The Impact of Healthy Menu Choices on School Nutrition Programs

Over the past 20 years, obesity rates among children have more than doubled, resulting in one-third of children and adolescents in the United States (U.S.) classified as overweight or obese. The U.S. Surgeon General estimates that 70% of obese children and adolescents will grow to become obese adults and will be susceptible to serious health problems. The current obesity trend indicates the present generation of children will live shorter lives than their parents. Schools provide an important environment for improving access to healthy foods, opportunities for physical activity, and for providing children with both nutrition and physical education. School-aged children and adolescents spend a large portion of their day in school and consume 35% of their daily energy intake at school, thus placing schools in a good position to have a strong impact in the fight against child and adolescent obesity.

On June 30, 2004, the Child Nutrition and Special Supplemental Nutrition Program for Women, Infants and Children (WIC) Reauthorization Act of 2004 was signed into law requiring every school district that participates in the National School Lunch Program (NSLP) to establish a local wellness policy. The objective of the wellness policy is to promote student health, reduce childhood obesity, and prevent nutrition-related chronic diseases. Since the implementation of wellness policies, school nutrition (SN) programs have offered healthier menu choices such as whole-wheat, reduced-fat cheese pizza, a variety of fruits.
and vegetables, hummus and pita bread, fat-free flavored milk, and low-fat yogurt. However, SN programs that provide healthier menu options face challenges due to budget constraints, staff shortages, staff training, menu modifications, administrative burden, and lack of acceptance by school staff, students, and parents. Therefore, the purpose of this research project is to explore the impact of healthy menu choices on SN programs participating in the National School Lunch Program (NSLP).

**OBJECTIVES**

The specific objectives of this project included the following:

- Identify the practices involved with providing healthy menu choices in SN programs;
- Identify the perceptions of SN professionals toward providing healthy menu choices in SN programs;
- Identify the barriers to providing healthy menu choices in SN programs; and
- Identify training/resources for SN professionals related to providing healthy menu choices in SN programs.

**METHOD**

**Phase I: Expert Panel**

- In Phase I of the research, two expert panel sessions were conducted with SN professionals. Panelists were chosen from a pool of SN directors, SN managers, state agency representatives, and coordinated school health representatives recommended by child nutrition state agency directors. Ten SN professionals agreed to participate as expert panel members for the first session, and 11 SN professionals agreed to participate as expert panel members for the second session.

- Participants in both sessions were asked semi-structured, open-ended questions designed to explore the impact of healthy menu choices on SN programs. Both expert panel sessions were facilitated by a National Food Service Management Institute, Applied Research Division (NFSMI, ARD) researcher with an assistant moderator capturing the participants' comments. After all questions were discussed, the researcher summarized responses, and participants were asked to verify that the summarized comments were an accurate depiction of the discussion.

- The responses were grouped into emerging themes and then used to develop statements that were incorporated into each of the quantitative survey instruments.

**Phase II: Survey Development**

- Researchers used the data from Phase I as the foundation for drafting two surveys designed to identify the practices, perceptions, barriers, and training/resources related to providing healthy menu choices in SN programs that participate in the NSLP.

- The scannable survey for SN directors was titled *SN Director’s Perspective on the Impact of Healthy Menu Choices*, and the scannable survey for SN managers was titled *SN Manager’s Perspective on the Impact of Healthy Menu Choices*. Each survey consisted of five sections.

- Twenty-five SN professionals were invited to participate on a review panel to evaluate both draft survey instruments. The panel reviewed both draft surveys and completed evaluation forms which assessed the content, scales, readability, clarity, and flow of the draft surveys. Responses from the review panel members were tabulated, comments were summarized, and suggestions were incorporated into the final survey instruments.

**Survey Administration**

- A random sample of 700 SN directors representing the seven USDA regions was selected for the national survey administration.

- A pre-notice letter was mailed to each of the 700 SN directors approximately one week before the survey instruments were distributed to notify the study participants about the surveys and briefly describe the study. A cover letter for the SN director was attached to the survey instrument explaining the purpose of the study, requesting participation in the study, assuring confidentiality of responses, and providing researchers' contact information. In addition, an instruction letter was provided to assist SN directors in selecting an SN manager who has experience with incorporating healthy menu choices, distributing the survey packet labeled SN manager to that individual, and reminding their SN managers to complete and return their surveys.

