

Attitudes of School Foodservice Directors about the Potential Benefits of School Wellness Policies

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Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.

ABSTRACT

Purpose/Objectives

The Reauthorization Act of 2004 requires schools participating in the National School Lunch and School Breakfast Programs to establish a wellness policy. The purpose of this study was to examine school foodservice directors' attitudes about the potential benefits of the wellness policy.

Methods

A survey research design was used for the study. The sampling frame was a stratified random sample of 847 foodservice directors selected from medium-sized or larger school districts. Data analysis consisted of descriptive statistics, factor analysis to determine underlying factors in attitude items, Cronbach's alpha to determine reliability of factors, and ANOVA to determine relationships among variables, followed up with Tukey's HSD post hoc test.

Results

The majority of foodservice directors agreed the federally mandated wellness policy has the potential to improve student health, nutrition education, and physical education. Attitudes of foodservice directors differed based on socioeconomic status of school districts and geographic region. Foodservice directors from school districts with a high percentage of free and reduced meals were more optimistic that the wellness policy would have a positive impact on health, nutrition, and physical and nutrition education than were directors from schools with a low percentage. Directors in the southeast region were more optimistic than directors in the mountain plains and southwest regions. Most foodservice directors believed that the wellness policy could be implemented using current resources in the district. They agreed that there was shared responsibility for obesity prevention with the family, schools, and the community.

Application to Child Nutrition Professionals

Foodservice directors are supportive and optimistic about the potential benefits of the wellness policy. Policy implementation is an opportunity to continue the dialogue with nutrition professionals to support the policy in the school and wider community. Advocacy for federal wellness standards needs consideration.

INTRODUCTION

The incidence of childhood obesity is increasing (Hedley, et al., 2004), creating concern about the health of American children (Ogden, Flegal, Carroll, & Johnson, 2002). The Child Nutrition and WIC Reauthorization Act of 2004 required local education authorities sponsoring school meal programs to establish a wellness policy by the beginning of School Year 2006-2007, but provided no funding to support the initiative. Schools are well positioned to play an important role in fighting childhood obesity because students spend a significant part of the day, and much of the year, in school

(American Dietetic Association, Society for Nutrition Education, & American School Food Service Association, 2003).

One explanation for the increasing concern about childhood obesity may be found in the school environment that offers students more options than the government-regulated National School Lunch (NSLP) and School Breakfast Programs (SBP) (U.S. Department of Agriculture [USDA], Food and Nutrition Service [FNS], 2000) such as purchasing single items from a la carte programs, school stores, snack bars, and vending machines. Students from some schools are allowed to leave campus to purchase food. Fundraisers and food as rewards further compromise the nutritional value of food offered at school. The school food environment can play a significant role in adolescents' food choices because a large proportion of their needed daily calories are consumed at school (Burghardt, Gordon, Chapman, Gleason, & Fraker, 1993; Fox, Crespina, Connor, & Battaglia, 2004). Federal regulations have limited jurisdiction for food outside the meal programs. The wellness mandate directs schools to regulate the school environment at the grassroots level.

Belief in effectiveness

Foodservice directors play a key role in determining what foods are sold in schools. The foodservice director, with input from students and staff, write menus and select foods for a la carte sales. Researchers have noted that if school foodservice directors are to be utilized in the fight against obesity, they need to believe that they are able to implement effective changes in their foodservice programs that will help reduce the number of overweight children (Giampaoli, Fisher, Houseal, & Gao, 2006). Unfortunately, the results of a study by Giampaoli et al. (2006) indicate foodservice directors do not see themselves in this important role.

