

Perceptions of School Nutrition Directors and Managers Regarding Their Role in School Wellness

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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 objectives of this study were to investigate the perceptions of school nutrition (SN) directors and managers regarding their role in school wellness, the responsibility of SN professionals for serving as positive role models, and factors contributing to greater involvement in school wellness.

Methods

A survey assessing the role of SN professionals in school wellness was developed from qualitative data from an expert panel discussion. Surveys were mailed to SN directors representing a random sample of 700 school districts, who distributed surveys to an SN manager in their districts, resulting in 1,400 surveys. Data were analyzed using descriptive statistics.

Results

A total of 462 surveys (33%) were returned. SN directors and managers believed SN professionals have an important role to play in school wellness and have a responsibility to model healthy behaviors. Roles related to food safety, availability of food choices, encouraging healthy diets in children, and modeling personal wellness were rated most important. In general, roles rated as most important were also roles in which participants reported the greatest level of involvement, although participants reported little involvement in many wellness roles. Factors perceived as promoting a greater contribution to school wellness included those related to financial support, time, and support from other involved parties.

Applications to Child Nutrition Professionals

Although SN directors and managers considered all roles related to school wellness important, they reported minimal involvement in many roles assessed, suggesting the potential for a much greater role in school wellness. Education materials should address the importance of the variety of potential roles that SN directors and managers may play in school wellness, with training provided to support these additional roles. Factors promoting a greater contribution to school wellness identified in this study will be helpful in expanding the roles of SN directors and managers in wellness initiatives.

INTRODUCTION

As part of a larger effort to improve student health and reduce childhood obesity, the Federal Child Nutrition and Women, Infants and Children (WIC) Reauthorization Act of 2004, Section 204, required any school district participating in school meal programs to establish a local wellness policy (LWP) by the beginning of the 2006-2007 school year (Pub. L. No. 108-265, § 204). A number of health organizations, including Action for Healthy Kids (AFHK) and the National Alliance for Nutrition and Activity (NANA), have provided guidance to schools on the development of LWPs (Action for Healthy

Kids, n.d.; National Alliance for Nutrition and Activity, 2005). Model wellness policies from both organizations address many nutrition-related initiatives, including school meal participation, meal times and scheduling, and the foods and beverages offered and served in schools. Additionally, both model policies include a staff wellness component to support staff efforts to establish and maintain a healthy lifestyle. Thus, these model policies promote the important role of school nutrition (SN) in student health and the importance of addressing the personal health of school staff.

There is a key role to be played by SN professionals in school wellness, provided that they are committed to modifying the school environment to positively impact student health and believe that they personally play an important role in school wellness initiatives. Levine et al. (2002) suggested that the likelihood of SN interventions being widely implemented depends in part on how much importance is placed on nutrition education and school foodservice by SN professionals, teachers, and administrators. No published studies addressing SN directors' and managers' perceptions of the importance of their roles in school wellness initiatives were identified.

Although there are many potential roles for SN directors and managers in school wellness initiatives, research regarding their involvement has been focused on general descriptions of roles in the development, implementation, and evaluation of LWPs. Studies showed a significant role for SN professionals, particularly SN directors, in the development of LWPs (McDonnell & Probart, 2008; McDonnell, Probart, & Weirich, 2006; Probart, McDonnell, Weirich, Schilling, & Fekete, 2008; Serrano et al., 2007), although many others have not been involved (McDonnell & Probart, 2008; Serrano et al., 2007). In addition, analysis of LWPs indicated that SN directors have been assigned responsibility for implementation (Probart et al., 2008; School Nutrition Association [SNA], 2006a) and evaluation (SNA, 2006a) of LWPs. Although these studies addressed general roles related to the development, implementation, and evaluation of LWPs, no research was identified describing the specific roles played by SN directors and managers with respect to their contribution to school wellness initiatives.

A position statement jointly authored by the American Dietetic Association, the Society for Nutrition Education, and the American School Food Service Association also recognized the critical role of SN programs and services in student health and academic performance (Briggs, Safaai, & Beall, 2003). In addition, this position statement notes the importance of the whole school environment modeling healthy choices, including school staff serving as role models for healthy lifestyle practices. Story, Hayes, and Kalina (1996) also emphasized the importance of role modeling as a way of increasing exposure to healthy behaviors within the school environment. A review paper by Wechsler, Devereaux, Davis, and Collins (2000) summarized a body of literature addressing the use of the school environment to shape students' dietary and physical activity behaviors. These authors suggested that role modeling is one of the most important ways that the psychosocial environment within a school influences the development of behavioral norms in students. In this context, SN professionals have the potential to become powerful role models for student health. No studies were identified regarding SN directors' and managers' perceptions of the responsibility of SN professionals to serve as positive role models for students within the school environment.

