

2011 Child Nutrition Showcase Abstracts

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.

The Ability of Menu Planning Approaches and Credentialing of Menu Planners to Meet SMI Nutrient Guidelines for National School Lunches and Breakfasts

Ethan A. Bergman, PhD, RD, FADA; Linda Cashman, MS, RD; Tim Englund, PhD
Central Washington University, Ellensburg, Washington

Purpose/Objective

The purpose of the study was to define the characteristics of schools, menu planning methods used, and the credentials of menu planners that were best able to meet School Meal Initiative (SMI) standards within the National School Lunch (NSLP) and Breakfast programs (BP).

Method

The study used SNDA-III data gathered during the 2004-2005 school year from a nationally representative sample of 398 public schools in the 48 contiguous states. Questionnaires answered by the School Food Authorities (SFA) in the representative sample of schools provided the data for this investigation. The three menu planning methods used were: 1. Traditional food-based menu planning method (TMP); 2. Enhanced food-based menu planning method (EMP); and 3. Nutrient Standard Menu Planning method (NSMP).

Results

Analysis of SNDA III data revealed that of the three methods, the TMP was used most often in 193 schools serving 49.6% of the students nationally. Although none of the methods met all the SMI standards regularly, the TMP was best for meeting breakfast SMI standards and the EMP was best for meeting lunch SMI fat standards. Menu planning was reported to occur at the district level in 117 of 129 districts (90.7%). Registered Dietitians planned the menus for 39% of the schools (138 of 357 of reporting schools), while individuals whose highest certification level was an American School Food Service Association (ASFSFA) Certificate planned 11 % of the school menus (39 of 357 schools).

Applications to Child Nutrition Professionals

None of the three menu planning methods stood out as being excellent methods of meeting the SMI standards. The food-based methods (TMP and EMP) were slightly more effective than the nutrient analysis method (NSMP). There are many variables that may influence effectiveness of menu planning to meet SMI standards, including the training of the menu planner.

An Assessment of Perceived Changes in School Nutrition Programs by School Nutrition Directors as a Result of Following the HealthierUS School Challenge Program

Jennifer S. Brown BS; Carolyn M. Bednar, PhD., RD, LD, CFCS; Nancy M. DiMarco, PhD., RD, CSSD;
Priscilla L. Connors, PhD., RD
Texas Woman's University, Denton, Texas

Purpose/Objective

The study purpose was to assess perceived changes in school nutrition programs due to following the USDA's HealthierUS School Challenge (HUSCC) program. The objective was to determine perceived before and after changes in the average lunch participation rate, food cost, labor cost, nutrition education (minutes/week), physical education (minutes/week), and students' food/beverage choices according to the following: level of

award received from HUSSC, school nutrition directors' education level and credentials, and type of management and menu planning for the school nutrition program.

Method

A survey was developed by the researchers, validated by several food and nutrition professionals, converted to online format, and pilot tested with a convenience sample of 11 school nutrition directors. Following survey revisions, all school nutrition directors who had received HUSSC awards were invited to participate in the online survey (N = 149). Those who did not respond were mailed printed survey forms. Survey data were summarized and statistically analyzed using SPSS software.

Results

Seventy-four surveys were returned from twenty-nine states (49% response rate). Participants reported an average lunch participation rate of 72.7% and average price of \$1.89 for a full-paid lunch. The majority of respondents used food-based menu planning (84.6%) and were self-operated (91.0%). The three most frequent challenges reported were the increased food cost of implementing HUSSC, availability of whole grain items, and physical education requirements. Most frequently reported actions that led to success in receiving an award were support from school staff and administrators, training foodservice staff, and changing menus to meet HUSSC requirements. Half of the districts reported no difference in the average lunch participation rate since receiving an award, indicating that students were accepting the healthier menu choices.

Applications to Child Nutrition Professionals

Results of this study may encourage and assist school nutrition directors who are considering following guidelines of the HUSSC program or making other changes for a healthier school environment.

Exploring Trends and Barriers to Implementation of Branding Concepts in the School Nutrition Setting

Alexandra Castillo, Mary Frances Nettles, PhD, RD

National Food Service Management Institute, Applied Research Division, The University of Southern Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The objective of this study was to identify perceptions, practices, advantages, and barriers to implementation of branding concepts in school nutrition (SN) programs.

Method

Seven SN directors participated in an expert panel session to discuss trends and barriers to implementation of branding concepts in SN programs. The qualitative information from the expert panel was used to develop the survey and a national review panel evaluated the content, scales, readability, clarity, and flow of the instrument. Surveys were mailed to a random sample of 700 SN directors stratified by USDA regions. Statistical analyses included descriptive statistics, Cronbach's alpha, and one-way ANOVA with Tukey's post hoc test.

