lower academic achievement, likely due to increased absenteeism (Action for Healthy Kids, 2004). Using estimates of absenteeism among overweight students, and an average prevalence of overweight students, the report extrapolates that children who miss one school day per month can cost an average-sized Texas school district \$95,000 per year in state aid (\$160,000 for average-sized California school district). Larger school districts stand to lose even more (e.g., New York

\$28 million, Los Angeles \$15 million, Chicago \$9 million).

Whereas some school health policies are carefully planned, others (such as a la carte food sales and vending machine sales) may simply evolve out of perceived necessity. The deliberate enactment of policy and regulation is a major way in which authorities influence health behavior and, in turn, the health status of populations. This fact is illustrated in the effect policy and regulation had on mortality in the United States between 1900 and 1973 through improvements in sanitation, housing, and water and food quality, including water fluoridation and milk pasteurization (McLeroy, Bibeau, Steckler, & Glanz, 1988). More recently, policies restricting venues in which tobacco smoking is permitted have altered the patterns and social acceptability of smoking behavior, and will impact future health outcomes for smokers and nonsmokers alike.

School boards can adopt policies for implementing and tracking the laws set forth by the state and other governmental agencies and to set a direction for the district for establishing its expectations and holding the system accountable. Policy is a critical element of coordinated school health programs as indicated by the Centers for Disease Control and Prevention, the National Association of School Boards of Education, and the National School Board Association (Allensworth & Kolbe, 1987; Institute of Medicine, 1997; Kolbe, Kann, Patterson, Wechsler, Osorio & Collins, 2004). Neill and Allensworth (1994) recommended that school boards support U.S. Department of Agriculture guidelines for school nutrition programs through limiting consumption of less healthy foods such as ones found in vending machines. According to some authorities, not only should schools' interest in youth relate to their academic achievement, but also to their

eating practices so that they can become healthy, productive adults (McCormack Brown, Akintobi, Pitt, Berends, McDermott, Agron, & Purcell, 2004).

Nutrition-related policies should focus on the availability of low cost healthy food alternatives and promoting sound education and positive food messages (Craypo & Samuels, 1998).

Despite an array of recommendations to promote healthier eating at school, the responsiveness of schools and school boards vary. Many school boards and individual schools have established contracts with fast food vendors, including restaurants and companies that lease vending machines. For instance, the *2000 California High School Fast Food Survey* revealed that more than half of school districts sold brand-name products (Public Health Institute, 2000). Schools view these contracts and lease agreements as essential mechanisms of sustaining financial support because of declines in tax-based support and increased operational costs (Nestle, 2000). Youth's ability to purchase and consume "junk" foods and sweetened beverages at school is a consequence of failing to enact policy to control access.

Some researchers report that nutrition and physical activity policies in school settings have not received thorough review (McGraw et al., 2000). Whereas many ways exist for assessing program implementation and adoption, measuring policy adoption relies on documenting written policies and key decisions made at meetings (e.g., school board meetings) and other proceedings that result in policy formation (e.g., community forums, parent participation). School board members are in a position to introduce and advocate for policies that can favorably influence eating practices by youth at school (McCormack Brown et al., 2004). To spearhead policy change,

however, school board members must be knowledgeable of the relationship between food and beverage decisions and placement of youth at risk for overweight, obesity, and the chronic disease conditions that can follow. In addition, they must adopt a philosophy that places the long-term health and well-being of youth ahead of short-term, iatrogenic solutions to budgetary shortfalls. Moreover, they must feel empowered to effect policy change, a condition that can be augmented through training and other targeted initiatives.

Attempts to influence school board members about introducing pro-health policies might be described as sporadic, ad hoc, and non-systematic. Social marketing is an approach for promoting socially beneficial behavior change, and one that is underutilized in the school health arena. According to Andreasen (1995):

Social marketing is the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of society (p. 7).

Social marketing distinguishes itself from other behavioral change approaches through its embrace of six principles: 1) a consumer orientation; 2) the use of marketing's conceptual framework for the design of interventions; 3) recognition of competition; 4) use of formative research to improve understanding of consumers' desires and needs; 5) segmentation of potential audiences to identify ones of particular priority; and 6) ongoing monitoring of program tactics to offer responsive revisions to achieve optimal possible effects (Andreasen 1995; Coreil, Bryant, & Henderson, 2000).

To promote awareness of nutrition-related policies that support healthier food choices in the school setting, the California Project LEAN in California sponsored development of a social marketing plan prioritizing school board members as key individuals who could effect change (McCormack Brown, Lindenberger, & Berends, 2002). The social marketing plan and subsequent intervention activities were the result of collaborations with social marketing and health education experts at the University of South Florida College of Public Health (USF CPH), the California School Board Association (CSBA), and California Project LEAN (CPL) *state and local regional* coordinators in ten regions of California. This paper reports the development, implementation, and evaluation of this social marketing approach carried out between 2000 and 2004.

PURPOSE

The purpose of this study was to evaluate the effectiveness of a social marketing approach in: 1) increasing the frequency with which nutrition-related policy issues were placed on the agendas of school board meetings; 2) increasing the number of school districts that enacted and enforced school policies that support healthy eating, particularly for high school students, but for other students as well; and 3) facilitating school board member involvement in sponsorship of nutrition-related school policy initiatives through promoting favorable attitudes toward these actions and by eliminating mitigating barriers that discourage such initiatives.

METHODS

FORMATIVE RESEARCH PHASE

CPL partnered with three groups that worked in cooperation with each other

and with Public Health Institute and other State of California officials: 1) academic staff members representing the social marketing and health education program of the USF COPH in Tampa, Florida; 2) a private nonprofit association, the California School Boards Association, in Sacramento, California; and 3) a private nonprofit social marketing firm, Best Start Social Marketing, Inc., also of Tampa, Florida. These groups formed the Community Research Collaborative and carried out the formative research that consisted of a literature review, key informant interviews, a brief solicitation survey, and a quantitative survey of California school board members in 2001. These formative research data were combined with other information: media analysis of nutrition-related issues (Berkeley Media Studies Group, 2001), a high school-based fast food survey (Public Health Institute, 2000), and analysis of existing soda contracts in California schools (Public Health Institute, 2001), and used to develop strategies for the social marketing campaign. To guide strategy development, the formative research phase included generating qualitative and quantitative data to enhance understanding of the school board member as the consumer. The objectives for the formative research phase included identifying:

- The factors that motivate school board members to develop and/or implement healthy food policies in their school district;
- The factors that deter school board members from developing and/or implementing healthy food policies in their school district;
- Effective information channels and spokespersons for school board members regarding healthy food policies; and
- Effective strategies for increasing school board members' interest in healthy food policies in schools.