The purpose of this study was to address limitations in the professional literature by conducting a national study to identify SN directors' and managers' perceptions of their roles in and responsibilities for supporting and contributing to the school wellness environment. In addition, their perceptions regarding the responsibility of SN professionals to serve as positive role models for students was explored. Finally, factors conducive to a greater involvement in school wellness initiatives and making positive personal lifestyle changes were addressed.

METHODOLOGY

Sample

The sample consisted of SN directors and managers in public school districts. A listing of states within each of the seven USDA regions was provided to Market Data Retrieval, a national school marketing company. The resulting random sample of 700 school districts was stratified by USDA

region, with 100 school districts from each USDA region. The resulting list identified the mailing address for the district SN directors. Survey packets were mailed to this national random sample of 700 SN directors who were asked to complete a survey, as well as distribute a survey to an SN manager in his or her district. Including the sample of 700 SN directors and 700 SN managers, a total of 1,400 surveys were distributed.

Research Design and Instrument

An expert panel session was conducted over one and a half days to discuss issues related to the role of SN professionals in school wellness. There were six participants, including one state agency representative (a wellness coordinator) and five SN directors. A second state agency representative (a wellness grant director) was unable to attend the expert panel session, but participated in a conference call with researchers prior to the meeting to discuss the research objectives.

Expert panel participants were asked semi-structured, open-ended questions designed to explore issues related to the role of SN professionals in supporting and contributing to school wellness. The session was facilitated by a researcher with an assistant moderator capturing participants' comments on a flip chart. After all questions were discussed, the researcher summarized responses, and participants were invited to verify that the summary comments were an accurate depiction of the discussion.

A survey instrument was developed from the qualitative data obtained from the expert panel session. In the survey, participants were asked to indicate the perceived level of importance of a set of 29 roles related to school wellness from their own professional perspectives. They then indicated their degree of personal involvement in each of these 29 roles. Participants also were asked to rate their level of agreement with 10 statements regarding SN professionals as role models in school wellness. Finally, participants were asked to rate their level of agreement with 28 statements identifying factors that may promote a greater contribution to the school wellness environment. Participants also provided information about themselves and their schools or school districts.

The six SN professionals who had participated in the expert panel discussion were asked to review the pilot survey instrument. Other individuals identified by state agency representatives as knowledgeable about school wellness, who had not been asked to participate in the expert panel session, also were asked to review the pilot survey instrument. In addition, representatives from the committee of state agency directors representing the seven USDA regions were asked to review the survey. In total, fourteen individuals and seven state agency committee members were asked to review the pilot survey instrument.

Reviewers were asked to complete an evaluation form to assess the clarity and completeness of the survey cover letter and survey content. Fourteen review panelists returned the evaluations representing four USDA regions and the state agency committee. Only minor wording changes were made to the survey instrument, based on the recommendations provided by pilot study reviewers. The University of Southern Mississippi Institutional Review Board approved the study protocol and survey.

Data Collection

Each SN director in the sample was mailed a pre-notice letter one week before the surveys were mailed. One week later, each SN director was mailed an envelope containing a cover letter and two survey packets, one for the SN director and one for an SN manager. The SN director's cover letter provided instructions on how to complete the survey based on his/her role, and to distribute the second survey packet to an SN manager in his/her district. Included in the survey packets were an instructional cover letter, the survey instrument, and a self-addressed, postage-paid envelope for returning the completed survey. No identifying codes were placed on the survey instruments, thus preserving the anonymity of all respondents. Participants were asked to return the completed surveys within a three week time period.

Data Analysis

Survey data were analyzed using the statistical package SPSS Version 13.0 for Windows. Descriptive statistics included means, standard deviations, and frequencies of total responses. Exploratory principal components factor analysis was performed on items in the various sections of the survey

instrument, to determine if each set of items could be reduced to a smaller number of factors. None of these analyses yielded a cognitively interpretable factor solution; thus, all data were analyzed using only descriptive statistics.