Results

A total of 208 surveys (29.7%) were returned. Results identified 10 factors that contribute to marketing the SN program which included SN staff involvement, advantages for students, stakeholders' support, development and implementation, and communication. School Nutrition directors reported "hardworking" (75.1%), "friendly" (73.7%), "healthy" (71.7%), and "successful" (65.4%) as the leading personality traits that describe their SN programs. The top marketing initiatives were posters/banners posted in the cafeteria, school specific color scheme in cafeteria, and consistent marketing district-wide. Advantages associated with marketing the SN program included student satisfaction with food choices, updated menu, increase in student participation, and increase in student selection of healthier food products. Barriers identified by participants included time commitment to plan and implement marketing initiatives, finding funds for marketing initiatives, SN staff's perception of increased workload, and utilization of existing facilities.

Applications to Child Nutrition Professionals

SN professionals can use this information to create a "brand" and focus promotional efforts on marketing initiatives that appeal to their customers. Results from this study will guide the development of a marketing resource that can assist SN professionals with developing, implementing, monitoring, and evaluating a marketing initiative in their SN program.

Determining Factors Impacting the Decision of Middle/Junior High School Students to Participate in the National School Lunch Program

Alexandra Castillo; Kristi Lofton, PhD, RD; Mary Frances Nettles, PhD, RD

National Food Service Management Institute, Applied Research Division, The University of Southern Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The purpose of this study was to identify issues associated with the participation and satisfaction of middle/junior high school students in the National School Lunch Program (NSLP).

Method

Focus group methodology was used to investigate the perceptions of middle/junior high school students regarding service and satisfaction with the school nutrition (SN) program and barriers with participation in the NSLP. The focus group discussions with SN professionals, which included SN directors and middle/junior high school SN managers, explored these same issues from their perspective. Four school districts in different

USDA regions were selected to host focus group discussions. Following the transcription of focus group discussions, researchers summarized and grouped responses into emerging themes.

Results

Results identified five primary reasons middle/junior high school students eat school lunch: food preference, hungry, no choice, convenience, and socialize. Focus group responses indicated four primary reasons middle/junior high school students do not eat school lunch: food quality, customer service, sanitation, and long lines. School Nutrition professionals suggested the primary reasons students do not choose to eat school lunch were students want to socialize, peer pressure/cool factor, and long lines. Responses from both focus group discussions revealed there is a disconnect between the perceptions of middle/junior high school students and SN professionals regarding students' school lunch experiences.

Applications to Child Nutrition Professionals

Participation in the NSLP begins to decline at the middle/junior high school level. Focusing on a customer service oriented approach by involving students can assist SN professionals in developing strategies to increase customer satisfaction and retain these customers once they enter high school. Results from this study will guide the development of a customer service survey to assess the perceptions of middle/junior high school students and measure factors affecting participation in and satisfaction with the NSLP.

Conducting a State-Wide Farm to School Survey Aims to Help Students "Grow Healthy" with School Foodservice

Sherri Cirignano, MS, RD, LDN; Michelle Brill, MPH; Alexandra Greci, MS, RD, LDN, CDE; Luanne Hughes, MS, RD; Kathleen Morgan, DMH, DTR
Rutgers University/Rutgers Cooperative Extension, Belvidere, New Jersey

Purpose/Objective

The objectives of this project were to develop and disseminate a state-wide survey to school foodservice professionals to assess their knowledge base of Farm to School (FTS) practices, their current activities in, readiness for and interest in implementation of FTS programs and their perceived barriers to this implementation.

Method

An online survey was developed as part of the Team Nutrition grant initiative, "Grow Healthy", and was approved by our Institutional Review Board. The survey was distributed to managers and directors of school foodservice through a variety of list-serves and school foodservice organizations including the state Department of Agriculture and the School Nutrition Association. The survey was open for 6 weeks. SurveyMonkey was utilized to gather and analyze the results.

Results

Survey respondents (N=222) consisted of those who were primarily in the age range of 41-60 years (67%), female (77.7%) and from a facility with on-site kitchens (69.3%). Results indicate that 41% of survey respondents are interested in pursuing FTS but don't know where to start. Their interest in the availability of ready-to-use produce was mixed. The majority (37.5%) had a strong preference for ready-to-use, with 26.5% somewhat and 29% very comfortable with handling uncut produce. Seven percent reported only being able to work with ready-to-use produce. Barriers to FTS were rated with the following being perceived as the most important barriers: liability concerns about food safety, pricing and quality of local food and farmer access.

