

ABSTRACTS OF CHILD NUTRITION SHOWCASE ACCEPTED RESEARCH POSTERS 2020

Although accepted, these posters were not presented due to the cancellation of ANC.

Cultivating a Healthy School Environment: Evaluation of a Virginia School Nutrition Training Program Using the RE-AIM Framework.

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BACKGROUND: The Virginia Department of Education Office of School Nutrition Programs (VDOE-SNP) has been implementing a USDA's Team Nutrition Training Program, an evidence-based intervention to support child nutrition programs through training and technical assistance for Virginia school nutrition professionals, from 2017-2020. VDOE has offered two training workshops to school nutrition directors (SNDs) and provided technical assistance and other training opportunities, such as training eModules, during the school year to assist SNDs with improving the school food environments in their divisions.

METHODS: The implementation of Team Nutrition in Virginia has been evaluated using the Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) framework, a dissemination and implementation framework used to examine and understand the execution of evidence-based programming in new settings. Pre- and post- training surveys were used to gather SNDs' perceived support from stakeholders, self-efficacy, and intention to implement strategies from the training. Quarterly check-ins, strategic plans for improving the school food environment, and lunchroom observations using the Smarter Lunchroom Scorecard, will be used to determine implementation of Team Nutrition strategies.

RESULTS: The SNDs that attended the June 2018 training represented over 290,000 elementary school students from the 81 divisions. Results from the first training indicate that SNDs were significantly more likely to attend the non-mandatory training workshop in divisions with more Hispanic and African American children and a higher percentage of students receiving free or reduced-price lunches. SNDs were significantly more likely to report intending to implement changes related to five of the six target areas during the 2018-2019 school year on the post- than on the pre-survey. Perceived support from cafeteria staff significantly decreased from the pre- to the post-survey, but did not change significantly for parents, community, teachers, superintendent, or school administration. Lunchroom observation showed no differences between Spring 2019 and baseline, indicating more time may be required for strategies to be implemented at the school level.

PRACTICAL APPLICATION: State agencies implementing Team Nutrition Training Programs should expect a lag between training and technical assistance for SNDs and meaningful changes to the school nutrition program.

The effectiveness of full-time wellness coordinators conducting a multi-level intervention on students' nutrition attitudes, knowledge, and behaviors: Findings from small, medium, and large districts in Arizona.

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School Wellness Coordinators (SWCs) have potential to change the school environment, nutrition, education, and engagement to enhance implementation of local wellness policies; this effect may vary by Local Education Agency (LEA) size. The purpose of this quasi-experimental study was to examine the effectiveness of the introduction of SWCs in small, medium, and large LEAs in Arizona on students' nutrition outcomes as compared to control LEAs without school wellness coordinators (6 schools per condition; 12 schools total) over a two-year period. Intervention LEA SWCs implemented Smarter Lunchroom techniques, vegetable sub-group recipe development and testing, and wellness events at schools that involved nutrition education and taste tests; control schools operated under normal conditions. Change in 4th and 5th grade students' attitudes, knowledge, and behaviors were examined using the Kids' Activity and Nutrition Questionnaire. Interviews with the SWCs were also conducted to identify promising practices and ideas for scalability and sustainability.

*Assessment of the Current Trends in Effective Training for School Food Service Staff:
A Review of Literature.*

Kristi Lewis, PhD, RDN
Institute of Child Nutrition

BACKGROUND: Child Nutrition policy and food service trends have prompted many changes in professional development trainings for school nutrition professionals meeting USDA's Professional Standards. Innovative equipment designs and regulatory requirements have also increased the need for school authorities to seek more competent and knowledgeable staff to meet the needs for serving nutritious meals to students. To assess the current trends, a systematic literature review was conducted to identify professional development models and strategies for effective training of food service staff.

METHODS: The Participant-Intervention-Comparator-Outcomes (PICO) meta-analysis approach (Schardt, et al., 2007) was used as the guide for facilitating the literature review. Five databases (Google Scholar, EBSCOHOST, PubMed, Science Direct, and ProQuest) were utilized to search for studies and peer-reviewed articles on best practices of professional development/training models for effective training; effective training models for food service staff; school food service staff and effective training models; and effective trainings for food service staff. To narrow the focus, advanced searches for trainings based upon research-based models for planning for effective staff development was used.