RESULTS AND DISCUSSION

Sample Characteristics

A total of 1,400 surveys were distributed to 700 SN directors and 700 SN managers. A total of 462 surveys were returned and used in statistical analysis, for a response rate of 33%. Program and personal characteristics of respondents are provided in Table 1. Both SN directors and managers were represented, with the majority of participants (66.2%) being SN directors. The vast majority of participants (90.5%) were Caucasian or White, with little representation from other races/ethnicities. Participants represented all USDA regions. The largest percentages of participants reported working in SN programs for more than 20 years (27.4%) and being in their current positions one to five years (33.8%). The largest percentage of SN directors reported working in school districts with an enrollment of 2,799 or less (56.8%), while the largest percentage of SN managers reported working in schools with an enrollment of 301-600 (37.6%). In terms of certification status, the largest percentage of participants reported that they were not certified (37.7%), closely followed by those reporting School Nutrition Association (SNA) certification (36.8%).

Participants indicated that a variety of wellness activities had been implemented for SN staff, with nutrition promotions and programs (34.2%), nutrition education programs or classes (31.2%), and health screenings (27.8%) most often reported (Table 1). However, many participants (30.3%) also reported that no wellness activities were available for SN staff. Although LWPs must address student health, there are no requirements that the health of school faculty and staff also be addressed, and school districts vary with respect to whether staff wellness has been incorporated into their policies (SNA, 2006b). National studies have produced conflicting results with respect to the inclusion of staff wellness in LWPs. Moag-Stahlberg, Howley, and Luscri (2008) reported that only 36% of LWPs analyzed included a staff wellness component, while Longley and Sneed (2009) reported that 71% of LWPs included staff wellness. Another study conducted by the SNA and the School Nutrition Foundation indicated that while 78% of school nutrition directors surveyed reported that their LWPs included staff wellness in policy standards, only 33% reported that staff wellness programs had been implemented (SNA, 2007). Thus, although LWPs may address staff wellness, programs for staff may or may not have been implemented.

Table 1. <i>Program and Personal Characteristics of Participants</i>		
Item	Frequency	%
Job Title (n = 423)		
SN Director	280	66.2
SN Manager	143	33.8
Years Worked in SN Programs (n = 446)		
< 1 year	011	02.5
1-5 years	077	17.3
6-10 years	074	16.6

11-15 years	082	18.4
16-20 years	080	17.9
> 20 years	122	27.4
Years in Current Position (n = 447)		
< 1 year	036	08.1
1-5 years	151	33.8
6-10 years	078	17.4
11-15 years	090	20.1
16-20 years	036	08.1
> 20 years	056	12.5
USDA Region (n = 455)		
Southeast	086	18.9
Mountain Plains	077	16.9
Southwest	073	16.0
Mid-Atlantic	064	14.1
Northeast	058	12.7
Midwest	057	12.5
Western	040	08.8
Race/Ethnicity (n = 451)		
Caucasian or White	408	90.5
African American or Black	020	04.4
Hispanic or Latino	011	02.4
Asian or Pacific Islander	008	01.8
American Indian	003	00.7
Other	001	00.2
School District Enrollment ^a (n = 315)		

2,799 or less	179	56.8
2,800-9,999	100	31.7
10,000-19,999	018	05.7
20,000-44,999	015	04.8
45,000-64,999	001	00.3
65,000 or greater	002	00.6
School Enrollment ^b (n = 249)		
300 or less	038	17.8
301-600	080	37.6
601-900	054	25.4
901 or greater	041	19.2
Certification Status (n = 555)		
Not certified	169	37.7
SNA certified	165	36.8
Other	068	15.2
State Department of Education certified	064	14.3
School Nutrition Specialist credentialed	042	09.4
Registered Dietitian	028	06.3
Licensed Dietitian/Nutritionist	019	04.2
Wellness Activities for SN Staff (n = 1,122)		
Nutrition promotions and programs	150	34.2
Nutrition education programs or classes	137	31.2
No wellness activities for SN staff	133	30.3
Health screenings available	122	27.8
Walking/fitness promotions and programs	096	21.9
Fitness facilities available at worksite	093	21.2

Cooking programs or classes	081	18.5
Weight management promotions and programs	077	17.5
Free/discounted gym or fitness center memberships	075	17.1
Professional training related to school wellness	072	16.4
Opportunities to participate in physical activity during work day	040	09.1
Federal/state/local funding for staff wellness	019	04.3
Other	019	04.3
Financial incentives for participating in wellness activities	008	01.8
<p><i>Note.</i> SN = School Nutrition ^a This item was only answered by SN directors. ^b This item was only answered by SN managers.</p>		

Roles Related to School Wellness

Participants were provided with 29 statements regarding potential roles that SN professionals may play in the school wellness environment and were asked to rate the level of importance of each statement to their own role in the school wellness environment, using a scale of 4 (very important) to 1 (not important). Table 2 presents the means and standard deviations for each of the 29 statements in descending order of importance.