Applications to Child Nutrition Professionals

The results of this survey indicate 1) that there is an interest in the school foodservice field to include fresh local produce in school meals and 2) where efforts need to be focused to achieve success in this area. Foodservice professionals from all states can apply this model to their own state/programs to initiate or enhance a statewide FTS program.

Monitoring the Implementation of Local Wellness Policies: Successes, Challenges and the Way Forward

Purpose/Objective

The USDA's Team Nutrition Local Wellness Demonstration Project documented implementation of Local Wellness Policies (LWP) by school districts and schools within those districts by describing implementation successes, barriers, and outcomes and identifying technical assistance needs.

Method

A total of 31 districts and 84 schools from California, Iowa, and Pennsylvania participated in the project. In Fall 2007 and Spring 2009, online surveys and onsite interviews were completed at district and school levels. All districts were combined into a single cohort for trend analysis, and all schools were combined into a single cohort for trend analysis. Statistical analyses were by chi square with significance set at $p=0.1$.

Results

Schools and districts were equally likely to indicate that they have taken steps toward implementation of LWP goals for nutrition education, physical activity/physical education, assurances for meeting federal nutrition standards in reimbursable meals, nutrition standards for competitive foods and beverages both sold and offered, other school-based wellness activities, and assigning operational responsibility. Over half of districts and schools reported that measuring implementation was "very challenging" or that they had made no attempts to measure implementation of their LWP. Fewer than one-third of districts reported having plans for measuring LWP implementation, and only 3% of districts reported conducting professional development in this area. Few districts had comprehensive plans for measuring implementation, and districts did not communicate plans for monitoring well to schools. Districts and schools have reported efforts to ensure sustainability, including ongoing communication, maintaining active wellness committees, and having processes for policy revision. Frequently cited impediments to sustainability included changes in leadership and lack of funding.

Applications to Child Nutrition Professionals

Districts and schools may not be prepared to monitor LWP implementation; therefore, resources are needed to assist districts and schools monitor progress and report change. Continued leadership, communication with stakeholders, and technical assistance are critical to LWP progress and sustainability.

Middle School Menu Innovations Based on a Digital Photography Method of Plate Waste Analysis

Priscilla Connors, PhD., RD; Carolyn Bednar, PhD., RD; Sarah Wilcox, BS;
Rian Davis, BS.; Carolyn Bednar, PhD
Texas Woman's University, Denton Texas

Purpose/Objective

The purpose of this study was to analyze plate waste and food choices of seventh grade students at two middle schools participating in the National School Lunch Program.

Method

Both schools had similar menus and three serving lines. Digital still photography methods were used to measure and analyze plate waste. Student lunch trays at each school were pre-labeled with randomized numbers to identify the school and lunch line and to match trays for before and after comparison. Lunch trays were photographed after students made their lunch selections and again after students had consumed their lunches and exited the lunchroom. Before and after photos were compared by researchers to estimate food waste and to identify factors that may have influenced food choices and food consumption.

Results

Lunch trays at each school were photographed on 2 days for a total of 418 lunch trays at school 1 and 338 trays at school 2. All lunches were served on white Styrofoam trays and included mostly beige and white foods. Presentation of food items as well as ease of eating appeared to influence which foods were selected and consumed. Photo review showed that whole fruits (i.e. apples, oranges) and quartered carrots were infrequently selected and often discarded. Based on initial review of baseline photo images, the following menu innovations were established: baby carrots replacing large quartered carrots, four different types of canned fruit (mixed fruit, applesauce, pears, peaches) offered each day, oranges quartered instead of whole, and a variety of apple choices (Granny Smith, Gala, Red Delicious, Golden Delicious) offered daily.

Applications to Child Nutrition Professionals

Study results provide insight into food choices made by middle school students and can be of use when planning menus that encourage consumption of healthy foods.

Dietetics Student Focus Groups Reveal Value of School Nutrition Sites for Supervised Practice Experiences

Jessica F. Keller; Virginia S. Webb, MS, RD; Deborah D. Canter, PhD, RD, LD; Mary Frances Nettles, PhD, RD
Kansas State University, Manhattan, Kansas

Purpose/Objective

The purpose of this study was to explore the opinions of dietetic students and interns regarding participation in school nutrition (SN) during their supervised practice experiences. Objectives were to identify participants' knowledge of SN as a career, ascertain perceived value of various SN learning experiences, and solicit advantages or disadvantages of SN as a training site.

Method

Directors of supervised practice programs in dietetics assisted the researchers in identifying students attending the national conference of the American Dietetic Association. Students were recruited to participate in one of two 60- minute focus groups. Sixteen students volunteered, representing all USDA regions and dietetics program types. Focus group discussions were audiotaped and common themes which emerged were summarized.

