

**Practices and Perceptions of School Nutrition
Professionals Toward Obtaining the
HealthierUS School Challenge Award**



National Food Service Management Institute
The University of Mississippi
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**National Food Service Management Institute
The University of Mississippi**

Building the Future Through Child Nutrition

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PURPOSE

The purpose of the National Food Service Management Institute is to improve the operation of child nutrition programs through research, education and training, and information dissemination.

MISSION

The mission of the National Food Service Management Institute is to provide information and services that promote the continuous improvement of child nutrition programs.

VISION

The vision of the National Food Service Management Institute is to be the leader in providing education, research, and resources to promote excellence in child nutrition programs.

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**PRACTICES AND PERCEPTIONS OF SCHOOL NUTRITION PROFESSIONALS
TOWARD OBTAINING THE HEALTHIERUS SCHOOL CHALLENGE AWARD**

EXECUTIVE SUMMARY

In 2004, the United States Department of Agriculture (USDA) established the HealthierUS School Challenge (HUSCC) award, a voluntary school nutrition (SN) and wellness initiative, to recognize schools participating in the National School Lunch Program (NSLP) that have created a healthier school environment through the promotion of nutrition and physical activity. There are four HUSCC award levels: Bronze, Silver, Gold, and Gold Award of Distinction. Each level has certain criteria that reflect the recommendations from the 2005 Dietary Guidelines for Americans and the Institute of Medicine. To qualify for the HUSCC award, schools must submit a formal application; meet menu criteria for fruits, vegetables, whole grains, and milk; and submit a local school wellness policy. The USDA offers incentives for HUSCC award recipients, which include a monetary award for each level, an award plaque, and an award banner to display at each recipient school. It is likely many SN programs that meet the criteria for the HUSCC award do not apply. Therefore, the purpose of this study is to explore the impact of obtaining the HUSCC award on SN programs participating in the NSLP (USDA, 2013).

This project consisted of a two-phase research design. Phase I included two site visits to school districts that had received HUSCC awards and an expert panel meeting with six SN professionals with experience in successfully applying for a HUSCC award. The objective of Phase I was to identify the impact of obtaining the HUSCC award on SN programs, with a focus on practices and perceptions for the purpose of developing an online national survey. In Phase II,

a draft online quantitative survey instrument was created from data gathered during the expert panel. The draft survey, which consisted of 25 multiple-choice questions, was evaluated via e-mail by a review panel of eight SN professionals for readability and clarity. Afterward, survey revisions were made to reflect the panel's comments. The final version of the survey was uploaded into Survey Monkey.

The sample for the survey portion of Phase II consisted of SN directors from 266 public school districts representing all seven USDA regions. All SN directors in the sample were in school districts that had received a HUSSC award. One hundred and thirty nine survey recipients responded to the survey, for a response rate of 52.2% ($n = 139$). Respondents were distributed throughout the seven USDA regions, with the largest percentage coming from the Southeast (22.8%) and the smallest percentage coming from the Mid-Atlantic (7.9%). Survey results provided insight into the practices, perceptions and barriers of SN professionals that have received HUSSC awards. Those insights were as follows:

- The USDA HUSSC Web site (89.1%) and state agency resources (81.9%) were the most common sources of support used to prepare for a HUSSC application.
- Bronze was the most frequently received HUSSC award (56.8%), while the gold was the least frequently received (19.4%).
- School nutrition directors (93.5%) and SN staff (79.1%) were the individuals within school districts that were most frequently involved in preparing the HUSSC application.
- The vast majority of school districts (91.4%) made changes to their menus as part of the HUSSC application process, and those changes most often included more beans/legumes (80.8%) and more whole grains (77.6%).

- A little less than half (43.2%) of respondents reported they would not be applying for a higher level HUSSC award, and the most frequent reasons given were “currently have the highest level award” (40.9%) and “student participation” (38.6%).
- When asked if they would be applying for a HUSSC award at the middle or high school level, 43.9% of respondents said no; the most common reason given was “à la carte foods” (45.7%).
- Most recipients agreed that “the HUSSC award status increases recognition among other SN programs” (3.51 ± 0.58); however an “increase in cost” (3.13 ± 0.72) for SN programs and the “application processes” (3.07 ± 0.74) were commonly cited as perceived barriers to obtaining a HUSSC award.