Financial risk and motivation

These same directors are challenged to offer healthier food items to help reduce the incidence of overweight among children, as well as provide a healthful learning environment. These foodservice directors are concerned that offering healthier food options may reduce meal program participation. They believe that students prefer high fat, high sugar foods to more nutritious items offered by the school's foodservice program (Giampaoli et al., 2006). This perception crosses all levels of education and foodservice experience, and must be addressed before school foodservice programs can successfully contribute to reducing childhood overweight. An additional barrier to the foodservice director to invest in the fight against obesity is the pressure to maintain a profitable foodservice operation. Probert, McDonnell, Bailey-Davis, and Weirich (2006) reported the majority of school foodservice directors are required to operate programs that are financially self-supporting. In another study (McDonnell, Probart, & Weirich, 2006), participants discussed the pressure they felt to meet this financial requirement and the demands of their student customers, and implement a policy that addresses childhood obesity. They did not believe that their districts would provide financial support if they were unprofitable, and they believed their jobs would be threatened if revenue declined (McDonnell et al., 2006).

Limited experience establishing policies

The literature further suggests that school foodservice directors have little experience in establishing school policies (French, Story, & Fulkerson, 2002). In the expansion of school breakfast, foodservice directors expressed the same lack of confidence in their abilities to persuade others to make changes in the school environment. They also perceived a general lack of value placed on school meals programs and school foodservice personnel (McDonnell, Probart, Weirich, Hartman, & Birkenshaw, 2004). A majority (58 of 69) of the directors surveyed believed the incidence of childhood overweight is caused by factors outside the control of the school foodservice program (Giampaoli et al., 2006).

Funding needed

The 2000 School Health Policies and Program Study identified the need for funding of nutrition education for students and adults to make healthy choices (McDonnell et al., 2006). Prior to the wellness policy mandate, foodservice directors believed increased local, state, and federal funding for behavior-based nutrition education was needed to encourage students' healthy food choices. Adults who influence children, including parents, teachers, and administrators, must be better educated in nutrition to become effective role models for healthy eating behaviors (Rainville, Choi, & Brown, 2005).

The purpose of this study was to examine school district foodservice directors' attitudes about responsibility for obesity prevention and potential benefits of school wellness policies. Specific research questions addressed foodservice directors' attitudes about the potential benefit of wellness policies to improve student's health, improve nutrition and physical education, improve nutrition guidelines, and ability to implement change with current resources, and assessed foodservice director's perception of the responsibility of the school, community, and parents for obesity prevention.

METHODOLOGY

Study Design and Sample

Districts participating in the NSLP were included in the study. The research study consisted of three phases. In Phase 1, state laws and regulations for school nutrition were evaluated. Based on the findings of laws and regulations, states were sorted into weak and strong environments for the development of wellness policies. States were scored based on policies for fat, calorie, and sugar content of a la carte foods; beverage portion and nutrition standards; time and place rules for food sales; and statewide training on the development of wellness policies. Each criterion was assigned one point. States scoring 5 points or greater were classified as strong legislative environments. In Phase 2, two methods were used for recruiting participants. In the first method state nutrition directors were contacted in selected strong and weak states for names of foodservice directors involved in wellness policies development. When it was not possible to obtain a contact from the state nutrition director, the list of foodservice directors attending the School Nutrition Association Leadership Meeting Fall 2006 was utilized to find participants from some of the selected states (n=21). Participants were interviewed by telephone using a qualitative survey. Results of the phone study described experiences of foodservice directors in wellness policy development. The third phase was a national quantitative survey about wellness policy development based on the experiences of foodservice directors in phase 2.

The target population for Phase 3 was school foodservice directors in medium-sized (2,500 to 9,999) or larger public school districts. A random national sample of foodservice directors in public school districts was drawn from the *Digest for Educational Statistics* (National Center of Educational Statistics, 2004). A sampling frame of 3,924 school districts consisted of 3,077 medium-sized school districts, 717 large-sized (10,001-39,999) districts, and 130 extra large-sized (greater than 40,000) districts. Based on school size, a stratified random sample of 847 foodservice directors was surveyed. Socioeconomic status (SES) of school districts was determined by the reported level of free and reduced meal applications. Email and mail questionnaires were used for data collection.