Results

Participants reported a wide range of exposure to SN during their education. Some were introduced to SN in a course, by a guest speaker, or through their own efforts. Some participants reported working with chefs to plan creative menus, while others experienced limited involvement due to lack of preceptor guidance. Students stated that their experiences in a SN setting altered any negative perceptions about school nutrition, and enabled them to recognize the valuable role SN plays in the lives of children. Students believe that SN programs can play an important role in combating childhood obesity. Lack of districts willing to host rotations and limited availability of trained preceptors were viewed as major challenges to incorporating SN rotations into dietetics education. Participants stated that they would like to experience SN at an administrative level as well as gain more insight about meal reimbursement paperwork.

Applications to Child Nutrition Professionals

These findings revealed that resources are needed to assist dietetics education and SN directors to develop and facilitate rich supervised practice rotations. Positive experiences for dietetics students and interns may entice more dietitians to consider SN as a viable and exciting career choice.

Examining Green/Environmental Conservation Practices in School Nutrition Programs and Schools Using Case Study Methodology

Kristi Lofton, PhD, RD; Mary Frances Nettles, PhD, RD
National Food Service Management Institute, Applied Research Division, The University of Southern Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The purpose of this study was to describe and examine green/environmental conservation (GEC) issues and initiatives in school nutrition (SN) settings. Research objectives and goals focus on identifying roles, practices, perceptions, and barriers to implementing these approaches in SN programs.

Method

A multi-phase descriptive case study method was used to examine GEC approaches in SN programs. In Phase I, a virtual panel of SN professionals (n=19) participated in a modified Delphi process and provided data supporting the research objectives. The data were then used to develop the case study instruments. In Phase II, a holistic, multiple-case study design using a literal replication format was used during visits to four school districts in four states, representing four USDA regions. Data from each school were analyzed; and cross-case tabulation was performed to confirm similarities and/or differences that identified and described GEC practices, perceptions of GEC roles and responsibilities of SN staff and school personnel, factors for sustainability, and barriers to success.

Results

Participants in phases I and II of this project identified 40 GEC practices within six practice categories (Recycling, Energy Conservation, Air and Water Conservation, Resource Conservation, Building Renovations and Construction, and Other GEC Practices) occurring in SN programs and schools across the country. The

primary factors affecting sustainability of GEC practices were lack of school officials' and other school staff's support and perceived cost and time to implement and sustain practices. Roles and responsibilities of SN directors, SN staff, school personnel, community members, and vendors were also identified.

Applications to Child Nutrition Professionals

Findings from this study will be used to develop a national survey to assess GEC practices and sustainability in SN programs across the country.

Greening the School Nutrition Scene: A National Study Examining Green/Environmental Conservation Practices and Barriers in School Nutrition Programs

Kristi Lofton, PhD, RD; Mary Frances Nettles, PhD, RD
National Food Service Management Institute, Applied Research Division, The University of Southern Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The purpose of this project was to identify green/environmental conservation (GEC) practices in school nutrition (SN) settings across the U. S. Additional objectives included identifying the roles of stakeholders and the barriers associated with planning, implementing, and sustaining GEC practices in schools.

Method

Qualitative and quantitative research methods were used to conduct the project. In Phase I, an expert panel consisting of six SN professionals involved in GEC approaches in SN programs convened to identify and confirm GEC practices, benefits, and barriers. The responses from the expert panel were summarized and researchers drafted a survey that was reviewed and piloted by a panel of 19 SN professionals. The survey was then distributed to 700 SN directors in the seven USDA regions.

Results

A total of 223 surveys (31.8%) were returned. Respondents perceived that implementing and sustaining GEC practices in SN programs would provide a healthier learning environment for children (63.5%) and would save money and resources over time (65.2%). They perceived their primary roles as nutrition educator (39.0%) and role model (35.0%) in GEC efforts. The top two GEC practices were energy conservation (99%) and recycling (97.8%) while the barriers to sustaining these practices were lack of school administrators' support (55.5%), cost (41.3%), and time (29%). School Nutrition professionals are actively involved in GEC practices.

Applications to Child Nutrition Professionals

Findings from this study will be used to develop a GEC guide to assist SN professionals in planning, implementing, and sustaining GEC practices.

Identifying Emergency Preparedness Issues Faced by School Nutrition Programs and Readiness to Respond

Kristi Lofton, PhD, RD; Mary Frances Nettles, PhD, RD; Evelina Cross, PhD
National Food Service Management Institute, Applied Research Division, The University of Southern Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The purpose of this study was to identify school nutrition (SN) directors' perception of the effectiveness of their emergency preparedness (EP) and their role in evaluating and implementing procedures that assure safe, nutritious food during an emergency.