LITERATURE REVIEW

A literature review revealed the availability of little published data concerning factors that influence the decision-making process used by school board members in advancing policy, particularly as it relates to nutrition issues.

KEY INFORMANT INTERVIEWS

Based on the literature and input from state and national experts in the areas of school health and social marketing, an interview guide was drafted and guided through several iterations, culminating in a product to enhance understanding of how nutrition-related health policy decisions occur in school settings. Fifty-seven key informant interviews were conducted with school board members and other key stakeholders (e.g., superintendents, state and national school health leaders).

SOLICITATION SURVEY

The key informant interviews led to development of a one-page (front and back) solicitation survey distributed at the annual California School Boards Association Conference. Results of this survey guided development of a comprehensive survey targeting school board members regarding key issues in school districts (particularly school health issues), opinions regarding healthier food choices, and factors that influence decision-making by school boards.

SCHOOL BOARD MEMBER SURVEY

The primary formative research tool was a 41-item survey of California school board members. Using social marketing as a framework, survey questions were developed focusing on *product*, *price*, *place* and *promotion* (Bryant, Forthofer,

McCormack Brown, & McDermott, 1999). An expert panel comprised of six individuals involved at the national level in nutrition, school health issues, school boards, academia, social marketing, and/or survey development, as well as California *Project LEAN state and regional coordinators* reviewed the survey for content validity, organization, and inter-pretability (McDermott & Sarvela, 1999; McKenzie, Wood, Kotecki, Clark, & Brey, 1999).

FEEDBACK AND FEEDFORWARD FROM SCHOOL BOARD MEMBERS

The school board member survey generated useful data for constructing the social marketing plan. Specific elements emanating from the formative research included: (1) school board members' beliefs and understanding of formal nutrition-related school policies; (2) their perceptions of factors that influence their school nutrition-related policy decision-making; (3) their perceived needs for professional development and training; (4) an iteration of nutrition-related policies they do or do not support; and (5) spokespersons they believe could influence their nutrition-related policy decision-making. Details of these elements were included in a previous publication (McCormack Brown et al., 2004).

ADDITIONAL FORMATIVE RESEARCH

MEDIA ANALYSIS

A media analysis was conducted on newspaper coverage in California's major newspapers to evaluate how they cover adolescent nutrition policies (Berkeley Media Studies Group, 2001).

HIGH SCHOOL FAST FOOD SURVEY

The *2000 California High School Fast Food Survey* describes the prevalence of

fast foods on California high school campuses and student access to health foods at school (Public Health Institute, 2000). The availability of these data to school board members was viewed as aiding decision-making about the sale of fast food in high schools.

ANALYSIS OF CONTRACTS WITH SODA COMPANIES

A qualitative analysis of the prevalence and specifics of contracts with soda companies in California's 25 largest school districts was conducted (Public Health Institute, 2001). This report provided compelling evidence that beverage companies maintained a strong and visible presence in the schools.

COLLATION OF DATA FOR STRATEGY DEVELOPMENT

Following the completion of data collection and analysis, the Community Collaborative Research workgroup, consisting of the California Project LEAN state and regional coordinators and the consultants from the USF COPH, developed a guide to facilitate discussions at strategy sessions attended by school board members and other key stakeholders (e.g., state organization leaders, superintendents, and so on). Comments emanating from the strategy sessions and the formative research (both qualitative and quantitative) provided the basis for the communication strategies below.

SOCIAL MARKETING STRATEGIES AND APPROACHES

The *product* (behavior) to be marketed to school board members consisted of their:

- Bringing forward school nutrition-related issues to the school board agenda.
- Establishing policies that support healthy eating.

The objective of the product strategy is to determine how the product can be

made more attractive to the priority population (i.e., school board members). In this case, the behavioral benefits emanating from the formative research to be transmitted to school board members to support the product (i.e., nutrition-related school policies) included:

- Linking nutrition and academic achievement.
- Linking nutrition and improved attendance.
- Promoting practical benefits for students, both short term (feeling better daily) and long term (decreasing risk of obesity, cancer and other lifestyle chronic illnesses).

The objective of the pricing strategy is to lower the perceived costs and make them more acceptable to the priority population. Based on formative research, the *price* (i.e., cost to lower – what needed to be addressed to increase school board members' ability to enact school policies that support healthy eating for high school students) included:

- Nutrition not being viewed as a priority in the school district and among parents and community members.
- Inadequate preparation of school board members in developing nutrition-related school policies.
- Budget considerations.

The *placement* strategy is what makes the product more accessible, determines where it should be offered, and where information about the product should be placed. Formative research suggested that the placement strategy consider that school board members:

- Were receptive to receiving training on nutrition-related school health issues.

- Would be willing to receive school nutrition-related policy information via the Internet, through tailored electronic mail messages (i.e., e-mail), and through school board publications and conferences.

The *promotion* strategies had to take into consideration the fact that school district nutrition policies are influenced by many factors – finances, student food preferences, tradition, and politics – to name just a few. However, one of the most powerful venues for improving nutrition in schools is through school board initiatives.

Although the priority population was all California school board members, an important audience segment included school board members in districts with high schools in which 50% or more of the students were eligible for free or reduced price meals at school (an indicator of socioeconomic status, and in turn, enhanced risk for marginal nutrition). It was important that messages, their design, and related creative elements be consistent throughout all promotional materials to insure continuity of program awareness in the priority population and easy recognition. Although some materials were designed for specific audience segments, a unifying appearance enabled one message to reinforce another as well as avoid having them compete with each other for attention.

PRIORITY AUDIENCE: SCHOOL BOARD MEMBERS

Promotional strategies for school board members included an iteration of required materials, message content, especially the particular “call to action,” tone, appeals, and manner, appropriate spokespersons, and specific conceptual recommendations. The content of Table 1 summarizes these campaign strategies that emanated from the formative research.

