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primary aim of this study, to examine the relationship between gardening and gut microbiome composition.

Funding: USDA

P143 Analyzing Costs Associated with Implementation of a Nutrition Program in Early Childhood Education

Janna Martin, BA,BS, jmartin@uams.edu, University of Arkansas for Medical Sciences, 4301 W Markham St, Slot 530, Little Rock, AR, 72205; Taren Swindle, PhD, MS, University of Arkansas for Medical Sciences

Background: Cost analysis is a tool used to summarize and report on individual elements of costs to implementing an innovation. We used cost analysis to track and compare costs of provision of 2 implementation strategies to support an evidence-based nutrition curriculum in the Head Start (HS) setting.

Objective: To compare how much it cost, per classroom per year, to deliver the basic (ie, training and reminders) and enhanced implementation support (ie, a package of 8 implementation strategies).

Study Design, Setting, Participants: We partnered with a HS program in an urban area of a Southern state with 9 sites and 38 classrooms. We used stratified randomization to assign sites to participate in either the basic or the enhanced implementation of the nutrition curriculum. All sites received the same 6-hour training and implemented the curriculum with either basic or enhanced implementation support.

Measurable Outcome/Analysis: Cost accounting methods allowed for a comparison of time and materials allocated to each group. Our primary outcome of cost included fixed (eg, costs of trainings, materials, printing) and variable (eg, duration of facilitation, number of incentives, travel) costs for both strategies. Facilitators logged activities using a smartphone application.

Results: Estimated costs per classroom, per year were \$35 for basic and \$261 for enhanced implementation support. This reflects average delivery of 4 incentives and 2 resources per classroom, a total of 39.2 in-person and 20.4 virtual facilitation hours to enhanced classrooms. In-person facilitation accounted for 25% of the enhanced costs; travel 23%; and the tailored incentives and educational materials 21%.

Conclusions: These data, paired with outcome data, will help understand the relative cost in improving implementation outcomes (eg, fidelity, acceptability) between groups, and will inform scalability and sustainability efforts for future uptake of the intervention.

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P144 A Comprehensive Community Partnership Model for Improving Nutrition Among SNAP-Eligible Families in Early Education Settings

Razan Sahuri, MPH, rsahuri@umd.edu, University of Maryland Extension, 3300 North Ridge Rd, Suite 240,

Ellicott City, MD, 21043; Erin Duru, MHS, RD, LDN, University of Maryland Extension; Nicole Walker, PhD, University of Maryland Extension

Objective: One in 4 U.S. children are overweight or obese before they reach kindergarten. Early intervention encourages the development of positive behaviors, including healthy eating, that are necessary for young children's healthy growth, development and prevention from chronic diseases. This model highlights an innovative community partnership model to increase the consumption of fruits and vegetables among low-income preschool families.

Use of Theory or Research: Maryland SNAP-Ed implements an innovative partnership model with multilevel interventions for children and their families; as well as policy, systems, and physical environment (PSE) changes which target each level of the socio-ecological model.

Target Audience: Low-income preschool children and their families in Howard County, Maryland.

Program Description: This unique collaboration with the county school system; Head Start; Women, Infants, and Children (WIC) program; Food Bank; Farmers' Markets; and the Local Health Improvement Coalition leverages resources to improve access to and consumption of healthy foods. Children and families receive nutrition education and exposure to programs linking to gardens, the grocery store, and farmers' markets.

Evaluation Methods: Maryland SNAP-Ed's comprehensive evaluation model assesses individual-level impacts through participant surveys and PSE changes through post-program year reports.

Results: Maryland SNAP-Ed programming is associated with improved individual health behaviors, including increased consumption and purchasing of healthy foods. Early education sites in Howard County have also established health-promoting PSEs, such as healthy classroom celebrations, limited availability of sugar-sweetened beverages, and increased variety of healthy foods offered during family events and on-site food pantries, that encourage positive nutrition behaviors.

Conclusions: Maryland SNAP-Ed's holistic approach with multiple county collaborators establishes a sustainable county-wide framework that increases access to fruits and vegetables for preschool families. This poster shares a detailed sustainable approach for others to replicate.

Funding: Supplemental Nutrition Assistance Program - Education.