RESULTS: Of 240,000 articles on effective training for staff, 708 articles were identified for food service staff. Four of six research-based models identified by Gall & Vojtek (1994) for planning effective staff development training were identified in 13 peer-review articles for school staff and school nutrition staff. The top three topics assessed in these articles included

evaluating and defining effective training, assessing staff's training needs and expectations, and documenting training success and outcomes. Additional findings from these articles were also trending in other areas of effective training for staff development. These include the need for trainings developed from learner-focused models, motivational approaches that encourage productive behavioral changes in the workplace; and effective training that included acknowledging staff's accomplishments of milestones and departmental achievements.

Nutrition Education Efforts in FFVP Schools: A Perfect Pairing.

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Minnesota Department of Education

The Minnesota Department of Education's Team Nutrition Training Grant, in partnership with the University of Minnesota Extension, expanded nutrition education efforts in elementary schools that were participating in the Fresh Fruit and Vegetable Program. Eight schools received free nutrition lessons, taught by a SNAP-ED Educator, between February-May 2019. USDA's Serving Up MyPlate: A Yummy Curriculum was used to reach 247 students, primarily in fifth grade. Students completed a pre and post survey to assess changes in attitudes and knowledge. Overall, students improved their attitudes toward fruits and vegetables, increased knowledge of nutrition and physical activity, and improved their recognition of MyPlate food groups after participating in the lessons.

Cooking Up Change: Chefs' Perceptions of Their Role and Impact on School Nutrition Programs.

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School Food Authorities (SFA) are responsible for serving nutritious, appealing foods to students that meet the National School Lunch and School Breakfast Programs nutrition standards. In order to support SFAs, chefs were encouraged to volunteer and work with schools to create healthy, student-approved menus, train school kitchen staff, prepare recipes from scratch, and generate excitement. Beyond the Chefs initiative, SFAs have continued to employ or continued to have chefs employed on staff in local SNPs at different capacities. Because the school chef is a burgeoning position in the SNPs' infrastructure, it is important to understand the roles and impact of school chefs on school food operations from the perspective of the school chefs.

Education, Training, and Research Needs Assessment for State Agency Child Nutrition Program (CNP) Professionals.

Keith Rushing, PhD
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The purpose of this project is to identify the training and professional development needs for State agency CNP professionals that work primarily with School Food Authorities (SFAs) and the SFAs they support. Results of this project will be used by ICN and the United States Department of Agriculture, Food and Nutrition Service to support the professional development needs of State agency CNP professionals that work primarily with SFAs and the SFAs they support.

Fueling Fitness: Evaluation of a Food Education Program for High School Football Players in a Rural, Appalachian School District.

David Holben, PhD

Office of Food and Nutrition Security at University of Mississippi

This poster describes the evaluation of an innovative food education program implemented in a rural, Appalachian school district for high school football players in grades 9-12. Participants completing the post-program evaluation (n=37/41, 90.2% response rate) were 16.3±1.2 years, male (n=37/37, 100%), and identified as African American (n=23/37, 62.2%), White (n=9/37, 24.3%), Biracial (n=3/37, 8.1%), or White Hispanic (n=2/37, 5.4%). The majority of participants rated the food education [31/33 (93.9%)] and food packages [29/33 (87.8%)] as Good/Very Good/Excellent. The majority reported that the take-home food packages made a difference in their eating during the week [25/36 (69.4%)] and their family being able to afford food during the week [30/36 (83.3%)]. A food education program (food-based nutrition education and take-home food packages) in a rural, Appalachian school district is acceptable to high school football athletes and improves perceptions of food availability by youth.

Manager Training in Louisiana: What Do We Know that Leads to Success?

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Pennington Biomedical Research Center

In 2015, the Louisiana Department of Education, Division of Nutrition Support (DNS) partnered with the Pennington Biomedical Research Center to develop and implement Louisiana Fit Kids, a collaborative project focused on training and education for child nutrition program professionals. Manager training, which had been conducted by the DNS since 1983, was one of the focus areas of the Louisiana Fit Kids project. In 2012, manager training was temporarily halted while major revisions to the training program were conducted, and was re-instated in 2016. Since 2016, Manager Trainings have been conducted with an approximate passing rate of just over 50%, with 80% as the passing score in an assessment quiz of 100 questions.