Participants considered almost all roles to be important, with 26 of 29 statements having a mean importance rating of 3.00 or higher. Overall, SN directors and managers rated roles related to food safety, availability of food choices, and encouraging healthy diets for children as most important. This is illustrated by the fact that the highest rated roles were “addressing food safety issues” (3.77 ± 0.49), “making healthier menu choices available” (3.74 ± 0.52), “encouraging students to make healthy food choices” (3.68 ± 0.53), “encouraging students to try new foods” (3.64 ± 0.56), and “limiting unhealthy food choices at school” (3.61 ± 0.60). Roles related to modeling personal wellness also were considered important, with “improving personal eating habits” (3.56 ± 0.61), “improving personal physical activity habits” (3.54 ± 0.67), and “modeling consumption of healthy food choices” (3.51 ± 0.64) having mean importance ratings greater than 3.50. Roles rated as least important included “assessing the impact of wellness activities” (2.98 ± 0.80), “evaluating the implementation of wellness activities” (2.95 ± 0.82), and “writing grants to provide funding to support wellness activities” (2.82 ± 1.01), although each of these roles was still considered important.

Participants then were asked to indicate their level of personal involvement in each of the roles, using a scale of 4 (very involved) to 1 (not involved). Table 2 again presents the means and standard deviations for each of the 29 statements. In general, the roles rated as most important also were the roles in which participants reported the greatest level of involvement, with the greatest level of personal involvement in “addressing food safety issues” (3.52 ± 0.79), “making healthier menu choices available” (3.43 ± 0.85), “encouraging students to try new foods” (3.27 ± 0.83), “limiting unhealthy food choices at school” (3.22 ± 0.89), and “encouraging students to make healthy food choices” (3.19 ± 0.81). Participants reported being involved in modeling dietary behaviors, with “improving personal eating habits” (3.16 ± 0.83) and “modeling consumption of healthy food choices” (3.02 ± 0.89) also being rated above 3.00. Overall, participants reported little involvement in

many roles, as evidenced by the fact that only nine of the 29 statements had a mean involvement rating greater than 3.00.

In terms of more general roles related to wellness initiatives, participants in the current study perceived roles related to development of LWPs and other wellness initiatives to be important, with “serving on the district/school wellness committee” (3.36 ± 0.78) and “assisting in planning the school wellness policy” (3.33 ± 0.81) being rated above 3.00. Likewise, implementation of wellness initiatives was considered important, with “implementing wellness activities” (3.13 ± 0.83) also rated above 3.00. The evaluation of wellness initiatives was perceived to be slightly less important, with “assessing the impact of wellness activities” (2.98 ± 0.80) and “evaluating the implementation of wellness activities” (2.95 ± 0.82) receiving lower ratings. Level of involvement in these roles paralleled the perceived importance ratings, with “serving on the district/school wellness committee,” “assisting in planning the school wellness policy,” “implementing wellness activities,” “assessing the impact of wellness activities,” and “evaluating the implementation of wellness activities” receiving involvement ratings of 2.74 ± 1.18 , 2.66 ± 1.21 , 2.20 ± 1.08 , 1.92 ± 0.98 , and 1.86 ± 0.98 , respectively. However, these ratings indicated limited involvement in the roles other than those related to the development of wellness policies. These results are consistent with previous research reporting a significant role for SN professionals, particularly SN directors, in LWP development (McDonnell & Probart, 2008; McDonnell et al., 2006; Probart et al., 2008; Serrano et al., 2007). However, although many LWPs have assigned responsibility for implementation (Probart et al., 2008; SNA, 2006a) and evaluation (SNA, 2006a) to SN directors, actual involvement in these roles is limited in the current sample.