- A self-addressed postage-paid envelope was included with each survey for each participant to return the completed survey. A follow-up postcard was sent approximately one week after the survey was mailed. The postcard was sent to encourage SN directors to complete and return their surveys and remind their SN managers to complete and return their surveys as well.

- A total of 267 SN director surveys were returned and used in statistical analysis, for a response rate of 38.5%, and a total of 219 SN manager surveys were returned and used in statistical analysis, for a response rate of 31.5%.

**Data Analysis**

- Survey data were analyzed using the statistical package SPSS Version 17.0 for Windows.

- Statistical analyses included descriptive statistics, exploratory principal components factor analysis, Cronbach’s alpha, independent sample t-tests, and one-way ANOVA with Tukey’s post hoc tests.
**FINDINGS**

**Practices Related to Providing Healthy Menu Choices**

**School Nutrition Directors**

- School nutrition directors were provided with 35 practice statements related to providing healthy menu choices in their SN programs. Respondents were asked to rate the level of importance for each statement, using a scale of 4 (very important) to 1 (not important), and to indicate their current status in regard to each statement, using a scale of 4 (fully addressed) to 1 (not addressed).

- For level of importance, SN director respondents ranked the following four statements the highest: “Adequate time is scheduled for students to select and eat a nutritious meal” (3.75 ± 0.55), “Healthy menu choices served are appealing to students” (3.72 ± 0.50), “SN director serves on the district/school wellness committee” (3.71 ± 0.62), and “SN director was involved in developing the school district’s local wellness policy” (3.68 ± 0.64).

- The current status levels were considerably lower than levels of importance. Out of the 35 practice statements, 25 statements had mean scores between 2.96 ± 0.90 to 1.16 ± 0.47. The highest current status levels reported were “SN manager is involved in deciding which healthy menu choices to offer students” (3.35 ± 0.83), “SN director was involved in developing the school district’s local wellness policy” (3.35 ± 0.99), and “SN program offers a variety of healthy menu choices” (3.29 ± 0.76).

**School Nutrition Managers**

- School nutrition managers were provided with 15 practice statements related to providing healthy menu choices in their SN cafeterias. Respondents were asked to rate the level of importance for each statement, using a scale of 4 (very important) to 1 (not important), and to indicate their current status in regard to each statement, using a scale of 4 (fully addressed) to 1 (not addressed).

- For level of importance, SN manager respondents ranked the following four statements the highest: “SN program offers students a variety of healthy menu choices” (3.77 ± 0.46), “Healthy menu choices served are appealing to students” (3.74 ± 0.52), “SN director develops recipes for healthy menu choices” (3.67 ± 0.56), and “SN manager is provided professional development on providing healthy menu choices” (3.64 ± 0.61).

- The current status levels were lower than levels of importance. Out of the 15 practice statements, five statements had mean scores between 2.62 ± 0.98 to 2.14 ± 0.92. The highest current status levels reported were “SN program offers students a variety of healthy menu choices” (3.49 ± 0.64), “SN director develops recipes for healthy menu choices” (3.33 ± 0.83), and “Healthy menu choices served are appealing to students” (3.33 ± 0.71).
Perceptions Related to Providing Healthy Menu Choices

School Nutrition Directors
• School nutrition directors were asked to rate their level of agreement with 15 statements regarding their perceptions toward providing healthy menu choices using a scale of 4 (strongly agree) to 1 (strongly disagree).
• The majority of the statements had a high level of agreement from respondents, with 12 out of the 15 statements receiving a mean rating of 3.0 or greater. “Incorporating healthy menu choices is the right thing to do for students” had the highest mean rating (3.88 ± 0.37), followed by “Healthy menu choices improve students’ learning abilities” (3.62 ± 0.63), “Nutrition education makes it easier for students to select healthy choices that will carry over into adulthood” (3.57 ± 0.65), and “SN director is a positive role model for school wellness” (3.50 ± 0.65).

School Nutrition Managers
• School nutrition managers were asked to rate their level of agreement with nine statements regarding their perceptions toward providing healthy menu choices using a scale of 4 (strongly agree) to 1 (strongly disagree).
• The majority of the statements had a high level of agreement from respondents, with seven out of the nine statements receiving a mean rating of 3.0 or greater. “Incorporating healthy menu choices is the right thing to do for students” had the highest mean rating (3.90 ± 0.33), followed by “Offering healthy menu choices teaches students how to make healthier lifestyle decisions” (3.57 ± 0.74), and “SN manager is a positive role model for school wellness” (3.55 ± 0.61).