P145 Results of Using Improvised Kitchen Spaces to Teach Skills-Based Nutrition in Schools

Amelia Huelskamp, PhD, huelskampa@uncw.edu, University of North Carolina Wilmington, 601 S. College Rd, Wilmington, NC 28403

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Objective: This program was designed to develop cooking skills among youth living in a rural food desert.

Use of Theory: Research suggests that obesity prevention programs based on Social Cognitive Theory may be effective to promote healthy weight status in school-age youth. SCT was integrated into a nutrition curriculum using improvised kitchen space to provide opportunities for observational learning and development of behavioral skills and self-efficacy.

Target Audience: This program was designed for high school students living in rural southeastern North Carolina. Teachers at the school were interviewed to identify greatest needs for their students, and a curriculum was planned for the entire 9th grade class.

Program Description: The curriculum was implemented in 4 sessions. Session 1 targeted food groups and nutrients, with practice opportunities to analyze food labels. Students used laptops in session 2 to find recipes for favorite meals, analyze the nutrition content using an online application, and modify recipes to meet nutrition requirements. In session 3, student teams traveled to a supermarket where each team had \$10 to purchase ingredients, and session 4 was devoted to preparing and tasting the modified recipes in an improvised kitchen.

Evaluation Methods: With IRB approval, the teaching team administered an anonymous follow-up survey to participants (n = 40). Each item (Likert scales) addressed a program objective. Each item began with the stem, "After participating in the nutrition sessions, I feel more confident to:" followed by 12 target behaviors, like "analyze nutrition information for any recipe."

Results: Of 40 participants, 78% reported increased confidence to perform at least 75% of the target behaviors.

Conclusions: Integration of SCT in a cooking curriculum could improve self-efficacy to perform cooking related skills. Higher self-efficacy may increase frequency of a behavior (Glanz, Rimer, and Viswanath, p. 163). Improvised kitchen space provides small teams with chances for observational learning, social support, and stress-free opportunities to develop mastery of skills.

Funding: None.

P146 California Youth Participatory Action Research Projects Illustrates the Need for Nutrition Staff Professional Development

Cathryn Johnson, MPH, IBCLC, ckjohnson@ucanr.edu, University of California, Agriculture and Nature Resources, 423 E. Saint Charles St, San Andreas, CA, 95249; Yu Meng, PhD, University of California,

Agriculture and Nature Resources; Marisa Neelon, MS, RD, University of California, Agriculture and Nature Resources; Charles Go, PhD, University of California, Agriculture and Nature Resources; Nancy Erbstein, PhD, University of California, Davis; Brandon Louie, MS, University of California, Davis; Deedee Chao, BS, University of California, Davis

Background: Youth Participatory Action Research (YPAR) is an innovative approach to engage youth (ages 12-18) in projects that address issues in their community. When implemented as part of a Supplemental Nutrition Assistance Program-Education (SNAP-Ed) program, YPAR aims to empower youth to achieve policy, systems, and environmental (PSE) changes related to community health and nutrition. SNAP-Ed programming has traditionally focused on direct nutrition education, which may require substantially different professional skills than needed to implement YPAR projects.

Objective: This qualitative research project aimed to assess the impact of professional development and learning to support the shift from traditional nutrition education delivery to an approach that engages youth in creating PSE changes.

Study Design, Setting, Participants: Pre- and post-project interviews were conducted with 6 SNAP-Ed staff members who implemented or attempted to implement YPAR projects in 4 California counties during the 2018-2019 school year. Questions assessed the impact of current technical assistance, professional learning opportunities and needs, and suggestions for improving future support.

Analysis: Members of the research team each individually analyzed a subset of the interview responses and reported emerging themes. The team consolidated reports and identified key findings for 3 outcome measures related to 1) Staff capacities for YPAR work aimed at PSE changes; 2) key topics; and 3) key processes/structures for additional professional learning support.

Results: The following themes emerged related to the outcome measures: 1) the importance of comprehensive knowledge and skills related to youth engagement and positive relationship skills to build support for YPAR; 2) the need for information on the history of YPAR; training around PSE change work, evaluation and reporting; and curricula for younger youth; and 3) the need for regular support from supervisors.

Conclusions: Staff articulated the capacities they gained, key learning topics and support received, and additional professional development support needed to conduct a YPAR project. Key themes were identified that can help inform practitioners interested in conducting YPAR projects, especially under the SNAP-Ed framework.

Funding: Supplemental Nutrition Assistance Program - Education.