TABLE 1

California Project LEAN Social Marketing Campaign Strategies for Priority Audience Segment: School Board Members

Materials Required:

- 1 - *Successful Students through Healthy Food Policies* (food policy resource guide)
- 1 - *Successful Students through Healthy Food Policies* Promotional brochure
- 1 - Nutrition Policy Development Workshop Promotional Brochure and Flyers
- 3 - Promotional/Informational Print Ads for publication in school board trade publications
- Promotional incentive items (e.g., bookmark, mouse pad, pedometers)

Fact Sheets for School Board Members and Parents:

- Nutrition and Youth Health Statistics
- Nutrition, Physical Activity, and Academic Achievement
- *2000 California High School Fast Food Survey*
- School Health Policies and Programs Study
- Fund raising ideas that do not rely on the sales of unhealthy foods

Nutrition Policy Trainings:

- Three workshops at CSBA Annual Conference in December 2002 and two in 2003
- Three full-day regional sessions in 2003

Articles:

- 6 – articles, case studies and resources on the CSBA and CPL Websites and in the CSBA newsletter and magazine, *Schools*; other articles in related publications as appropriate, e.g., National School Boards Association, Association of California School Administrators, National Association of State Boards of Education, Healthy Kids Resource Catalog

Promotion of Guide and Trainings:

- Website Promotions: CPL, CSBA, California Department of Education, NSBA, etc.
- Listserv Promotions: Local Incentive Awardees; Society of Nutrition Educators; MealTalk; NetCom Grads

Message Content:

The primary message is that nutrition programs increase student performance, attendance, and well being. Your actions can improve the lives of countless students in your school district.

Call to Action

- Include a school nutrition policy item on the school board agenda once each quarter of the year.
- *Secondary*: adopt a healthy nutrition related policy.

Tone

- Technical, respectful, and straightforward

Appeal

- Use an intellectual appeal focusing attention on school board members' use of current information to make decisions that are in the best interests of the students in their districts

Manner

- Scholarly and authoritative

Spokespersons:

- Health expert; school food service staff; school district superintendent; parents

Four types of spokespersons emerged from the formative research: *health expert*, *school food service staff*, *school superintendent*, and *parents* were recommended. School board members reported that these individuals were important resources or “champions” to whom they are likely to listen. Two elements were believed to enhance perception of the spokesperson as an effective champion: 1) demonstrating that school nutrition is a personal agenda, and 2) that the individual is heavily committed to this issue.

Whereas school board members are well versed in decision-making, they lack evidence-based information on the value for students of improved nutrition. Relationships among readiness to learn, academic performance, school attendance, and optimal nutrition were identified as important “hooks” for communication. School board members valued messages framed in “bottom-line” terms.

Finally, school board members’ knowledge of their community and their perceptions of being influential were important elements. Fostering better school nutrition practices was consistent with their commitment to community and their role to promote health, education, and well being among youth.

CAMPAIGN DEVELOPMENT

The formative research and the strategies emanating from it guided the materials development for the campaign. During this phase four concepts were created and pre-tested with 25 school board members. Through three phases of concept testing these entities evolved and were narrowed eventually to a single concept using the following criteria: 1) *Relevance* – to identify the concept with California Project LEAN; 2) *Acceptability* – to verify that the message is not offensive, annoying, or inappropriate; and 3) *Attractiveness* – to identify if the concept

FIGURE 1



or message is perceived as attractive. The successful program message or theme with its accompanying four-color logo (*Successful Students through Healthy Food Policies – Act Now for Academic Achievement*) is shown in Figure 1.

IMPLEMENTATION PHASE

Successful implementation of a social marketing program requires coordination of activities that are time sequenced, especially when the strategies are varied and multifaceted. Among the key activities were:

- Initial distribution and repeat mailings of the *Successful Students through Healthy Food Policies* Resource Guide (Guide) promotional brochure to all school board members and school district superintendents.
- Dissemination of new nutrition policies through CSBA policy alert to 800 district superintendents, school board members and/or policy contacts, in March 2003.
- Distribution of updated sample policies to purchasers of the Guide, training and workshop attendees, and CSBA policy subscribers.
- Dissemination of free copies of the Guide to California Project LEAN regions through various partners working with school boards, key partners, CSBA delegates, and at nutrition policy trainings, workshops, and conferences.

- Distribution of additional Guide fact sheets in support of nutrition issues.
- Promotion of the campaign to and through organizational partners working with school boards (e.g., promotion of the Guide and distribution of promotional brochures at CSBA Legislative Action Conference in May 2003, and CSBA Annual Conferences/exhibits and meetings; promotion of the Guide to food service directors through presentations; promotion of the Guide to parents through the *PTA Communicator* and PTA 2003 Annual Conference presentation; and distribution of the promotional brochure at County Office of Education meetings, through regional partners, the California Department of Education, national and local presentations, including the NSBA Annual Conferences, Centers for Disease Control and Prevention, and other conferences and meetings.

The level of success for the campaign would be due, in part, to the partnership with CSBA and the vast network of partnering organizations through which the message to school board members could be multiplied and reinforced. An abbreviated list of these partnering groups includes: the Public Health Institute, the California Department of Education, the California Parent-Teacher Association, California Project LEAN Regional coordinators, the California Food Policy Advocates, the California Nutrition Network for Healthy Active Families, the California Center for Public Health Advocacy, the California Obesity Prevention Initiative, the California School Nurses Organization, the California Task Force on Youth and Workplace Wellness, the National Association of State Boards of Education, the National School Boards Association, the U.S. Department of Agriculture, the

Association of California School Administrators, the Public Health Institute, School Health Connections, the Strategic Alliance for Healthy Active Environments, U.S. Centers for Disease Control and Prevention, other state-level nutrition programs, other national and state agencies and associations promoting nutrition and physical activity, community based organizations advocating and promoting nutrition and physical activity, program funders, and legislators.

Coordination also ensures that activities are not in competition with one another or become marginalized by other events. The coordinator for this project was the Marketing Manager of California Project LEAN who worked closely with California's education agencies, community organizations, other stakeholder organizations, and the USF COPH social marketing team to facilitate continuity of thematic and design elements, thus ensuring that:

- Production and design teams accurately interpreted formative research findings and translated them into appropriate materials and activities;
- Materials were carefully audience tested and revised accordingly;
- A monitoring of the campaign was conducted to fine tune implementation;
- Contracting agencies maintained a consistent campaign approach, and optimal audience penetration of the various program components occurred; and
- Unintended duplication of activities did not occur.