Student participation is likely a barrier to pursuing a higher level HUSSC award, because many schools do not meet the higher participation levels required for the higher award levels. The HUSSC criteria for competitive foods are the same for all grade levels, and sales of these items are usually higher in middle or high schools compared to elementary schools. Therefore, SN directors may not want to apply for the HUSSC award at higher grade levels, because they perceive that à la carte sales will decrease.

In summary, the results of this research demonstrate that the HUSSC award process positively affects SN programs. However there is much opportunity to improve in the process, specifically increasing the percentage of school districts that apply for higher level awards and awards at higher grade levels. More research is needed to determine how to simplify the application process and how to make this process cost effective. Additionally, SN directors will have to identify ways to increase student participation and secure the support of school administration regarding SN program involvement in the HUSSC process.

INTRODUCTION

The increasing rates of childhood obesity are of great concern when it comes to the health of children in the United States. Within the past 20 years, the prevalence of obesity among children has more than doubled (Vanderhook, 2009). In 2001, the U.S. Surgeon General released a report, *Call to Action to Prevent and Decrease Overweight and Obesity*, with the intention of improving the health of children by bringing about change in schools. This report identifies schools as an important environment to begin improving access to healthy foods, providing opportunities for physical activity, and providing children with both nutrition and physical education (Moag-Stahlberg, Howley, & Luscri, 2008). The United States Department of Agriculture (USDA) believes that schools can take on a leadership role in helping students make healthier lifestyle choices. Since then, many schools have improved their school nutrition (SN) environment, increased opportunities for physical activity, and provided healthier menu choices to their students (USDA, 2013).

In 2004, the USDA established the HealthierUS School Challenge (HUSSC) award, a voluntary SN and wellness initiative, to recognize schools participating in the National School Lunch Program (NSLP) who have created a healthier school environment through the promotion of nutrition and physical activity. The goal of the HUSSC is to improve the health of children. In order to meet this goal, the USDA identified schools that have made changes to improve the quality of the foods served, provide students with nutrition education, and provide students with physical education and opportunities for physical activity. There are four HUSSC award levels: Bronze, Silver, Gold, and Gold Award of Distinction. Each level has certain criteria schools must meet. The HUSSC criteria reflects the recommendations from the 2005 Dietary Guidelines for Americans and the Institute of Medicine, emphasizing the servings and variety of fruits and

vegetables, whole grains, fat-free or low-fat milk and milk products; the types of nutrition education to be offered; the amount of physical education/activity per week; and the implementation of a school's wellness policy (USDA, 2013).

The guiding principles for the HUSSC award are as follows:

- Schools will commit to meeting the HUSSC criteria for four years.
- Schools will meet all the School Meals Initiative (SMI) requirements.
- Schools will serve reimbursable meals that reflect good menu planning principles.
- Schools will ensure students can select a meal that meets HUSSC criteria.
- A significant portion of the menu items planned for the HUSSC criteria should be routinely selected by the students.

To qualify for the HUSSC award, schools will need to submit a formal application; meet menu criteria for fruits, vegetables, whole grains, and milk; and submit a local school wellness policy (Michigan Department of Education, 2010). The USDA offers incentives for HUSSC award recipients, including a monetary award for each level, an award plaque, and an award banner to display at each recipient school (USDA, 2013). It is likely many SN programs that meet the criteria for the HUSSC award do not apply. Therefore, the purpose of this study is to explore the impact of obtaining the HUSSC award on SN programs participating in the NSLP.

METHODOLOGY

Research Overview

The purpose of this study was to explore the impact of obtaining the HealthierUS School Challenge (HUSCC) award on school nutrition (SN) programs participating in the National School Lunch Program (NSLP). To achieve this purpose, a two-phase research design was utilized. Phase I included two site visits to school districts that had received HUSCC awards and an expert panel meeting with representation from SN directors and state agency staff that had experience successfully applying for a HUSCC award. The objective of Phase I was to identify the impact of obtaining the HUSCC award on SN programs, with the focus on practices and perceptions for the purpose of developing an online national survey. In Phase II, the online survey was sent to SN directors in districts that had received HUSCC awards.

Phase I

Site Visits

Two SN programs that had previously received HUSCC awards were selected from a list of school districts identified by United States Department of Agriculture (USDA, 2013). Each site visit included an observation of the SN program operation and an interview with the SN director (Figure 1).