Role ^a	Importance		Involvement	
	N	Mean \pm SD ^b	N	Mean \pm SD ^c
Addressing food safety issues	437	3.77 \pm 0.49	444	3.52 \pm 0.79
Making healthier menu choices available	439	3.74 \pm 0.52	443	3.43 \pm 0.85
Encouraging students to make healthy food choices	429	3.68 \pm 0.53	439	3.19 \pm 0.81
Encouraging students to try new foods	438	3.64 \pm 0.56	443	3.27 \pm 0.83
Limiting unhealthy food choices at school	437	3.61 \pm 0.60	439	3.22 \pm 0.89
Making healthier à la carte choices available	426	3.57 \pm 0.68	441	3.13 \pm 1.08
Assessing and modifying recipes	441	3.57 \pm 0.58	440	3.10 \pm 0.99
Improving personal eating habits	434	3.56 \pm 0.61	442	3.16 \pm 0.83

Improving personal physical activity habits	426	3.54 ± 0.67	442	2.90 ± 1.04
Modeling consumption of healthy food choices	433	3.51 ± 0.64	438	3.02 ± 0.89
Promoting a positive school wellness environment	431	3.50 ± 0.63	439	2.59 ± 1.00
Encouraging students to be physically active	416	3.49 ± 0.72	445	2.07 ± 1.04
Making healthier choices available in vending machines	432	3.48 ± 0.79	442	2.13 ± 1.24
Modeling a physically active lifestyle	431	3.45 ± 0.68	443	2.72 ± 0.99
Modeling a healthy weight status	434	3.44 ± 0.68	442	2.80 ± 0.98
Providing nutrition education to students	432	3.44 ± 0.70	446	2.16 ± 0.96
Providing training to SN staff related to wellness	439	3.38 ± 0.73	439	2.66 ± 1.08
Serving on the district/school wellness committee	444	3.36 ± 0.78	445	2.74 ± 1.18
Assisting in planning the school wellness policy	439	3.33 ± 0.81	445	2.66 ± 1.21
Participating in wellness training	434	3.29 ± 0.72	438	2.43 ± 1.04
Marketing school wellness	433	3.27 ± 0.75	442	2.42 ± 1.01
Providing nutrition education resources to teachers	424	3.24 ± 0.82	444	1.83 ± 0.94
Making healthier choices available in school stores	414	3.23 ± 0.96	431	1.60 ± 1.02
Implementing wellness activities	439	3.13 ± 0.83	438	2.20 ± 1.08
Providing training to teachers and administrators related to wellness	431	3.05 ± 0.84	445	1.66 ± 0.91

Seeking resources for implementing school wellness initiatives	432	3.00 ± 0.88	439	1.79 ± 0.95
Assessing the impact of wellness activities	440	2.98 ± 0.80	438	1.92 ± 0.98
Evaluating the implementation of wellness activities	433	2.95 ± 0.82	442	1.86 ± 0.98
Writing grants to provide funding to support wellness activities	432	2.82 ± 1.01	445	1.37 ± 0.77
^a Roles are listed in descending order of perceived importance. ^b The response scale was a 4-point Likert-type scale ranging from 4 (<i>very important</i>) to 1 (<i>not important</i>). ^c The response scale was a 4-point Likert-type scale ranging from 4 (<i>very involved</i>) to 1 (<i>not involved</i>).				

School Nutrition Professionals as Role Models in School Wellness

Participants were provided with ten statements regarding the role of SN professionals in school wellness and were asked to rate their level of agreement with each statement using a scale of 4 (strongly agree) to 1 (strongly disagree). Table 3 presents the means and standard deviations for each of the ten statements in descending order of agreement. Participants agreed that “SN professionals play an important role in school wellness” (3.46 ± 0.57) and that “SN professionals have a responsibility to model healthy behaviors to school children” (3.37 ± 0.58). Participants also agreed that “wellness activities designed for SN professionals should be included in school wellness initiatives” (3.06 ± 0.66) and that “local wellness policies and initiatives encourage SN professionals to make positive changes in personal health behaviors” (2.84 ± 0.73). Participants believed that “modeling healthy behaviors and weight status are equally important” (2.93 ± 0.67), and that “modeling healthy behaviors is more important than weight status” (2.91 ± 0.72). Although health behaviors and weight are both judged to be important, behavior appears to be perceived as more important than weight. In terms of the weight status of SN professionals, participants believed that underweight (2.77 ± 0.71) and overweight (2.64 ± 0.75), but not obese (2.34 ± 0.82), SN professionals can model healthy behaviors to school children. Weight appears to be more relevant in terms of modeling if an SN professional is overweight enough to be classified as obese.