Community Research Collaborative partners provided guidance to the Marketing Manager and the academic partners during the implementation phase. The organizations represented on the committee

played major roles in implementing particular components of the plan that fit their organizational mission and interest.

EVALUATION PLAN

OVERVIEW

The evaluation plan for the social marketing campaign was crafted by an independent external evaluator. Several iterations of the plan were created, each reflecting a different level of sophistication and resource need. Working in conjunction with California Project LEAN, a plan was agreed upon that captured important and desirable measures while simultaneously maintaining feasibility and optimal deployment of resources.

PROCESS EVALUATION MEASURES

The monitoring of a social marketing intervention is critical for at least two reasons. First, whereas intervention components undergo pilot testing, their success may vary when the project is brought to full scale implementation. Monitoring permits adjustments of a "fine tuning" nature in the campaign. Second, a phenomenon known as "intervention drift" is a risk of any intervention. Its influence is minimized through development of a carefully designed implementation plan, and concomitant monitoring. Potential process evaluation measures for the school board member social marketing campaign are identified in Table 2.

TABLE 2

Potential Process Evaluation Measures for California Project LEAN School Board Member Social Marketing Campaign

Number and location of trainings for school board members
Number of school board members requesting and receiving formal training
Number of e-mails to school board members about nutrition-related issues
Number of "hits" on an Internet site related to this project
Number, frequency, and timing of articles appearing in selected newspapers addressing nutrition in schools
Number, frequency, and timing of school board publications and conferences with nutrition-related information or policy advocacy information
Dissemination of nutrition policy promotional brochure
Dissemination and distribution of <i>Successful Students through Healthy Food Policies</i> (food policy resource guide) copies to school board members, superintendents, and food service supervisors, at conferences
Written and telephone requests for <i>Successful Students through Healthy Food Policies</i> (food policy resource guide) by school board members or other stakeholders
Utility of <i>Successful Students through Healthy Food Policies</i> (food policy resource guide) as assessed by school board members and other key informants
Relevant nutrition policy sessions at annual meetings of professional groups and organizations (in addition to the CSBA)
Emergent program "champions" among school board members or other stakeholders

OUTCOME MEASURES

The logistics of this evaluation, including recognition of the possibility of diffusion contamination, i.e., a “school bus effect” (Campbell & Stanley, 1966), and the limited availability of resources did not permit employment of an experimental or quasi-experimental design. Consequently, there was no comparison group. Therefore, the social marketing campaign was most appropriately examined as a case study.

With respect to school board members, desired outcomes included: 1) evidence of school nutrition-related policy issues being placed on school board meeting agendas; 2) evidence of favorable policy actually being enacted; and 3) evidence of alteration in beliefs or attitudes of school board members related to nutrition-related policy. Potential outcome measures for the school board member social marketing campaign are identified in Table 3. In addition, a logic

model for the social marketing campaign, adapted from one proposed by McDermott (2004), is shown in Figure 2.

RESULTS

SCHOOL BOARD MEMBER WORKSHOP AND TRAINING

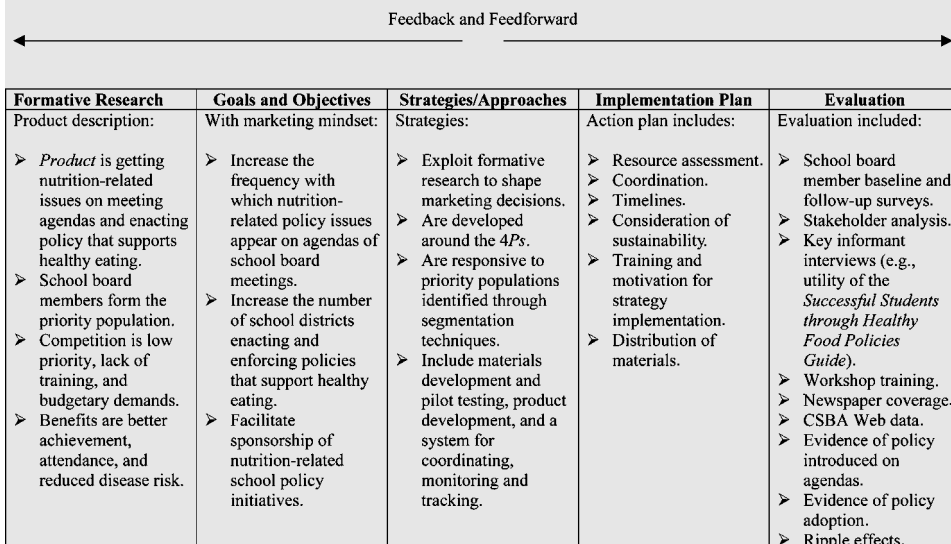
As illustrated in the social marketing plan (Table 1) major training initiatives were scheduled for 2002 and 2003. These activities were supplemented by workshops and one-on-one efforts carried out by California Project LEAN regional coordinators. Principal topics for these workshops included: linkages among nutrition, physical activity, and academic achievement; the scope and risks associated with the rise in obesity among Americans, especially youth; making policies work; the school board’s role in community relations and policy development; the policy process and analysis of sample policies; and case studies or examples

TABLE 3

Potential Outcome Evaluation Measures for California Project LEAN School Board Member Social Marketing Campaign

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- Ensure that less healthy foods are not offered as fundraisers.
 - Increase the proportion of healthy foods in the school meal program or as a la carte sales.
 - Offer more healthy beverages and snacks in vending machines.
 - Limit the marketing of less healthy foods and beverages.
 - Price less healthy foods and beverages higher than healthy alternatives.
 - Limit the hours of a la carte food sales availability.
 - Restrict the locations of soda and other food vending machines.
 - Restrict or ban vending machines in elementary schools.
 - Restrict or ban food and soda advertisements in schools.
 - Debate the merits of exclusive soda contracts at school board meetings.
 - Turn down exclusive soda contracts at either the school or school district level.
 - Change in beliefs or attitudes of school board members related to nutrition-related policy.
 - Identification of school board member preparedness to change.
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FIGURE 2
Logic Model Illustrating School Board Member Social Marketing Campaign



Adapted from: McDermott, R.J. (2004). Essentials of evaluating social marketing campaigns for health behavior change. *The Health Education Monograph Series*, 21(1), 13-20.

from other school districts successfully offering healthier foods.