Figure 1

Interview Questions

1. Which of the HealthierUS School Challenge (HUSCC) Awards did your schools receive?
2. Would you be willing to give us a brief overview of your experience?
3. How long was the process of obtaining HUSCC award?
4. Who was involved in the HUSCC process? How?
 - a. Did you develop a team? Who was involved in the team?
5. Did you make any changes to your menu? What?
 - a. SN Program? School? What?
6. What resources did you use to prepare you to take the HUSCC Challenge?
7. Did you attend any type of training to prepare you to take the HUSCC Challenge?
8. What type of training did you provide SN staff to prepare them to take the HUSCC Challenge?
9. Did you encounter any barriers during the HUSCC process? How did you overcome those barriers?
10. Several of your schools received a silver award. Do you plan to submit an application for a higher award level? (Why/Why not?)
 - a. Were there any barriers to obtaining a higher award level in these schools?
11. Several of your schools received a bronze award. Do you plan to submit an application for a higher award level? (Why/Why not?)
 - a. Were there any barriers to obtaining a higher award level in these schools?
12. You have HUSCC awards only for elementary schools. Do you plan to submit an application for your middle and high schools? (Why/Why not?)
 - a. Are there any barriers to obtaining a HUSCC award at the middle and high school levels? What?
13. Did you promote your HUSCC award status to stakeholders? How? Community?
14. What feedback have you received from your staff since obtaining the HUSCC award?
 - a. Students? Parents? School administrators/teachers?
15. What benefits has the HUSCC award status offered your SN program?
16. What was your biggest challenge to obtaining the HUSCC award? Why?
17. Do you have any advice for other SN professionals interested in obtaining the HUSCC award?

Expert Panel Session

Phase I of the study also consisted of a one-and-a-half day expert panel session with SN professionals. State agency child nutrition directors were contacted for recommendations on state agency staff and SN directors who had either worked with SN programs or were in school districts that had received HUSCC awards. From this pool, five SN directors and one state

agency representative agreed to participate on the expert panel. The invitations included an explanation of the study, the specific objectives of the expert panel session, contact information for questions and concerns, and an informed consent statement further outlining details of study participation. Confirmation letters including additional information regarding the upcoming session and travel arrangements were mailed to expert panel members who agreed to participate.

Prior to conducting the expert panel session, researchers at the National Food Service Management Institute, Applied Research Division (NFSMI, ARD) developed discussion topics for the expert panel session based on research objectives, site visits, and previous research. A listing of those discussion topics is provided in Figure 2 below.

Figure 2

Expert Panel Discussion Topics

Practices

Think back to when you decided to embark on the HealthierUS School Challenge. Why did you choose to take the challenge? (Why do you think SN directors choose to take the challenge?)

Which of the HUSSC Awards did your school(s) receive?

Gives us an overview of your experience. (SN Directors, State Agency, & Training Specialist)

How long was the process of obtaining the HUSSC Award? (How long have SN directors said that it has taken them to go through the entire process?)

Who was involved in the HUSSC process? How?

What role did you have related to HUSSC process?
SN director? State agency? SN manager?

Did you develop a team? Who was involved in the team?

Did you make any changes to your menu? What? (What are some of the common menu changes you have seen?)

Who was involved in changing your menu?

Did you make any other changes within your SN program? What?

Were there any changes made within the school? What?

What type of nutrition education do you offer students? (activities during a subject, curriculum as part of the health class)

Who is involved with the nutrition education?

How is it being offered? (Is the curriculum being tied to what is being served in the cafeteria?)

Are you incorporating the tasting of new food items?

What type of physical education/activity does the school offer students?
Who is involved?

Did you promote your HUSSC award status to your stakeholders (students, staff, administrators, parents)? How?
Promotion within the community?

What feedback have you received from your SN staff? (HUSSC, menus, nutrition education)
Students? Parents? School administrators/teachers?

Did you contact your state agency during the HUSSC application process? Describe your experience.

For state agency, do you contact your regional USDA office when reviewing HUSSC applications? Describe your experience.

(Figure 2 continues)

(Figure 2 continued)

Expert Panel Discussion Topics

Perceptions

Several of you have bronze and/or silver HUSSC awards. Do you plan to submit an application for a higher award level? (Why/Why not?)

Several of you only have elementary HUSSC awarded schools. Do you plan to submit an application for your middle and high schools? (Why/Why not?)

What was the SN staff's perception/reaction when you chose to embark on the HealthierUS School Challenge?

Teachers/Administrators?

What benefits has the HUSSC award status offered your SN program?

What are the advantages of obtaining the HUSSC award?