Previous literature has emphasized the importance of the whole school environment, including school staff, modeling healthy behaviors to children (Briggs et al., 2003; Story et al., 1996; Wechsler et al., 2000). SN directors and managers in the current study perceived SN professionals as playing an important role in school wellness and having a responsibility to model healthy behaviors for children. They also believed that wellness programs for staff would aid in making health behavior changes and thus, serving as more positive role models. In this context, it is important that school wellness initiatives not only address the health of students, but staff also. This is consistent with the AFHK and NANA model wellness policies, both of which include a staff wellness component (Action for Healthy Kids, n.d.; National Alliance for Nutrition and Activity, 2005). A study by Webber, Johnson, Rose, and Rice (2007) suggested that elementary school personnel were very receptive to the idea of a school-based weight loss program. Participants in the current study identified both behavior and weight as important factors in modeling good health; therefore, staff wellness programs should address both of these issues.

Table 3. *Opinions Regarding the Role of School Nutrition (SN) Professionals in School Wellness*

Statement	N	Mean \pm SD^a
SN professionals play an important role in school wellness	451	3.46 \pm 0.57
SN professionals have a responsibility to model healthy behaviors to school children	437	3.37 \pm 0.58
Wellness activities designed for SN professionals should be included in school wellness initiatives	431	3.06 \pm 0.66
Modeling healthy behaviors and weight status are equally important	431	2.93 \pm 0.67
Modeling healthy behaviors is more important than weight status	435	2.91 \pm 0.72
Local wellness policies and initiatives encourage SN professionals to make positive changes in personal health behaviors	439	2.84 \pm 0.73
Underweight SN professionals can model healthy behaviors to school children	427	2.77 \pm 0.71
Overweight SN professionals can model healthy behaviors to school children	430	2.64 \pm 0.75
Obese SN professionals can model healthy behaviors to school children	429	2.34 \pm 0.82
Neither modeling healthy behaviors nor weight status are important	443	1.67 \pm 0.69
^a The response scale was a 4-point Likert-type scale ranging from 4 (<i>strongly agree</i>) to 1 (<i>strongly disagree</i>).		

Factors Promoting Contribution to School Wellness

Participants were provided with 28 statements regarding factors that may promote a greater contribution to the school wellness environment and were asked to rate their level of agreement using a scale of 4 (strongly agree) to 1 (strongly disagree). Table 4 presents the means and standard deviations for each of the 28 statements in descending order of agreement. Although 26 of 28 statements received mean agreement ratings of 3.00 or higher, the greatest levels of agreement were reported for “financial support for school wellness initiatives” (3.40 \pm 0.66), “time to devote to wellness initiatives” (3.34 \pm 0.65), “support from parents” (3.32 \pm 0.68), “support from school administration and teachers” (3.31 \pm 0.73), and “employment benefits and incentives for personal wellness” (3.25 \pm 0.72). Thus, factors most perceived as promoting a greater contribution to school wellness included those related to financial support, time, and support for wellness initiatives from other involved parties. Other studies have identified funding and time issues (Longley & Sneed, 2009; McDonnell & Probart, 2008; McDonnell et al., 2006) and lack of support from other involved parties

(Longley & Sneed, 2009; McDonnell & Probart, 2008) as barriers to wellness policy development and implementation. Support for personal wellness and adequate information, training, and resources also were perceived as conducive to a greater contribution to wellness initiatives.

Table 4. <i>Factors Associated with a Greater Contribution to School Wellness</i>		
Statement	N	Mean ± SD^a
Financial support for school wellness initiatives	444	3.40 ± 0.66
Time to devote to wellness initiatives	445	3.34 ± 0.65
Support from parents	456	3.32 ± 0.68
Support from school administration and teachers	452	3.31 ± 0.73
Employment benefits and incentives for personal wellness	443	3.25 ± 0.72
Support from the community	451	3.23 ± 0.66
Wellness activities/programs provided in the work place	440	3.17 ± 0.70
Support from the state agency on wellness resources	454	3.14 ± 0.73
Information for measuring SN outcomes	453	3.09 ± 0.67
Training related to nutrition and wellness	438	3.08 ± 0.80
Information regarding expectation of my role	449	3.08 ± 0.76
Access to varied wellness resources	450	3.04 ± 0.65
Financial resources dedicated to personal wellness	442	3.03 ± 0.82
Knowledge about nutrition	453	3.02 ± 0.74
Time to devote to personal lifestyle changes	443	3.00 ± 0.83
Training related to healthy cooking techniques	452	2.99 ± 0.81
Leadership skills to implement school wellness initiatives	450	2.98 ± 0.79
<p><i>Note.</i> SN = School Nutrition ^aThe response scale was a 4-point Likert-type scale ranging from 4 (<i>strongly agree</i>) to 1 (<i>strongly disagree</i>).</p>		