Workshop feedback offered at least four important pieces of data: 1) the training activities are welcomed and considered to be useful; 2) school board members are less in need of education about the benefits of nutrition and physical activity than they are of education that equips them with the tools and skills necessary to organize specific policy initiatives; 3) school board members like to be kept informed, albeit in concise ways whenever possible; and 4) the CSBA is held in high esteem and viewed as a credible source of information.

HEALTHY FOOD POLICY RESOURCE GUIDE UTILITY SURVEY

The *Successful Students through Healthy Food Policies* Resource Guide was created to assist school board members and other persons who influence school board policy and decision-making. The

Guide was released and disseminated in April 2003. USF CPH consultants analyzed key informant comments ($n = 8$) about the Guide in June 2003, and subsequent to that, California Project LEAN state and regional coordinators carried out an online survey of key informants ($n = 54$) with respect to the utility of the Guide. The consensus among respondents was that the Guide "increased confidence in developing policy for my district," "increased confidence in introducing nutrition-related issues to school board agendas," and "increased nutrition issues as a priority for me." Only one respondent indicated not having reviewed the Guide. Praise for the Guide was accompanied by the recommendation that future printings of the Guide expand the number of case studies as these illustrations were "most compelling." Key informant data suggested that the Guide had utility. Sample policies were identified as being of assistance. The suggestion was offered that

sections of the Guide, especially the policy development section, may need to be streamlined to facilitate greater utility.

NEWSPAPER COVERAGE

Newspaper coverage of overweight and obesity among children and youth and school nutrition-related issues was sporadic prior to the campaign. The source for these stories tended to be from a national wire service. Introduction of a local angle concerning the story content was a rare event. Between June 2003 and February 2004, 27 relevant stories or editorials appeared in California newspapers monitored in ten regions of the state. Many of these were of local origin and ten of the stories (37.0%) referred to a related issue appearing on a school board agenda. Evidence of media coverage, including newspaper editorials, demonstrated the beginning of a popular ground swell for change in schools with respect to the foods offered to children and youth.

WEBSITE ANALYSIS

A Website activity analysis was performed by *WebTrends* (Portland, OR, www.webtrends.com). The Website of the California School Board Association (CSBA) has several links posted to it to aid school board members, parents, and other citizens with creating and reviewing policies (e.g., sample policies). Website "hits" were monitored for calendar years 2003 (before school leaders were trained and encouraged to consult the CSBA site) and 2004 (when trainings were completed). There were 598 "hits" on the *Successful Students through Healthy Food Policies Resource Guide* link (released April 2003). Comparison data for 2004 revealed 415,105 "hits" for an average of 1,531 per day. The average "length of stay" was 3 minutes 46 seconds. There were 2,103 "hits" on the *Successful*

Students through Healthy Food Policies Resource Guide link. These comparisons demonstrate a 349% increase in the overall number of Website "hits," a 211% increase in "length of stay," and a 264% increase in linking to the *Successful Students through Healthy Food Policy Resource Guide* (even after correcting for the more limited period of exposure in 2003). Thus, results indicate the successful dissemination of information through the CSBA Website, a "movement of the needle" attributable at least in part to the efforts of the social marketing campaign.

SCHOOL BOARD MEMBER SUPPORT FOR SCHOOL NUTRITION-RELATED POLICIES

In the formative research phase of this project school board members were queried about the attitudes and beliefs about nutrition-related issues affecting their constituencies, and their preparedness to address them. A follow-up survey was conducted in 2004 to examine evidence of change following the training initiatives and accompanying activities reported above (see Implementation Phase, page 26). The comparison of the 2001 and 2004 school board member data provided additional evidence that progress in "moving the needle" had been accomplished. Statistically significant improvement ($p \leq .05$) in support for banning a la carte food sales entirely in all schools, banning a la carte food sales in elementary schools only, banning fast food sales entirely, and banning fast food sales in elementary schools only occurred (Table 4). Whereas significant change occurred, the proportion of school board members indicating their support of selected issues was still less than 50%. Budget considerations continued to be a guiding force, possibly the most critical element in influencing the decision-making of California school board members.

TABLE 4

California School Board Members' Support for Selected School Nutrition-Related Practices *Before* (2001, n = 174) and *After* (2004, n = 208) the California Project LEAN Social Marketing Campaign

Providing Healthy Food Options in Schools (i.e., fruits, vegetables, low fat milk) 2001: 96.6% 2004: 95.7%	Banning Food and Soda Advertisements in School 2001: 52.3% 2004: 57.2%
Establishing Minimum Nutritional Standards for Fast Foods Sold in School 2001: 87.9% 2004: 81.7%	Manipulating Vending Machine Prices so that Unhealthy Foods Cost More and Healthy Foods Cost Less 2001: 38.5% 2004: 41.8%
Limiting and Monitoring Food and Soda Advertisements in School 2001: 83.3% 2004: 80.3%	Banning A La Carte Food Sales in Elementary Schools 2001: 33.9% 2004: 48.1%*
Soda Vending Machine Locations are not in Heavily Trafficked Areas 2001: 57.5% 2004: 52.4%	Banning Fast Food Sales (cannot be sold) 2001: 21.8% 2004: 36.5%*
Banning Fast Food Sales in Elementary Schools 2001: 52.9% 2004: 64.9%*	Banning A La Carte Food Sales (cannot be sold) 2001: 10.3% 2004: 22.1%*

*Statistically significant change ($p \leq .05$).

SCHOOL NUTRITION-RELATED ISSUES ON SCHOOL BOARD MEETING AGENDAS

Prior to start-up of the social marketing campaign (school year 2000–01), school board meetings rarely addressed school nutrition-related issues unless they dealt directly with budgetary matters. This absence of nutrition-related issues was verified by the key informant interviews and the baseline survey of school board members that was part of this project's formative research in 2001. There is evidence from follow-up key informant

interviews in June 2003 that healthy food options were being discussed at some school board meetings. Issues presented at school board meetings according to these interviews related to vendor contracts, specific lunch programs developed by food service workers, school lunch pricing, student health and nutrition, food carts, and schedules related to vending machine access. California Project LEAN regional coordinators tracked school board meetings and agendas during school year 2003–04. Of the school board meeting

minutes that were tracked during the 2003–04 school year, nutrition-related policy appeared on the agenda an average of 32.6% of the time in these regions.