Advantages for students?

Advantages for schools?

Why do you believe taking the HealthierUS School Challenge is important?

What is your future plan related to the HealthierUS School Challenge?

Updates? Submission? Mentoring?

Barriers

Did you encounter any challenges/barriers during the HUSSC process? Which ones?

How did you overcome those barriers?

Which one was your biggest challenge? Why?

What types of challenges/barriers have you seen other SN programs experience?

Do you know how they addressed those issues?

State Agency - What are the most common issues/errors you are experiencing with HUSSC applications?

How can SN directors overcome these issues?

What are the barriers to obtaining a higher award level?

What are the barriers to obtaining a HUSSC award at the secondary (middle/high schools) level?

What type of financial impact have you experienced from being a HUSSC awarded school?

How did you address these issues?

(Figure 2 continues)

(Figure 2 continued)

Expert Panel Discussion Topics

Training/Resources

What resources did you use to prepare for the HealthierUS School Challenge?

Did you attend any type of training related to HUSSC?

Which ones?

Were they helpful?

Would you recommend to other SN professionals?

What type of training did you provide SN staff to prepare them to take the challenge?

What delivery methods did you use?

State agency – What type of training do you provide SN directors?

What types of resources or training would assist SN professionals who want to prepare for the HealthierUS School Challenge?

List three things that SN professionals interested in obtaining the HUSSC award should know or be prepared for. Advice/Recommendations

List three things that SN professionals interested in advancing to a higher award level should know or be prepared for. Advice/Recommendations

The expert panel session was conducted at NFSMI, ARD, located on the campus of the University of Southern Mississippi in Hattiesburg, Mississippi. The agenda established for the expert panel was designed to address the issues outlined in the research objectives so that discussion supported the development of a survey to be utilized in Phase II of the study. Throughout the session, participants were asked semi-structured, open-ended questions related to the research objectives. A structured approach was employed to keep the discussion focused on the selected topics. The expert panel was moderated by one researcher, while an additional researcher captured participant comments on a computer. Toward the end of the session, after all questions were discussed, the moderator summarized responses, and participants were asked to verify the accuracy of the depiction of the discussion summation. Afterwards, the responses

recorded during the expert panel were incorporated into statements that were utilized to develop the quantitative survey instrument.

Phase II

Survey Development

The online quantitative survey instrument for Phase II of the study was created in Survey Monkey from data gathered during the expert panel session in Phase I. The survey consisted of 25 questions subdivided into three sections. Section one included 13 questions regarding practices toward obtaining the HUSSC award. Section one questions were multiple choice in format, eight of which were “select all that apply” and two that were “yes or no.” Section two contained five questions regarding practices toward obtaining the HUSSC award. Three of the questions in section two were multiple choice, one of which was “select all that apply” and two that were “yes or no.” For the remaining two questions in section two, participants were asked to indicate their level of agreement with statements regarding perceptions and barriers towards obtaining the HUSSC award. The response scale was a 4-point Likert-type scale ranging from 4 (*strongly agree*) to 1 (*strongly disagree*). Section three included five multiple-choice, demographic questions about the SN director and the SN program, such as certification status and student enrollment.

Review Panel

For the purposes of evaluating the readability and clarity of the survey created in Phase II, a review panel was assembled. Individuals who were invited to participate in the review panel were expert panel members and SN directors who were recommended by state agencies, but who were not able to participate in the expert panel session. Review panel members were sent an e-mail which included a draft of the survey, a survey evaluation form, and a detailed description of

the purpose of the study. The panel was asked to evaluate each section of the draft survey and to provide comments on the form provided. Eight panel members returned completed evaluation forms. Afterward, survey revisions were made to reflect the panel's comments. The final version of the survey was uploaded into Survey Monkey.

Sample and Survey Distribution

The sample for the survey portion of Phase II consisted of SN directors from 266 public school districts representing all seven of the USDA regions. All SN directors in the sample were in school districts that had received a HUSSC award. School nutrition directors were sent an e-mail invitation requesting recipient participation with the following information: assurances of confidentiality of responses, the purpose of the survey, instructions for completing the survey, and a hyperlink for recipients to access to the survey. One week after the survey invitation was e-mailed, a follow-up e-mail was sent to all original recipients encouraging them to complete the survey if they have not already done so.

Informed Consent

The Institutional Review Board at The University of Southern Mississippi reviewed and approved the protocol for Phase I and Phase II of the study.