Method

In Phase I, an expert panel of SN professionals explored issues related to emergency preparedness. In Phase II, a mailed survey was developed using the expert panel results. It was sent to a random sample of 700 SN directors representing the seven USDA regions.

Results

A response rate of 26% was achieved. All respondents reported having an EP plan. Two-thirds (66.5%) use the district plan and one-third (33.5%) have a separate SN plan. They have been most utilized for lockdowns (51.4%) and power failures (41.3%). Seventy percent (70%) of respondents were able to use their plan as written or with modifications prompted by a prior emergency. A majority (52.8%) of respondents indicated that they were unaware of any barriers or there were no major barriers to their current EP plan. The challenge cited most often was lack of staff to carry out the plan (16%). A majority (63.9%) of respondents perceived their current plan as effective for all emergencies. Respondents agree/somewhat agree that they, SN staff, and

district staff are adequately trained. Their major sources of EP information were the school district (92.1%), local health department (47.8%), and the state agency (46.1%). The most needed training topics named were food safety/sanitation (83.1%), maintaining food service operations during emergencies (76.2%), EP drills (72.1%), and HACCP (70.9%).

Applications to Child Nutrition Professionals

This study provided baseline information for assessing SN emergency preparedness. Results will be used to direct the development of resources and training materials to enhance SN professionals' ability to respond to emergency situations.

Breakfast Powers Academic Performance and Health

Susan Meacham, Ph.D., R.D.; Audrey C. McCool, Ed.D., R.D., L.D.; Susan Roe, M.S., Ph.D. Candidate; Christine Bergman, Ph.D., R.D.
University of Nevada Las Vegas, Las Vegas, Nevada

Purpose/Objective

The purpose of this study was to determine factors influencing children's participation in the Clark County School District's (CCSD) School Breakfast Program (SBP) and to identify recommendations for actions which the Food Service Department might consider in their efforts to improve participation.

Method

Surveys of elementary children in grades one through five and their parents were conducted in 13 schools. The survey questions were developed to reflect the questions and findings of the USDA's School Nutrition Dietary Assessment Study III. The parents' questions varied somewhat from the children's questions, as the purpose was to both compare the parents' perspectives with those of the children and gain insight from the parents regarding ways to improve their children's participation in the SBP. Classroom surveys were completed over a four-week period. Completed parent survey forms, previously sent home with the children by the teachers, were picked up from the teachers by project personnel. The data from the completed survey forms were analyzed using SPSS Version 17. Following verification of the data scans, 93 first and second grade forms and 167 third through fifth grade forms were usable resulting in a total of 260 usable student forms. A total of 460 usable parent survey forms were returned.

Results

Key findings include: 60% of the children eat breakfast at home, so, participation improvement efforts must be focused on the remaining 40%; parents' income level is inversely related to children eating breakfast at home and to their children increasing their participation in the SBP if program changes are made; ethnicity is a factor influencing where children eat breakfast and the importance of possible SBP changes as way to increase their children's participation in the SBP; reasons for children not eating breakfast at home include parents' knowledge that breakfast is available at school, the children aren't hungry, and lack of time for breakfast before the children leave for school. Primary reasons for children not eating breakfast at school (other than already at home) included that the breakfast line is too long, don't like the foods served, don't get to school in time to eat, school breakfast foods not considered very healthy, not hungry or don't want any breakfast, no choice in breakfast foods, breakfast costs too much, foods not foods children's families eat for breakfast. Children think SBP might be improved by: serving breakfast in the classroom; serving more foods that they like; offering more choices; and a longer service time to have more time to eat. Parents think SBP might be improved by: offering more nutritious food; giving children more time to eat; offering more choices in foods offered; offering more fruits and vegetables; offering less processed foods; offering more ethnic foods; lowering cost; and increasing portion sizes. Response variances among the several economic, racial, and ethnic groups comprising the CCSD indicate a need for CCSD to develop multiple approaches to the SBP and tailor those approaches to their elementary schools.

Applications to Child Nutrition Professionals

A "one size fits all" SBP approach will not lead to desirable SBP participation rates. Program and food improvements that work well with one segment of the student population should be considered for implementation at schools serving that population. All program modifications should first be pilot tested in one or two schools. The greatest potential for improving SBP participation is in low-income schools with high proportions of racial and ethnic minority children, particularly schools where many parents do not speak English. This study provided valuable insight into tailoring SBPs specific to the population served.