Questionnaire Development

Telephone interviews were conducted with 21 foodservice directors from seven United States Department of Agriculture (USDA) regions. An open-ended formative questionnaire was used to collect information about the wellness committee development and working process, barriers and support for the wellness policy, status of the wellness policy, and demographic questions. Results from interviews were used to develop constructs and questions for the written questionnaire.

The questionnaire asked about foodservice directors' underlying attitudes regarding the wellness policy. Specific questions included foodservice directors' attitudes about the potential for wellness policies to improve students' health, improve nutrition and physical education, and improve nutrition guidelines. Additional questions included attitudes about the ability to implement change with current resources, responsibility of all school district staff for policy implementation, and responsibility of the school, community, and parents for obesity prevention.

Data Collection

Telephone interviews were conducted during January and February 2007. The national survey was conducted during April 2007.

A total of 847 surveys were sent out either by e-mail or mail. An introduction e-mail was sent to a sample of 717 randomly selected school foodservice directors using SurveyMonkey.com. Three days after the original contact, an e-mail was sent with a cover letter and questionnaire. One week

is the responsibility of all district employees.	11	3.2	28	8.1	45	13.0	165	47.8	96	27.8	3.9
will improve district nutrition guidelines.	4	1.2	15	4.3	42	12.1	223	64.5	62	17.9	3.9
will improve the health of students.	8	2.3	18	5.2	74	21.2	198	56.7	51	14.6	3.7
will improve nutrition education.	4	1.1	21	6.0	84	24.1	194	55.7	45	12.3	3.7
will improve physical education.	4	1.2	34	9.9	119	34.6	150	43.6	36	10.5	3.5
can be implemented with the current resources in the district.	15	4.4	57	16.6	66	19.2	174	50.6	32	8.7	3.4
Obesity prevention is the responsibility of the community.	13	3.8	55	15.9	77	22.3	169	48.8	32	9.2	3.4
Obesity Prevention Factor ^c											
Obesity prevention is the responsibility of the school.	24	6.9	64	18.4	78	22.4	162	46.6	20	5.4	3.3
Obesity prevention is the top priority in my community.	24	7.0	117	34.3	148	43.4	47	12.8	5	1.5	2.7

Note. 5-point scale: Strongly Disagree (SD); Disagree (D); Neutral (N); Agree (A); Strongly Agree (SA). a. Due to missing data, frequencies for attitude statements may not add up to the sample total; b. Cronbach's alpha for school characteristics factor = .78; c. Cronbach's alpha for obesity prevention factor = .77.

Foodservice directors were asked to rate their level of agreement with several statements about the impact of their district's wellness policy. Many foodservice directors agreed or strongly agreed ($n = 285, 82.4\%$) that their district wellness policy will improve district nutrition guidelines. Almost three-fourths of the directors ($n = 249, 71.3\%$) agreed or strongly agreed to the statement about their wellness policy improving the health of students. Two-thirds of respondents ($n = 239, 68\%$) agreed or strongly agreed their wellness policy would improve nutrition education (Table 1).

Factor analysis reduces variables into a smaller number of variables or factors. In this study, there was no hypothesis regarding the number of underlying factors prior to data collection. Exploratory factor analysis (Jae-On & Mueller, 1978) yielded two attitude factors that were named School Characteristics and Obesity Prevention Strategies. The initial Cronbach's reliability values for these factors were .78 and .57, respectively. Because the alpha value for the Obesity Prevention Strategies factor was less than .70, this factor was considered unreliable. Reliability analysis indicated that

deleting the variable "Obesity prevention is the responsibility of the family" from the Obesity Prevention Strategy factor would increase Cronbach's alpha to .77, an acceptable level. The variable "Obesity prevention is the responsibility of the family" and the two attitude factors (School Characteristics and Obesity Prevention Strategies) were used in subsequent data analyses.