EVIDENCE OF POLICY ADOPTION

The ultimate success of the campaign is to show evidence of a clear and decisive policy that separates itself from the traditional competition. Some California schools and school districts have been successful in forging contracts with soft drink providers that provide more slots containing healthy alternatives to conventional beverages. Coalitions, work groups, and other advocacy groups were active in identifying physical activity options, alternative nutrition solutions, and model policies that promote positive health and well-being. Some of these efforts attempted to involve youth, and were mostly successful. Several advocacy groups supported, endorsed, or even spearheaded some policy change initiatives. Some set food policy change goals.

Some examples of attempting to implement policy change at individual schools or at the district level are evident. A focus on high schools and on schools in historically low-income communities can be found for some regions, but not all. A series of examples of successful policy change initiatives are presented below.

In the Los Angeles Unified School District (LAUSD), California Project LEAN regional coordinators worked with several partners (California Center for Public Health Advocacy, California Food Policy Advocates, and Occidental College) to persuade the LAUSD school board to approve two nutrition-related policies: 1) elimination of all soda and other highly-sweetened drinks from all district schools; and 2) establish stringent nutrient standards for snack foods sold in the district.

Regional coordinators working on behalf of the Eureka City schools

(Humboldt County) successfully influenced the school board to establish a comprehensive policy that: 1) set nutritional standards for foods sold in the district and eliminated the sales of soda; 2) required universal offering of breakfast to pupils in grades K-6; 3) controlled costs of food sold to students; and 4) maintained a favorable eating environment for students by providing both adequate space and time. Similarly, California Project LEAN regional coordinators led an effort with the school board of the Alisal Union Elementary School District (Monterey County) to: 1) prohibit distribution of candy and soda in the classroom; and 2) require fundraisers and school parties to follow nutrition standards.

According to the *Contra Costa Times* (Walnut Creek, June 5, 2003) the intention of a bill was to ban soda sales on elementary and middle school campuses beginning September 1, 2005 and in high schools in 2006. Eventually, the bill was modified to allow sales of sodas in high schools. Despite the fact that bills such as this one failed to impose the strictest of conditions, it garnered significant attention for the overall issue of food and beverage sales in schools. A high level school administrator cautioned against the ban, saying that such restrictions would lead to a “slippery slope” as other factors also are responsible for child health problems. He also questioned what the future would be in schools for products such as hamburgers, French fries, and chocolate milk (if bans similar to the one discussed became enacted).

According to the *Orange County Register* (Laguna Beach, September 12, 2002), the school board considered a ban on sodas and junk food sales at school. School administrators, other school leaders, and student representatives advocated for the ban and the replacement of

less healthy food and beverage products with healthier alternatives.

In the *Press-Enterprise* (Riverside, March 16, 2003), in response to a proposed carbonated-caffeinated high sugar beverage ban, a high school student was quoted as saying: "It's preposterous." The ban was enacted.

A further "ground swell" or "ripple effect" emerged in the state. In 2003, California became the first state in the nation to ban the sale of soft drinks in public schools, this ban being limited thus far to elementary, middle, and junior high schools (Senate Bill 677). Schools had until July 1, 2004 to comply with the ban, although some schools enacted it almost immediately after passage. Soft drink manufacturers were beginning to offer new products at schools, such as juice, sports drinks, and non-fat milk drinks. However, some juices and sports drinks, also known as isotonic, do contain large quantities of sugar, and therefore, represented change that fell somewhat short of the intent. A feature story about this legislative action was reported on the National Public Radio

(NPR) program, *Morning Edition* on October 24, 2003, thus further enlarging the public profile of this issue (National Public Radio, 2003).

Another important outcome was the sponsorship of legislation to ban the sale of soda and sweetened beverages in high schools. Previous attempts to implement this action had failed. This outcome was due to the successful partnership between California Project LEAN and the CSBA. Before the campaign, the CSBA had taken no position on legislation, and in some cases, had opposed legislation setting food and beverage nutritional standards for schools.

California Project LEAN's efforts have been at least partially responsible for creating healthy food policies increasing the availability of healthy foods to one million of California's six million students. In 2005, approximately ten percent of California's unified school districts (those having at least one high school) have developed or are developing healthier nutrition policies and others are being encouraged to follow suit (see Figure 3).

FIGURE 3



DISCUSSION

Inherent with any case study approach are causality threats to internal validity that cannot be disregarded (Campbell & Stanley, 1966; McDermott & Sarvela, 1999). For example, it is impossible to separate the effects of this campaign from concurrent initiatives going on at local and national levels. The impending dangers of obesity, especially in childhood and youth, have been the focus by the U.S. Centers for Disease Control and Prevention, the Institute of Medicine, and other authoritative groups, even prior to the launch of this social marketing campaign. Moreover, the problem of youth obesity has received attention in the electronic press as well as in scholarly and popular print media. Whereas use of comparison communities or regions outside of California received consideration, the logistics of successfully identifying appropriate matches, obtaining cooperation from other venues, and the deploying of the necessary resources were viewed as significant obstacles. Moreover, assignment of one or more comparison communities in California could result in a "school bus" or diffusion effect (Campbell & Stanley, 1966) especially given the proximity and overlap of several media markets within the state. In addition, a national secular trend has increased awareness and importance of the problem of youth obesity among school personnel, and thus, further necessitates reader caution when interpreting results of this campaign. Thus, whereas the results of the campaign appear to show favorable impact, the absence of a control or comparison site prevent one from fully attributing the results directly and exclusively to this intervention.

This social marketing project was launched with the intention of: 1)

increasing the frequency with which nutrition-related policy issues were placed on school board meeting agendas; 2) increasing the number of school districts that enacted and enforced school policies that support healthy food and beverage consumption; and 3) facilitating school board member involvement in sponsorship of nutrition-related school policy initiatives. The campaign results reported above do offer evidence that each of these objectives was met in many school districts.

In less than two years, significant progress was made toward increasing the visibility and importance of nutrition-related issues among school board members. This increase is indeed remarkable, particularly if viewed from a commercial perspective of "market share" where the shift of just a few percentage points can have a major impact on product sales and revenue. Moreover, the evidence demonstrates that what was brought to the attention of California school boards was not a unitary theme but a range of nutrition-related issues (e.g., vendor contracts, vending machine access, alternative menus, pricing, dining schedules, hours of in-school food and beverage sales, food and beverages used for fundraising, etc.) whose solutions could be fostered by school board members.