Competencies of 21st Century School Nutrition Directors: The District Administrator's Perception

Mary Frances Nettles, PhD, RD; Deborah H. Carr, PhD, RD
National Food Service Management Institute, Applied Research Division, The University of Southern
Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The purpose of this study was to determine the degree to which district administrators and school nutrition (SN) directors perceive that SN directors are adequately prepared in competency areas.

Method

Random samples of 700 SN directors and 700 district administrators stratified by USDA region were selected. Previous research identified ten functional areas and 23 competencies needed by SN directors to effectively lead their programs in the current environment. School Nutrition directors and district administrators were asked to respond to the phrase, “Based on my professional experience, district administrators (e.g., superintendent, assistant superintendent, business manager) perceive that SN directors are competent in...” and then indicate their level of agreement with each competency statement using a 4-point scale (1, strongly disagree to 4, strongly agree).

Results

Survey respondents included 352 SN directors (50%) and 274 district administrators (39%). The majority of SN directors were female (84.8%) with both male and female respondents having a baccalaureate degree or higher (55.9%). The majority of administrators were male (54.0%) with both males and females having a master’s degree or higher (63.9%). School Nutrition directors rated 18 of 23 competencies 3.0 or greater and administrators rated 15 of 23 competencies 3.0 or greater indicating agreement that district administrators perceive SN directors as competent in these areas. Competencies with the lowest mean ratings by directors and administrators were similar and included “developing a systematic approach for marketing the school nutrition program,” “establishing a communication infrastructure with stakeholders to promote the school nutrition program,” and establishing a comprehensive technology infrastructure to achieve the operational goals of the school nutrition program.”

Applications to Child Nutrition Professionals

SN programs are growing in complexity and importance. Research-based competencies illustrate these varied responsibilities of SN directors. Study results suggest that resources may be needed to assist SN directors address those competencies that received the lowest mean ratings.

Exploring the Role of the School Nutrition Program in the Sustainability of Local Wellness Policy Initiatives in the Middle School Setting

Jane M. Osowski, PhD, RD; Mary Frances Nettles, PhD, RD
National Food Service Management Institute, Applied Research Division, The University of Southern
Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The specific objectives of this study were to determine strategies utilized by school nutrition (SN) directors and other administrators to implement local wellness policies (LWP), identify strategies, resources and successful practices for sustaining LWP initiatives, and identify characteristics of the LWP that students respond to well.

Method

A descriptive case study method with a holistic multiple-case replication design was used at four school districts across the nation. Data were gathered through structured interviews with SN directors and other district/school personnel responsible for LWP implementation, and guided focus groups with middle schools students. Data from each site were analyzed for pertinent data and themes. Cross-case tabulation was performed to search for distinct patterns, similarities or important differences in LWP implementation and sustainability strategies.

Results

Results indicated that successful implementation of the LWP involved a team of numerous key personnel consisting of top administration, teachers and staff, important community members and parents. Extra funding and outside collaborations enhanced implementation. Strategies and successful practices for sustaining the LWP included: extra funding received through grant support and collaborations with outside resources, policies and guidelines to ensure sustainability, support and commitment from district administration, evaluation for measuring success, communication of the LWP, strong wellness committee leadership, student and parent involvement, and education of staff about the LWP. Characteristics of the LWP that students

responded well to included offering foods the students perceived as healthy, taste testing of new foods, poster displays of healthy foods, nutrition literature on display at eye level, and healthy eating lessons in classes.

Applications to Child Nutrition Professionals

Findings suggest that several strategies are necessary to successfully implement and sustain LWP initiatives. Information gained from this study can be used to guide the development of a self-report survey targeting SN directors to determine what LWP implementation and sustainability strategies are being utilized in SN programs across the nation.

School Foodservice Representatives: Their Knowledge About Disabilities

Paola Paez, PhD; Susan Arendt, PhD, RD
University of Costa Rica, San Jose, Costa Rica

Purpose/Objective

The purpose of this study was to identify school foodservice representatives' knowledge about people with disabilities.

Method

An online questionnaire was developed using SurveyGizmo™ and sent to all school foodservice representatives in Iowa (N = 363). The questionnaire was pilot tested for content validity and understanding with educators and foodservice managers (N = 15). The questionnaire had five sections; the knowledge section of the questionnaire included 11 items to assess school foodservice representatives' perceived knowledge about different disabilities and organizations; a Likert-type scale with corresponding descriptors (SA = strongly agree, A = agree, N = neutral, D = disagree, SD = strongly disagree) was used. Responses were analyzed using SPSS; descriptive statistics, including frequencies, means, and standard deviations, were computed.