Data Analysis

The statistical package SPSS Version 20 for Windows was utilized to analyze survey data. Descriptive statistics included means, standard deviations, and frequencies of total responses. Inferential statistics, including t-tests, One-way ANOVA, and Chi-Square tests, were run between variables in sections one and two of the survey, however, since no significant relationships were observed, these tests were not reported in the following section.

RESULTS AND DISCUSSION

Demographics

One hundred and thirty-nine survey recipients responded to the survey, for a response rate of 52.2% ($n = 266$). The majority of respondents were school nutrition (SN) certified (Table 1), and a little more than half had worked in SN programs for more than 20 years (Table 2). Respondents were distributed throughout the seven USDA regions, with the largest percentage coming from the Southeast (22.8%) and the smallest percentage coming from the Mid-Atlantic (7.9%) (Table 3). Approximately one-third of respondents were from school districts with 2,800 to 9,999 in student enrollment, while another third were from districts with 2,799 or less in student enrollment (Table 4).

Table 1

School Nutrition Director Certification Status (N = 228)^a

Certifications	N	Percentages
School Nutrition Association certified	67	48.6%
School Nutrition Specialist credential	39	28.3%
Registered Dietitian	38	27.5%
State agency certified	33	23.9%
Licensed Dietitian/Nutritionist	24	17.4%
Not applicable	20	14.5%
American Culinary Federation certified	4	2.9%
Dietetic Technician Registered	3	2.2%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 2

Years the Director has Worked in School Nutrition Programs (N = 138)

Years	N	Percentages
Less than 1 year	5	3.60%
1 - 5 years	16	11.50%
6 - 10 years	20	14.40%
11 - 15 years	23	16.50%
16 - 20 years	23	16.50%
Greater than 20 years	51	36.70%

Table 3

USDA Region of the School District (N = 138)

Region	N	Percentages
Southeast	40	28.8%
Mountain Plains	22	15.8%
Southwest	21	15.1%
Northeast	18	12.9%
Midwest	17	12.2%
Mid-Atlantic	11	7.9%

Table 4

School District Enrollment (N = 138)

Enrollment	N	Percentages
2,799 or less	45	32.40%
2,800 to 9,999	46	33.10%
10,000 to 19,999	17	12.20%
20,000 to 44,999	16	11.50%
45,000 to 64,999	5	3.60%
65,000 or greater	9	6.50%

HealthierUS School Challenge Award Practices

When recipients were asked what resources were used to prepare for the HUSSC award, the most common answers selected were USDA HUSSC Web site (89.1%) and state agency resources (81.9%), while the least common selection was Webinars (22.5%) (Table 5). In-service (78.3%) and menu planning (73.9%) were identified as the most common methods of providing HUSSC-related training to SN staff (Table 6).

Table 5

Resources Used to Prepare for the HUSSC Award (N = 460)^a

Resources	N	Percentages
USDA HUSSC Web site	123	89.1%
State agency resources	113	81.9%
Education session at conferences	54	39.1%
Networking with other HUSSC recipients	48	34.8%
SNA resources	47	34.1%
NFSMI	44	31.9%
Webinars	31	22.5%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 6

Training Provided to School Nutrition Staff to Prepare Them for the HUSSC Award (N = 292)^a

Resources	N	Percentages
In-service	108	78.3%
Menu planning	102	73.9%
Standardized recipes	82	59.4%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Respondents were asked which level of HUSSC award their schools had received. Bronze was the most frequently received award (56.8%), while the gold was the least frequently received (19.4%) (Table 7). In most school districts (56.1%), less than five schools received a

HUSSC award (Table 8). The most common time frames for completing the HUSSC application process were 2 - 4 months (34.5%) and 5-7 months (26.6%) (Table 9). School nutrition directors and SN staff (93.5% and 79.1%, respectively) were the positions most frequently involved in preparing for a HUSSC award, while schools boards (6.5%) were the entity involved the least (Table 10). The most prevalent roles of SN directors in the HUSSC award process were “coordinating with staff and administration” (93.5%) and “leading efforts to meet HUSSC criteria” (79.1%) (Table 11).