Still, at least two points are clear: 1) elements affecting school budgets continue to dominate school board meeting agendas; and 2) there is serious competition for space on meeting agendas. Although nutrition-related issues reached an increased level of priority for school boards in California, there is still room for improvement. Whereas the passage of Senate Bill 677 is a landmark event, continued focus may be required to maintain the momentum that evolved, and to prevent an erroneous assumption that the

"job is done" with respect to school board policy and nutrition. The competition to such bold legislative action is likely to be strong in other states. As one California school district pointed out, food and beverage fundraisers accounted for \$750,000 of annual revenue in its 23 schools. Thus, whereas California's apparent success can make it an appealing role model for other states, the allure of at-school product sales to offset budgetary shortfalls is enormous. Because budget is a primary topic of school board meetings, any discussion of nutrition-related policy must consider budget implications, as well as anticipate that decisions adversely affecting the budget or sources of revenue may not be embraced. Identifying policy decisions that can be demonstrated not to affect revenue flow adversely may be of critical importance in disseminating favorable nutrition-related policies.

The results described herein also suggest that school board members are amenable to training and learning about nutrition-related issues, particularly if the focus is on equipping them with tools, new skills, and ready access to resources that facilitate specific policy initiatives. In this campaign a variety of resources were created, kept current, and made accessible to school board members (e.g., *Successful Students through Healthy Food Policies Resource Guide*, CSBA Website links, California Project LEAN Website, sample policies, etc.). The value of having regional coordinators keep school board members informed of these resources must be underscored.

The source credibility of information and messages was important to members of the priority audience. The relationship between healthy food choices and student achievement may be particularly persuasive for school board members and other policymakers. Because these decision

makers may be especially impressed by "hard data," future workshops for school board members and other authorities should emphasize the growing evidence base. "Context" for workshops is important. Therefore, a consideration of school board members playing a role in "culture change" may be useful in stimulating attendance and interest.

Evidence emerged that coalition members and other advocates were active in making direct and personal contacts with school board members. This effort was of doubtless assistance in energizing communities and enhancing the effect of the primary intervention targeting school board members. Next steps for the program are to conduct more research with influential audiences, including parents and other citizens that comprise the voting public, and development of specific materials, actions, and messages for them, to increase penetration with school board members and be of assistance in sustaining the apparent gains to date. Whereas efforts in this area were of lesser priority in this social marketing campaign due to budget limitations, evidence from early formative research supported the belief that school board members respect and are influenced by the viewpoints of parent organizations. Thus, parents and other citizens could be important targets of social marketing messages, and thereby, become even stronger advocates and partners.

By late 2003, some school districts and school board members emerged as real promoters of the cause to forge new policies and enforce existing regulations. Some particular school board members emerged who were responsive to the call to action, and therefore, were true "program champions" and exemplary future spokespersons.

As pointed out previously, at least one California school district initiated a

beverage sales ban despite student protest. Despite this action, as food alternatives on campus are considered, changes and new product introductions must be seen by youth as “interesting and exciting.” Therefore, California campaigns and other states could follow CPL’s lead by involving youth in selecting and tasting healthier alternatives, as well as carry out consumer marketing “research” with potential vendors.

In the future, food service workers have the capability of being effective “go-betweens” in relaying nutrition policy recommendations to school board members if they can be positively engaged in the issue. The CSBA’s further dissemination of tools such as the *Successful Students through Healthy Food Policies Resource Guide* to food service directors may further enrich campaign impact. Moreover, food service workers emerged in the formative research as spokespersons to whom school board members would listen, and therefore, appear to be resources that could be tapped further.

Ideally, major school policy initiatives do not occur in a vacuum. Therefore, policymakers must be alert to the types of “side effects” about which Scriven (1973) cautions. In the future, any counterproductive consequences need to be noted (e.g., greater effort by selected stakeholders to enact policy to the contrary; introduction of products in schools that are only marginally better but do not contradict policy; placement of items in vending machines and elsewhere that are “below” or “above” the eye’s view, thereby directing purchases to less healthy items; and anecdotal data concerning students bringing sugary beverages or low nutrient, high fat foods to school to compensate for changes in school policy about what can be sold on campus). Likewise, one must be cognizant of positive side effects emanating from the project’s initiatives – e.g.,

greater interest in physical activity classes, development of sports teams, improved student and parent interest in school and school board affairs, improved attendance and achievement, and so on.

Whereas it is one thing for school board members to respond favorably to campaigns that direct messages at them to modify their beliefs, to introduce policy measures, and to adopt new policies, it is quite another to maintain vigilance concerning the implementation and enforcement of policy. Therefore, California and other states that respond to similar calls to action should inventory existing regulations (i.e., education-related regulatory codes) about school-based nutrition and examine the extent to which these regulations are observed, understood, and enforced.

A hallmark of social marketing is the willingness of marketers to review the competition from time to time, revise the product and accompanying messages, re-examine associated costs of adopting the product, and modify placement and promotion strategies. California school board members as well as their counterparts in other states will be challenged by evolving pressures to stabilize budgets, address a wide range of education performance issues, and conduct other school district business. This pressure may tempt them to focus less on nutrition-related issues and other matters affecting the health of children and youth. As the pressure mounts, alteration of the product, its expansion to new audiences, and modification of program tactics may be necessary. Such tasks could well be arduous ones as dedicated funding for these initiatives may be difficult to secure and sustain.

The work reported on herein shows that a social marketing campaign that is preceded by thorough formative research, careful development of strategies that are

pre-tested before being brought to scale, and that are supported by materials and adequate monitoring can be effective in modifying school board members' preparedness to initiate and support policy change. Social marketing may have promise for other endeavors involving school health programs and policies in that state as well as others.

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REFERENCES

ACTION FOR HEALTHY KIDS. (2004). *The Learning Connection: The Value of Improving Nutrition and Physical Activity in Our Schools*. Retrieved June 10, 2005 from: http://actionforhealthykids.org/pdf/LC_Color_120204_final.pdf.

ALLENSWORTH, D. D. & KOLBE, L. J. (1987). The comprehensive school health program: Exploring an expanded concept. *Journal of School Health, 57*, 409-412.