Results

Seventy-seven school foodservice representatives returned the questionnaire for a 21% response rate; 65 of the 77 respondents completed the knowledge section. Questionnaire respondents gave a neutral response (mean rating 3.16 on a scale where 1 = strongly disagree to 5 = strongly agree) to knowledge questions about disability-related topics; with a Cronbach's Alpha estimate of reliability of 0.856. Participants agreed that they were knowledgeable about: physical disabilities (65%), the Americans with Disabilities Act (63%), mental disabilities (52%), and reasonable accommodations (48%). Slightly more than half of the school foodservice representatives (52%) reported they lacked knowledge about state or federal benefits.

Applications to Child Nutrition Professionals

This work presents information about potential professional development needs of current school foodservice representatives that might increase their willingness to hire and integrate more of this sector of the population into the work force. It can also help educators identify human resources management curriculum needs for dietetic students who likely will work, at some point in their careers, with workers with disabilities.

Visuals To Educate Non-English Speaking Foodservice Workers About Food Safety

Lakshman Rajagopal, PhD, Catherine H. Strohbehn, PhD, RD, CP-FS
Iowa State University, Ames, Iowa

Purpose/Objective

The purpose of this study was to educate non-English speaking foodservice workers about food safety using visuals as the training method. Unsafe food handling practices are a common cause for food-borne illness in retail foodservice establishments. Providing food safety training to food handlers can help reduce the incidence of food-borne illness. Increasing diversity of the workforce has resulted in the need for training and education that meets the needs of diverse audiences. Conveying critical food safety messages using visuals is a useful tool to educate diverse audiences about food safety. One particular population that could benefit from such type of training is the non-English speaking Hispanic population. The Hispanic population in the United States is rapidly increasing; this increase has been seen in Iowa. The Latino population is the largest minority population in the state of Iowa representing 4% of the total state population, and increasing.

Method

Visuals depicting critical food safety messages about thermometer use and cleaning and sanitizing procedures in accordance with the 2005 Food Code were developed. Participants who were non/limited-English speaking Hispanic foodservice workers attended a one-hour training session conducted in Spanish. A minimal-text questionnaire written in Spanish and containing visuals was developed and administered before and after intervention.

Results

A total of 19 participants completed the training (Male=1, Female=18). Challenges were experienced in recruiting participants for the study owing to the voluntary nature of participation and possibly fear among participants about visibility of their immigrant status. Using visuals was extremely helpful in conveying critical food safety messages. This research is currently in progress.

Applications to Child Nutrition Professionals

Child Nutrition Professionals can use similar visuals to train staff whose native language is not English about safe food handling practices.

School Nutrition Purchasing Cooperatives Effectively Control Food Costs

Beth W. Rice; Catherine Strohbehm
Murray State University, Murray, Kentucky

Purpose/Objective

Purchasing cooperatives are a resource used by school districts to meet competitive purchasing requirements and increase purchasing power through combining purchasing with other districts that have similar needs. The purpose of this study was to compare the cost of selected food items between cooperative members and non-members and to determine if purchasing cooperative membership resulted in greater cost containment.

Method

A convenience sample (n=14) of cooperative directors and foodservice directors not participating in a purchasing cooperative were selected from information provided in an electronic survey of school nutrition directors. Phone interviews were conducted with each participant. Historical costs of selected food items were collected and percentage change in price was calculated and compared between groups and to Producers Price Index (PPI). Competitive bid contract documents were compared for terms and conditions.

Results

The mean percentage change in the price cooperatives paid was significantly less ($p < .05$) than the percentage change in the PPI for five of seven items. Cooperatives' percentage change in mean price paid for selected items ranged from 4.35% to 8.82%. No prices from nonmembers of cooperatives were significantly lower than the PPI. Contract document review from 7 cooperatives and 7 districts purchasing independently resulted in identification of 30 elements in bids, request for proposals, and contracts. Of the 30 elements, only 9 were common to all documents. Contract documents from cooperatives appeared to be more detailed than those from districts conducting their own bidding.

Applications to Child Nutrition Professionals

Child nutrition professionals responsible for the procurement of goods and services can use data from this study to evaluate current competitive purchasing results. Methodology from this study could be easily used as a model for benchmarking current purchasing results. Conducting similar comparisons, to the contract and cost analysis in this study, would help child nutrition professionals evaluate current purchasing outcomes. These same comparisons would also be beneficial to evaluating the potential benefit of cooperatives participation and its effect on increased purchasing efficiency.