Table 7

Level of HUSSC Awards Received (N = 183)^a

Level of HUSSC Awards	N	Percentages
Bronze	79	56.8%
Silver	45	32.4%
Gold with Distinction	32	23.0%
Gold	27	19.4%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 8

Number of Schools in the District that Received the HUSSC Award (N = 139)

Number of Schools	N	Percentages
Less than 5	78	56.1%
5 - 10	25	18.0%
11 - 15	12	8.6%
16 - 20	8	5.8%
21 - 25	3	2.2%
Greater than 25	13	9.4%

Table 9

Time Needed to Complete the HUSSC Application Process (N = 139)

Months	N	Percentages
Less than 2 months	23	16.5%
2 - 4 months	48	34.5%
5 - 7 months	37	26.6%
8 months	8	5.8%
11 - 12 months	7	5.0%
Over a year	16	11.5%

Table 10

Individuals Involved in Preparing for the HUSSC Award Process (N = 560)^a

Individuals	N	Percentages
School nutrition director	130	93.5%
School nutrition staff	110	79.1%
Principals	105	75.5%
Teachers	65	46.6%
State agency staff	55	39.6%
School district administrators	44	31.7%
Students	27	19.4%
Vendors	15	10.8%
School board	9	6.5%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 11

Role of School Nutrition Directors in Preparing for the HUSSC Award Process (N = 655)^a

Individuals	N	Percentages
Coordinate with staff and administration	123	93.5%
Lead the efforts to meet HUSSC criteria	120	79.1%
Implement changes to meet HUSSC criteria	119	31.7%
Train staff to meet HUSSC criteria	106	19.4%
Delegate responsibilities to staff	99	10.8%
Promote HUSSC efforts to gain stakeholder support	88	6.5%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Most school districts (69.8%) developed a team to assist in the HUSSC application process (Table 12), and most HUSSC teams included the SN director (98.2%), SN staff (80.4%), a physical education teacher (68.0%), and a principal (55.7%) (Table 13). The vast majority of school districts (91.4%) made changes to their menus as a part of the HUSSC award process (Table 14), and those changes most often included more beans/legumes (80.8%) and more whole grains (77.6%) (Table 15).

Table 12

Development of a Team to Assist in the HUSSC Application Process (N = 138)

Response	N	Percentages
Yes	97	69.8%
No	41	29.5%

Table 13

Members of the HUSSC Award Process Team (N = 353)^a

Individuals	N	Percentages
School nutrition director	90	92.8%
School nutrition staff	78	80.4%
Physical education teacher	66	68.0%
Principal	54	55.7%
Wellness committee	36	37.1%
Nutrition education teacher	29	29.9%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 14

Menu Changes Made During the HUSSC Award Process (N = 138)

Response	N	Percentages
Yes	127	91.4%
No	11	7.9%

Table 15

Changes Made to the Menu for the HUSSC Award Process (N = 486)^a

Changes	N	Percentages
More beans/legumes	101	80.8%
More whole grains	97	77.6%
New recipes	58	46.4%
More vegetables	57	45.6%
More fruits	50	40.0%
Offer fresh fruit	39	31.2%
Offer fresh vegetables	36	28.8%
Less à la carte foods	30	24.0%
Remove competitive foods	18	14.4%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Nutrition education was most often offered to students during core curriculum classes (74.6%) and physical education classes (71.7%) (Table 17). Nearly all school districts (95.0%) promoted the HUSSC award status to stakeholders, most frequently through banners in school

(83.1%) and local media (71.5%) (Tables 17 and 18). The most common responses received by SN programs as a result of achieving HUSSC award status were “pride from principals/administrators” (79.0%) and “validation and recognition of school foodservice” (74.6%) (Table 19).

Table 16

How Nutrition Education was Offered to Students (N = 336)^a

Nutrition Education Method	N	Percentages
Core curriculum class	103	74.6%
Physical education class	99	71.7%
Taste testing activity	77	55.8%
SN department instruction	57	41.3%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 17

Promotion of HUSSC Award Status to Stakeholders (N = 138)

Response	N	Percentages
Yes	132	95.0%
No	6	4.3%

Table 18

How HUSSC Award Status was Promoted to Stakeholders (N = 588)^a

Changes	N	Percentages
Banners in school	108	83.1%
Local media	93	71.5%
Board meeting	85	65.4%
Web site	82	63.1%
Menus	81	62.3%
District award ceremony	78	60.0%
Student assembly	37	28.5%
PTO	24	18.5%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 19

Response Received as a Result of HUSSC Award Status (N = 529)^a

Responses	N	Percentages
Made principals/administrators proud	109	79.0%
Validation and recognition of school foodservice	103	74.6%
Raised awareness of SN program in the community	95	68.8%
Empowered SN staff	94	68.1%
Enhanced professionalism of SN staff	69	50.0%
Excited students	59	42.8%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Perceptions

A little less than half (43.2%) of respondents reported they would not be applying for a higher level HUSSC award (Table 20), and the most frequent reasons given were “currently have the highest level award” (40.9%), “student participation” (38.6%), and “physical education” (22.7%) (Table 21). When asked if they would be applying for a HUSSC award at the middle or high school level, 43.9% of respondents said “no” (Table 22); the most common reasons given were “à la carte foods” (45.7%) and “student participation” (32.6%) (Table 23).