AMERICAN ACADEMY OF PEDIATRICS. (2004). Policy Statement: Soft Drinks in Schools. *Pediatrics, 113*, Retrieved March 19, 2004, from <http://pediatrics.aappublications.org/cgi/reprint/113/1/152.pdf>

- ANDREASEN, A. R.** (1995). *Marketing social change: Changing behavior to promote health, social development and the environment*. San Francisco, CA: Jossey-Bass.
- BERKELEY MEDIA STUDIES GROUP.** (2001). *Newspaper Coverage of Childhood Nutrition Policies*. Oakland, CA: California Project LEAN.
- BRYANT, C. A., FORTHOFFER, M. S., MCCORMACK BROWN, K., & MCDERMOTT, R. J.** (1999). Community-based social marketing. *Social Marketing Quarterly*, 5(3), 54–59.
- CAMPBELL, D. T., & STANLEY, J. C.** (1966). *Experimental and Quasi-experimental designs for research*. Boston: Houghton Mifflin Company.
- COREIL, J., BRYANT, C. A., & HENDERSON, J. N.** (2000). *Social and behavioral foundations of public health*. Thousand Oaks, CA: Sage Publications, pp. 211–231.
- CRAYPO, L., & SAMUELS, L.** (1998, August). *Creating an Adolescent Nutrition and Physical Activity Policy Agenda: A Report on a Public Policy Needs Assessment*. Sacramento, CA: California Project LEAN.
- CULLEN, K. W., & ZAKERI, I.** (2004). Fruits, vegetables, milk, and sweetened beverages consumption and access to a la carte/snack bar meals at school. *American Journal of Public Health*, 94, 463–467.
- DAVISON, K. K., & BIRCH, L. L.** (2001). Weight status, parent reaction, and self-concept in five-year-old girls. *Pediatrics*, 107. Retrieved September 16, 2003, from MD Consult database.
- DIETZ, W. H.** (1998). Health consequences of obesity in youth: Childhood predictors of adult disease. *Pediatrics*, 101(Suppl.) 518–525.
- FRENCH, S. A., STORY, M., & PERRY, C. L.** (1995). Self-esteem and obesity in children and adolescents: A literature review. *Obesity Research*, 3, 479–490.
- INSTITUTE OF MEDICINE.** (1997). *Schools and health: Our nation's investment*. Washington, DC: National Academy Press.
- KOLBE, L. J., KANN, L., PATTERSON, B., WECHSLER, H., OSORIO, J., & COLLINS, J.** (2004). Enabling the nation's schools to help prevent heart disease, stroke, cancer, COPD, diabetes, and other serious health problems. *Public Health Reports*, 119, 286–302.
- KUBIK, M. Y., LYTTLE, L. A., HANNA, P. J., PERRY, C. L., & STORY, M.** (2003). The association of the school food environment with dietary behaviors of young adolescents. *American Journal of Public Health*, 93, 1168–1173.
- MCCORMACK BROWN, K. R., AKINTOBI, T. H., PITT, S., BERENDS, V., MCDERMOTT, R. J., AGRON, P., & PURCELL, A.** (2004). School board members' perceptions of factors influencing school nutrition policy decision-making. *Journal of School Health*, 74, 52–58.
- MCCORMACK BROWN, K. R., LINDENBERGER, J. H., & BERENDS, V.** (2002). *School Board Members' Policy Decision-Making Social Marketing Plan*. Report to the Public Health Institute and the California Department of Health Services, Tampa, FL: Florida Prevention Research Center at the University of South Florida.
- MCDERMOTT, R. J.** (2004). Essentials of evaluating social marketing campaigns for health behavior change. *The Health Education Monograph Series*, 21(1), 13–20.
- MCDERMOTT, R. J. & Sarvela, P. D.** (1999). *Health education evaluation and measurement: A practitioner's perspective* (2nd ed.). Madison, WI: WCB/McGraw-Hill.
- MCGRAW, S. A., SELLERS, D., STONE, E., RESNIKOW, K. A., KUESTER, S., FRIDINGER, F., & WECHSLER, H.** (2000). Measuring implementation of school programs and policies to promote healthy eating and physical activity among youth. *Preventive Medicine*, 31(Suppl.), S86–S97.
- MCKENZIE, J. F., WOOD, M. L., KOTECKI, J. E., CLARK, J. K., & BREY, R. A.** (1999). Establishing content validity: Using qualitative and quantitative steps. *American Journal of Health Behavior*, 23, 311–318.
- MCLEROY, K., BIBEAU, D., STECKLER, A., & GLANZ, K.** (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, 15, 351–377.
- NATIONAL PUBLIC RADIO.** (2003, October 23). *California Bans Soda Sales in Schools*. Retrieved June 10, 2005 from <http://www.npr.org/templates/story/story.php?storyId=1477445>.
- NEILL, K., & ALLENSWORTH, D. D.** (1994). A model to increase consumption of fruit and vegetables by implementing the "5A Day"

initiative. *Journal of School Health*, 64, 150–155.

NESTLE, M. (2000). Soft drink “pouring rights”: Marketing empty calories. *Public Health Reports*, 115, 308–319.

OFFICE OF THE U.S. SURGEON GENERAL.

(n.d.). *Overweight and obesity fact sheet: Overweight in children and adolescents*. Retrieved September 16, 2003 from: http://www.surgeongeneral.gov/topics/obesity/calltoaction/fact_adolescents.htm.

OGDEN, C. L., FLEGAL, K. M., CARROLL, M. D., & JOHNSON, C. L. (2002). Prevalence and trends in overweight among U.S. children and adolescents, 1999–2000. *Journal of the American Medical Association*, 288, 1728–1732.

PUBLIC HEALTH INSTITUTE. (2000). *2000 California High School Fast Food Survey: Findings and Recommendations*. A report commissioned by California Project LEAN. Sacramento, CA: Author.

PUBLIC HEALTH INSTITUTE. (2001). *Prevalence and Specifics of District-wide Beverage Contracts in California’s Largest School Districts*. A Report Commissioned by California Project LEAN and funded by the California Endowment. Sacramento, CA: Author.

SCRIVEN, M. S. (1973). Goal-free evaluation. In E. R. House (Ed.), *School Evaluation: The Politics and Process*. Berkeley, CA: McCutchan.

SOTHERN, M. S. (2004). Obesity prevention in children: Physical activity and nutrition. *Nutrition*, 20, 704–708.

WARDLE, J., WALLER, J. & FOX, E. (2002). Age of onset and body dissatisfaction in obesity. *Addictive Behaviors*, 27, 561–573.