Exploring The Uniqueness Of School Nutrition Programs In Small School Districts

Keith Rushing, PhD, RD; Mary Frances Nettles, PhD, RD
National Food Service Management Institute, Applied Research Division, The University of Southern Mississippi, Hattiesburg, Mississippi

Purpose/Objective

The purpose of this project was to explore the uniqueness of school nutrition (SN) programs in school districts with less than 2,800 student enrollment.

Method

A two-phase research design was utilized with this project. In phase-one, an expert panel of SN professionals identified issues/characteristics unique to SN programs and their directors in districts with student enrollment of 2,800 or less. Data gathered from this panel were used to create a survey for phase-two. Afterwards, the survey was evaluated by a review panel of SN professionals. The final survey was mailed to a national sample of 700 SN directors from districts with less than 2,800 student enrollment. Data analysis included descriptive statistics.

Results

The survey response rate was 56% (n=388). Almost one-half (48.5%) of respondents reported a high school diploma or GED as their highest level of education. A 4-point scale (4, strongly agree to 1, strongly disagree) was used by respondents to rate agreement with 69 statements related to the operation of their programs.

Statements with the highest mean rating were “I have multiple responsibilities as a SN director” (3.78 ± 0.50), “I have a computer in my workspace” (3.65 ± 0.60), “I have a positive working relationship with school administrators in my district” (3.50 ± 0.59). Statements rated the lowest (in ascending order) were “commodity processing is not available to the SN program” (1.54 ± 0.74), finding distributors to deliver food and supplies to the school is a challenge” (1.99 ± 0.83), “my salary is comparable with other district administrators” (2.21 ± 0.86).

Applications to Child Nutrition Professionals

These findings suggest that even in the smallest school districts, SN directors face complex jobs. Information gained from this study can be used to guide the development of resources and training to support SN directors in small school districts.

Cooling Practices in School Nutrition Programs

Jeannie Sneed, PhD, RD, SNS, CP-FS; Kathiravan Krishnamurthy, PhD
U.S. Department of Agriculture, Alexandria, Virginia

Purpose/Objective

A nationwide, on-line survey was conducted to determine current food cooling practices used in schools and to examine if these practices have changed since implementation of the required school food safety programs.

Method

A 6-section on-line survey was developed, pilot tested, and emailed to 4,101 school district nutrition directors. Questions were asked regarding type of food production system, foods cooled, cooling practices and equipment, temperature measurement practices, barriers to following good cooling practices, number of meals served, and geographical location of the school/school district.

Results

A total of 411 directors responded. A majority (78%) reported to cool leftovers that would be reheated to serve at another meal. Taco meat, turkey, chili, spaghetti sauce, soup, macaroni and cheese, pork and beef roasts, rice, mashed potatoes, marinara sauce, and lasagna were foods commonly cooled. Only 8% had blast chillers to support quick cooling. Only 37% used ice water baths to speed cooling. The majority of respondents (76%) used 2" steamtable pans for cooling, yet 4" pans (39%), 6" pans (9%), and stockpots (6%) were also used. Temperatures were monitored by most respondents, but 18% did not take food temperatures during cooling and 12% used an incorrect type of thermometer. Many schools followed cooling practices such as placing food in shallow pans (82%), cutting meat into smaller pieces (55%) and cooling food uncovered in a refrigerator to speed initial cooling and covering later (49%). Some schools changed their cooling practices in the last five years. A significant portion of schools did not monitor (18%) or record (30%) the temperature during cooling. Work schedules of employees (49%), lack of equipment (30%), lack of funds (23%), inadequate refrigerator space (17%), and inadequate freezer space (15%) were major challenges facing schools.

Applications to Child Nutrition Professionals

Information about cooling practices in schools can be used to develop strategies to improve cooling effectiveness.

Feasibility of Online Training for Iowa Child Nutrition Staff

Janice Steffen, MS, RD, Catharine Strohbehn, PhD
Iowa State University, Ames, Iowa

Purpose/Objective

The purpose of this survey was to learn more about the availability of Internet access to school nutrition staff in Iowa, their potential interest in participation in online training, and topics they considered appropriate for online training.

Method

Surveys were distributed in October and November 2009 to a convenience sample of school food service staff attending regional training meetings and the School Nutrition Association of Iowa fall meeting. A total of 129 surveys were collected from school nutrition staff.

Results

Of the 129 school nutrition staff that completed the questions regarding computer use, 74% responded they used the Internet daily. For all topics listed on the survey, there were more respondents who would consider participation in online training than would not.

Applications to Child Nutrition Professionals

While the results of this survey and published research indicate there are some barriers and concerns related to online learning, child nutrition staff appreciated the opportunity for training that involves less travel expense

and can be accessed at a time convenient for them. Online training is a resource that should be considered for training child nutrition staff.