Table 20

Plans for Submitting HUSSC Application for a Higher Level Award (N = 138)

Response	N	Percentages
Yes	78	56.1%
No	60	43.2%

Table 21

The Reasons for Not Submitting a HUSSC Application for a Higher level Award (N = 53)^a

Reasons	N	Percentages
Currently have the highest level award	18	40.9%
Student participation	17	38.6%
Physical education	10	22.7%
À la cart foods	4	9.1%
Beverages	3	6.8%
Nutrition education	1	2.3%

^aParticipants were allowed to check more than one option; total exceeds 100%.

Table 22

Plans for Submitting HUSSC Application for Either Middle or High School Level (N = 138)

Response	N	Percentages
Yes	77	55.4%
No	61	43.9%

Table 23

The Reasons for Not Submitting a HUSSC Application for Either Middle or High School Level (N = 76)^a

Reasons	N	Percentages
À la carte foods	21	45.7%
Student participation	15	32.6%
Physical education	13	28.3%
Beverages	12	26.1%
Currently have the highest level award	8	17.4%
Nutrition education	7	15.2%

^aParticipants were allowed to check more than one option; total exceeds 100%.

When asked to rate their level of agreement with 10 statements regarding their perceptions towards obtaining a HUSSC award (4 = *strongly agree* and 1 = *strongly disagree*), recipients rated “the HUSSC award status increases recognition among other SN programs” the highest (3.51 ± 0.58) and “the HUSSC award status increases student participation” the lowest (2.45 ± 0.75) (Table 24). When recipients were asked to rate their level of agreement with 10 statements regarding their perceptions toward barriers to obtaining a HUSSC award,

(4 = *strongly agree* and 1 = *strongly disagree*), recipients rated “increase in cost” the highest (3.13 ± 0.72) and “beans/legumes” the lowest (2.47 ± 0.84) (Table 25).

Table 24

Mean Agreement Ratings and Standard Deviations for School Nutrition Directors’ Perceptions Toward Obtaining the HUSSC Award

Statement	N	Mean^a	SD
The HUSSC award status increases recognition among other SN programs.	136	3.51	0.58
The HUSSC award status improves the perception of school lunch.	136	3.31	0.70
The HUSSC award status enhances school pride.	136	3.26	0.66
The HUSSC award status increases positive feedback from the community.	137	3.25	0.72
The HUSSC award status improves stakeholder support.	136	3.24	0.73
The HUSSC award status increases SN staff morale.	136	3.21	0.67
The HUSSC award status improves communication with stakeholders.	136	3.08	0.67
The HUSSC award status increases student selection of healthier food items.	137	2.87	0.73
The HUSSC award status increases student fruit and vegetable intake.	135	2.78	0.75
The HUSSC award status increases student participation.	137	2.45	0.75

^a The response scale was a 4-point Likert-type scale ranging from 4 (*strongly agree*) to 1 (*strongly disagree*).

Table 25

School Nutrition Directors' Mean Agreement Ratings and Standard Deviations Regarding Barriers to Obtaining the HUSSC Award

Statement	N	Mean^a	SD
Increase in cost	136	3.13	0.72
Application process	135	3.07	0.74
Time constraints	137	2.88	0.77
Competitive foods	136	2.87	0.78
Physical education requirement	135	2.72	0.83
Student participation	136	2.71	0.75
Loss of revenue	136	2.64	0.84
Nutrition education requirement	135	2.59	0.77
Whole grain requirement	137	2.58	0.88
Bean/legume requirement	135	2.47	0.84

^a The response scale was a 4-point Likert-type scale ranging from 4 (*strongly agree*) to 1 (*strongly disagree*).