ANOVA and Tukey HSD tests (Field, 2005) were used to test for differences among demographic groups for the two attitude factors and one variable. For the School Characteristics factor, there were significant differences among foodservice directors' attitudes in different regions $F(6, 313) = 2.28, p < .05$. Tukey HSD test indicated that foodservice directors in the Southeast region ($M = 3.8, SD = 0.5$) responded with stronger agreement to statements on the School Characteristic factor than did directors in the Mountain Plains region ($M = 3.5, SD = 0.5$) or Southwest region ($M = 3.4, SD = 0.6$). No significant differences were identified for the Obesity Prevention Strategies factor or the variable "Obesity prevention is the responsibility of the family" based on region.

There were significant differences among SES groups for only the variable "Obesity prevention is the responsibility of the family," [$F(8, 308) = 2.26, p < .05$]. Tukey HSD test showed that foodservice directors from districts with 21-30% free and reduced meal applications ($M = 4.4, SD = 7.6$) had higher agreement to the statement than directors from districts with 71-80% of free and reduced meal applications ($M = 3.7, SD = 1.3$). Directors from districts with 51-60% free and reduced meal applications ($M = 4.4, SD = 0.6$) also responded with stronger agreement to the variable than directors from districts with 71-80% free and reduced meal applications ($M = 3.7, SD = 1.3$). No significant differences were identified for the demographic variables education, certification credentials, district enrollment, and state legislative environment on either of the two factors or one variable.

The variable with the strongest agreement of foodservice directors was the belief that obesity prevention is the responsibility of families. Additionally, the majority of foodservice directors reported obesity prevention is the responsibility of the community and schools. Foodservice directors indicated obesity prevention is not a top priority of the community. Though schools are uniquely positioned to offer nutrition education, role modeling, and healthy food choices (Wechsler, McKenna, Lee, & Dietz, 2004), obesity prevention is multifaceted (Fox, et al., 2004). Story, Hayes, and Kalina (1996) suggested school personnel may affect young people by modeling healthful practices and behavior. Foodservice directors recognize their role and responsibilities in obesity prevention. They also acknowledge to be successful, families and community need to be involved to reverse the obesity epidemic.

Foodservice directors were very optimistic about the potential for improvements due to wellness policy implementation. More than three quarters of the foodservice directors agreed nutrition guidelines will improve student health, nutrition education, and physical education. Similarly, researchers in Virginia found ambitious goals with adopted wellness policies (Serrano, et al., 2007).

SES of school districts and USDA region influenced the attitudes of foodservice directors. The foodservice directors from the southeast region were in stronger agreement the wellness policy will improve the health of students, nutrition guidelines, and nutrition and physical education than were directors from the mountain plains and southwest regions. Further, foodservice directors from the southeast region more strongly agreed that the policy can be implemented with the current resources compared to foodservice directors from the mountain plains and southwest regions. School foodservice directors from low-income school districts had a stronger belief that the school wellness policy would improve the health, nutrition and physical and nutrition education of students than school foodservice directors from high-income school districts. Foodservice directors from low-income school districts were less in agreement than foodservice directors in high-income districts that the prevention of obesity is the responsibility of families. The school districts with children of greatest risk for obesity and the fewest resources for obesity prevention had foodservice directors who thought the wellness policies will benefit students and are possible to implement with current resources. Further, this same group of foodservice directors scored the lowest in placing the responsibility of obesity prevention with the family. Foodservice directors serving the low-income schools appeared to understand the problems of their communities, and had the belief that the wellness policy would be beneficial in the prevention and treatment of obesity.

CONCLUSIONS AND APPLICATIONS

School foodservice directors are optimistic about the potential positive impact that school wellness policies will have on the nutrition and health of students. They agree that the wellness policy will likely improve nutrition guidelines, nutrition education, and physical education of students.

Nutrition professionals have the opportunity to support schools as they continue implementing and developing wellness programs for students. Nutrition professionals can work with school personnel, either in paid or volunteer positions, as advocates for good nutrition. They also can work within the larger community to advocate and support programs that improve nutrition and increase physical activity.

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