In 2019, we included several background questions and a pre-test in order to evaluate what might be areas that ensured success in passing the quiz. Louisiana has five regions and individuals from all regions participated in the 2019 sessions. The Southwest region (N=73) had the most participants followed by South Central, Northeast, Northwest, and Southeast with N=43, 38, 22, and 6, respectively. The majority of the participants were from public schools, followed by diocesan, and then by charter/residential schools (N=154, 20, and 8, respectively).

Approximately one third (33%) of the participants had been in their current job for 3 or less years, but this did not reveal any differences in total score or passing rates. Fifty-five percent of the participants had only a high school diploma/GED and their passing rate was 47%. This was statistically different ($p<.007$) from the 67% passing rate for the participants who had at least some post high-school education. Forty-five percent of the participants received training on their current job at least quarterly with a passing rate of 62%. This was marginally different ($p=0.067$) than the participants with less training, who had a passing rate of 48%. There were no differences in scores between regions. Total score had a moderate correlation ($r^2=0.356$) when the prediction by pretest scores was considered ($p<0.001$). The largest predictor of a passing score of 80%, similarly, was the pretest score ($r^2=0.204$). Total scores were significantly lower for charter/residential schools when compared to diocesan (diff=-12.7750, $p=0.008$) and public schools (diff=-9.4010, $p=0.024$).

The intention going forward is to look at these and a number of other factors with an overall objective of improving training of individuals seeking to become school nutrition managers. Larger representation from regions within Louisiana based on these factors could have a large effect on increasing the total scores and passing rates, resulting in very qualified individuals tasked with feeding our future generation.

Louisiana Team Nutrition: Does classroom nutrition education influence healthier eating among public school students?

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INTRODUCTION: The Louisiana Team Nutrition Training Grant program is part of the USDA Team Nutrition Initiative. Its purpose is to create healthier school nutrition environments and encourage healthier eating behaviors among students. To this end, the Louisiana program has guided the implementation of an array of innovative school-based food and nutrition strategies, among which has been classroom-based nutrition education.

OBJECTIVE: To determine the influence of classroom nutrition education in terms of nutrition knowledge, and of attitudes and behaviors associated with healthy eating.

METHODS: A grade specific nutrition curriculum (e.g. USDA's Serving Up MyPlate: A Yummy Curriculum) was implemented over a 5-6-month period, by classroom teachers of 1st to 10th-grade students in 14 public schools statewide. A curriculum-based survey was developed and conducted at pre and post-program time points to capture key indicators of student's nutrition knowledge, attitudes, and behaviors. Four versions of this survey, at increasing levels of sophistication, were created and used to accommodate the range of grade levels. A series of pre-post statistical proportions tests was used to analyze group change among students.

RESULTS: A total of 623 students were exposed to a nutrition curriculum; 606 completed pre surveys and 492 completed post surveys. The percent of correct responses to knowledge items increased ($p < 0.004$) for: healthy snacking, sugar content of foods, physical activity recommendations, protein foods, food groups, fats, and MyPlate. There was minimal knowledge gain on the topic of whole grains. Favorable attitudes increased ($p = 0.001$) by 1% and 14% for fruits and vegetables respectively, and by 9% ($p = 0.04$) for whole grains. Improvements in healthy eating advice articulated by these students reflected the following themes: eat lots of fruits and vegetables; eat more whole grains; be active; drink water, not soda; eat less junk food; eat beans and peas; eat healthy to be strong. This indicated a strong foundation for healthy eating; yet, no change in eating behavior was detected.

CONCLUSION and IMPLICATION: As a group, students exposed to the classroom nutrition curriculum demonstrated improvements in nutrition knowledge, in attitudes toward healthy eating, and in how to eat healthy. Although improvement in eating behaviors was inconclusive, classroom nutrition education appears to have had a positive influence. As students learn more about healthy foods and as they develop and share healthy eating advice, they will have the potential to affect healthier food choices among themselves and their family.