CONCLUSIONS AND APPLICATIONS

The results of this study provide several insights into the HealthierUS School Challenge (HUSCC) award process from the perspective of award recipients. The most common practices shared by HUSCC award recipients include:

- Utilizing the United States Department of Agriculture Web site and state agency resources to prepare for the award;
- Using in-services to train school nutrition (SN) staff on menu planning and standardized recipes;
- Achieving the bronze award level;
- Receiving awards in less than five schools in a district;
- Completing the application process in two to seven months;
- Creating a HUSCC team made up of the SN director, SN staff, principals, and the physical education teacher;
- School nutrition director serving as HUSCC team leader;
- Adding more beans/legumes and whole grains to menus;
- Providing nutrition education in core curriculum classes, physical education classes, and taste testing activities; and
- Promoting HUSCC award status through banners in schools, local media, board meetings, websites, menus, and district awards ceremonies.

These common practices provide useful information for future HUSSC award applicants on how to engage in the award process and what to expect, such as:

- Apply for the bronze first, and take small steps towards success.
- Do not try to achieve HUSSC awards for every school in a district at once; instead, apply for one or a few schools first.
- Expect the application process to take anywhere from two to seven months, and plan accordingly.
- Use in-services to train SN staff on menu planning and standardized recipes.
- Create a HUSSC team with the SN director, SN staff, the principal, and the physical education teacher as the primary/base members.
- As SN director, plan to be the HUSSC team leader.
- When adjusting menus, make sure beans/legumes and whole grains meet the required standards.
- When looking for venues to provide nutrition education consider core curriculum classes, physical education classes, and testing activities.
- When looking for ways to promote HUSSC award status, consider banners in the school, local media, board meetings, Web sites, menus, and district awards ceremonies.

Almost half of HUSSC award recipients will not submit for a higher level award. When asked why, the most common responses given were “currently have the highest level award,” “student participation,” and “physical education.” Student participation is likely a barrier, because many schools do not meet the higher participation level required for the higher award

levels. As for higher physical education requirement, this may be an obstacle if the HUSSC applicant is not receiving adequate support from school administration.

Almost half of HUSSC award recipients will not submit a HUSSC application for either a middle or high school level. When asked why, the most common responses given were “à la carte foods,” “student participation,” and “physical education.” The HUSSC criteria for competitive foods are the same for all grade levels, and sales of competitive foods are usually higher in middle or high schools than in elementary schools. Therefore, SN directors may perceive that when the HUSSC criteria for competitive foods are applied at the higher grade level schools, à la carte sales will decrease. As for physical education, the HUSSC criteria changes, but is not necessarily more stringent at the middle and high school level. Therefore, physical education may be an obstacle if the HUSSC applicant is not receiving adequate support from middle school and high school administration.

Achieving a HUSSC award positively affects school districts in the following ways:

- Increases recognition among other SN programs,
- Improves the perception of school lunch,
- Validates and recognizes SN,
- Enhances school pride,
- Makes principals/administrators proud,
- Raises awareness of the SN program in the community,
- Increases positive feedback from the community,
- Improves stakeholder support,
- Increases SN staff morale,
- Empowers SN staff, and

- Improves communication with stakeholders.

This data demonstrates that the HUSSC award program is meeting an intended objective, by recognizing schools participating in the National School Lunch Program that have created a healthier school environment through the promotion of nutrition and physical activity.

Many HUSSC award recipients do not believe that achieving a HUSSC award positively affected several items. Those items included:

- Student selection of healthier food items,
- Student fruit and vegetable intake, and
- Student participation.

These findings are not surprising, since many children are hesitant to try new foods.

Methods to overcome these barriers include:

- Involve students in the process of selecting new recipes and menu items;
- Conduct student taste testing of new recipe and/or menu items;
- Teach students about the new recipe/menu item (geographic origin, cultural significance, and nutritional values) before offering the new food item; and
- Involve students in preparing the new recipe/menu item.

Perceived barriers to obtaining a HUSSC award are an “increase in cost” and “the application process.” Each of these perceived barriers requires further research to identify if there is actually a problem, and if so, to identify the specific variable causing the problem and the best method to resolve the problem.

In summary, the results of this research demonstrate that the HUSSC award process positively affects SN programs. However there is much opportunity to improve on the process; specifically, increasing the percentage of schools districts that apply for higher level awards and

awards at higher grade levels. More research is needed to determine how to simplify the application process and how to make this process cost effective. Additionally, SN programs will have to find ways to increase participation numbers while gaining the support of school administration for the HUSSC process.

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