CONCLUSIONS AND APPLICATION

This study assessed the perceptions of SN directors and managers regarding their roles in school wellness, the responsibility of SN professionals to serve as role models for health, and factors promoting greater involvement in school wellness. Results indicated that participants believed that SN professionals have an important role to play in school wellness and that they have a personal

responsibility to model healthy behaviors to school children. SN directors and managers rated roles related to food safety, availability of food choices, encouraging healthy diets in children, and modeling personal wellness as most important to their professional positions. Roles rated as least important included grant writing to fund wellness initiatives and assessing and evaluating wellness initiatives. In general, the roles rated as most important were roles in which participants reported the greatest level of involvement, although participants reported little involvement in many roles. Overall, participants assigned more importance to and reported greater involvement in roles related to the development of wellness initiatives, as compared to implementation and evaluation of wellness initiatives. Factors perceived as promoting a greater contribution to school wellness included those related to financial support, time to devote to wellness activities, support from other involved parties, support for personal wellness, and adequate information, training, and resources.

Regarding the importance of serving as positive role models for school children, both health behaviors and weight status were perceived to be important, with slightly more importance being assigned to behaviors. Weight status was perceived as negatively impacting the ability to serve as a role model for obese, but not overweight or underweight, SN professionals. Participants also agreed that wellness activities designed for SN professionals should be included in school wellness initiatives, and that staff wellness initiatives encourage SN professionals to make positive changes in personal health behaviors. Although serving as a positive role model and personal lifestyle behaviors were perceived as important, many participants indicated that no wellness activities had been implemented for SN staff. When available, the most commonly reported wellness activities for SN staff were nutrition promotions and programs.

In conclusion, SN directors and managers considered all roles related to school wellness important. However, they reported little to no involvement in many roles assessed, suggesting the potential for a much greater role for SN directors and managers in school wellness. Factors promoting a greater contribution to school wellness identified in this study will be helpful in expanding the roles of SN directors and managers in school wellness.

One limitation to this research study was the overall response rate to the mailed survey instrument. At 33%, the response rate was lower than desired. In addition, the participant sample was primarily Caucasian or White (90.5%). Finally, only 33.8% of the respondents who provided information on their current job position were SN managers. The low response rate for SN managers may be due to SN directors not distributing survey packets to managers, or due to SN directors not following up on survey packets that were distributed. All of these issues may cause concern for the ability to generalize the results.

Recommendations for education and training based on study results include the development of education materials to increase the awareness of SN directors and managers regarding the many potential ways in which they may play an important role in school wellness. Education materials should illustrate the important contributions of SN directors and managers in model districts/schools. Training also must be provided to support the expanded roles that SN directors and managers may play in school wellness, to ensure that these professionals have the knowledge and skills necessary to engage in these new roles. Finally, expectations about the roles of SN directors and managers in school wellness must be adequately communicated. Education materials for state or district wellness coordinators are also needed and should emphasize the factors perceived as promoting a greater contribution to school wellness identified in this study, as these should be helpful in expanding the roles of SN directors and managers in school wellness. In addition, education materials should address the importance of role modeling within the school environment as a way of promoting healthy behaviors in students. Because they are role models within the SN environment, health promotion programs for SN professionals should be developed as a part of school wellness programs in order to promote the adoption of personal healthy behaviors.

Findings from this study also suggest the need for additional research. Case studies of successful programs should be conducted to illustrate the innovative ways in which SN directors and managers have contributed to the school wellness environment and to identify strategies employed to gain the "buy-in" and participation of these SN professionals in school wellness initiatives. Best practices for

successfully engaging SN directors and managers in school wellness should be developed. Research also is needed to assess the utilization of personal wellness programs for SN professionals, and assess the outcomes associated with these programs. This research should include investigating the relationship between the personal health behaviors and attitudes of SN professionals and their degree of support for and involvement in school wellness initiatives.

ACKNOWLEDGEMENTS

This manuscript has been produced by the National Food Service Management Institute – Applied Research Division, located at The University of Southern Mississippi with headquarters at The University of Mississippi. Funding for the Institute has been provided with federal funds from the U.S. Department of Agriculture, Food and Nutrition Service to The University of Mississippi. The contents of this publication do not necessarily reflect the views or policies of The University of Mississippi or the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

The information provided in this manuscript is the result of independent research produced by NFSMI and is not necessarily in accordance with U.S. Department of Agriculture Food and Nutrition Service (FNS) policy. FNS is the federal agency responsible for all federal domestic child nutrition programs including the National School Lunch Program, the Child and Adult Care Food Program, and the Summer Food Service Program. Individuals are encouraged to contact their local child nutrition program sponsor and/or their Child Nutrition State Agency should there appear to be a conflict with the information contained herein, and any state or federal policy that governs the associated Child Nutrition Program. For more information on the federal Child Nutrition Programs please visit www.fns.usda.gov/cnd.