Barriers Related to Providing Healthy Menu Choices

School Nutrition Directors
• School nutrition directors were asked to indicate their level of agreement with barriers related to providing healthy menu choices in their SN programs. A 4-point rating scale was used with 4 being strongly agree and 1 being strongly disagree. Of the 13 barriers listed on the survey, the highest level of agreements reported were “increase in food cost” (3.50 ± 0.82), “increase in production cost” (3.25 ± 0.87), and “increase in labor cost” (3.16 ± 0.97).

School Nutrition Managers
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Training/Resources Related to Providing Healthy Menu Choices

School Nutrition Directors
• Resource materials used most often to develop and incorporate healthy menu choices were state agency resources (74.2%), USDA resources (72.7%), and networking with other school districts (68.2%). Training attended most often by respondents related to healthy menu choices was state agency training (80.7%), SNA conference (63.9%), and SNA webinars (30.9%).
• Respondents indicated the training most often provided to their SN staff related to healthy menu choices was standardized recipes (84.0%), food safety (83.2%), kitchen safety (72.5%), production (71.4%), and regulations (70.6%).
• The majority of respondents reported that they were not Healthier U.S. School Challenge Award recipients (79.6%); however, 13.8% were in the process of applying for the award. Respondents were nearly equal in participation of the Department of Defense Fresh Fruit and Vegetable Program, with 44.7% of respondents indicating they participate while 52.3% do not participate. Almost 44% of respondents purchase fresh fruits and vegetables from local farmers, whereas 56.2% do not.

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School Nutrition Managers
- Training attended most often by respondents related to healthy menu choices was training by SN director (63.1%), state agency training (52.2%), and SNA conference (50.7%).
- Respondents indicated the training most often provided to their SN staff related to healthy menu choices was food safety (93.1%), standardized recipes (86.6%), kitchen safety (79.6%), and regulations (73.1%).

Survey Factor Analysis
School Nutrition Directors
- Exploratory factor analyses were conducted on the statements regarding practices, perceptions and barriers for both SN directors and SN managers. Results from the study indicated there were 10 factors that contribute to providing healthy menu choices among SN directors, which included promotional practices, student benefits, operational practices, wellness policy practices, student-focused practices, partnerships and resources, and positive program environment. Mean scores for SN directors who purchase local fresh fruits and vegetables were significantly higher than SN directors who do not purchase local fresh fruits and vegetables for all 10 factors. This finding suggests that SN programs that purchase fresh fruits and vegetables from local farmers are more likely than SN programs that do not purchase fresh fruits and vegetables from local farmers to recognize the importance of and to be currently providing healthy menu choices, thereby increasing the health benefits for students and establishing a supportive wellness environment in schools and with stakeholders.
- Mean scores for SN directors who are HUSSC Award recipients were significantly higher than SN directors who are not HUSSC Award recipients for six factors. This finding suggests that SN programs that have received the HUSSC Award are more likely than SN programs that have not received the HUSSC Award to recognize the importance of and also to be currently providing healthy menu choices to students, thereby gaining support from stakeholders through their operational, promotional, and wellness efforts.

School Nutrition Managers
- Results from the study also indicated there were four factors that contribute to providing healthy menu choices among SN managers. These include student-focused practices, healthy environment, and operational practices. SN managers believed that in order to successfully provide healthy menu choices in their SN cafeterias, they must focus on the students and create a healthy environment to obtain the support of their stakeholders.

PRACTICAL USE OF THIS INFORMATION
- Training modules could be developed to assist SN professionals in developing and incorporating healthier menu choices into their programs. Modules could be developed around the 10 healthy menu choice factors among SN directors identified in this study, to include promotional practices, student benefits, operational practices, wellness policy practices, student-focused practices, positive program environment, and partnerships and resources. The materials should provide strategies for overcoming possible barriers, such as recipe development and students’ perceptions.
- Additional training materials could be developed to assist SN directors in assessing their current local wellness policies, menus, nutrition education, and physical education in order to explore attaining the HUSSC Award.
- Educational materials could be developed to assist SN managers interested in finding creative ways to engage their customers and gain the support of their SN staff in relation to providing healthy menu choices.


Information about this and other topics may be obtained by contacting the
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