REFERENCES

Action for Healthy Kids. (n.d.). Wellness policy fundamentals: Key considerations as you develop your local wellness policy. Retrieved January 30, 2009 from <http://www.actionforhealthykids.org/school-programs/our-programs/wellness-policy-tool/wellness-policy-fundamentals.pdf>

Briggs, M., Safaii, S., & Beall, D. (2003). Position of the American Dietetic Association, Society for Nutrition Education, and American School Food Service Association - Nutrition services: An essential component of comprehensive school health programs. *Journal of the American Dietetic Association*, 103, 505-514.

Child Nutrition and Women, Infants, and Children (WIC) Reauthorization Act of 2004, Section 204 of Pub. L. No. 108-265, 42 U.S.C. § 1751 et seq.

Levine, E., Olander, C., Lefebvre, C., Cusick, P., Biesiadecki, L., & McGoldrick, D. (2002). The Team Nutrition pilot study: Lessons learned from implementing a comprehensive school-based intervention. *Journal of Nutrition Education and Behavior*, 34, 109-116.

Longley, C. H., & Sneed, J. (2009). Effects of federal legislation on wellness policy formation in school districts in the United States. *Journal of the American Dietetic Association*, 109, 95-101.

McDonnell, E., & Probart, C. (2008). School wellness policies: Employee participation in the development process and perceptions of the policies. *The Journal of Child Nutrition & Management*, 32 (1), Retrieved February 17, 2009 from [Spring-2008 Volume-32-Issue 1](#)

McDonnell, E., Probart, C., & Weirich, E. (2006). School foodservice directors' perceptions and concerns about local wellness policy development, implementation, and enforcement. *The Journal of Child Nutrition & Management*, 30 (1). Retrieved January 30, 2009, from <http://docs.schoolnutrition.org/newsroom/jcnm/06spring/mcdonnell/index.asp>

Moag-Stahlberg, A., Howley, N., & Luscri, L. (2008). A national snapshot of local school wellness policies. *Journal of School Health, 78*, 562-568.

National Alliance for Nutrition and Activity. (2005, March). *Model local school wellness policies on physical activity and nutrition*. Retrieved January 16, 2007, from <http://www.schoolwellnesspolicies.org/WellnessPolicies.html>

Probart, C., McDonnell, E., Weirich, E., Schilling, L., & Fekete, V. (2008). Statewide assessment of local wellness policies in Pennsylvania public school districts. *Journal of the American Dietetic Association, 108*, 1497-1502.

School Nutrition Association. (2006a). *A foundation for the future II: Analysis of local wellness policies from 140 school districts in 49 states*. Retrieved January 30, 2009, from [RegionalLWPReport.doc](#)

School Nutrition Association. (2006b, September 15). *Local school wellness policies: Incorporating staff wellness guidelines*. Retrieved July 23, 2009, from <http://www.schoolnutrition.org/Content.aspx?id=7566>

School Nutrition Association. (2007, September). *From cupcakes to carrots: Local wellness policies one year later*. Retrieved June 3, 2009, from "[From cupcakes to carrots PDF](#)"

Serrano, E., Kowaleska, A., Hosig, K., Fuller, C., Fellin, L., & Wigand, V. (2007). Status and goals of local school wellness policies in Virginia: A response to the Child Nutrition and WIC Reauthorization Act of 2004. *Journal of Nutrition Education and Behavior, 39*, 95-100.

Story, M., Hayes, M., & Kalina, B. (1996). Availability of foods in high schools: Is there cause for concern? *Journal of the American Dietetic Association, 96*, 123-126.

Webber, L. S., Johnson, C. C., Rose, D., & Rice, J. C. (2007). Development of ACTION! Wellness program for elementary school personnel. *Obesity, 15(Supplement)*, 48S-56S.

Wechsler, H., Devereaux, R. S., Davis, M., & Collins, J. (2000). Using the school environment to promote physical activity and healthy eating. *Preventive Medicine, 31*, S121-S137.

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