

P50 (continued)

Study Design, Settings, Participants: Random sample of Supplemental Nutrition Assistance Program-eligible (130% of FPL) households with children across 30 California counties. Youth age 10 to 18 years of age (n=2,231) completed an interviewer administered 24-hour dietary recall (ASA24) in English or Spanish in 2016.

Measurable Outcome/Analysis: Intake of whole grains was compared to recommendations, gender, ethnicity, and body mass index (BMI). Means were analyzed using independent sample t-tests and ANOVA (with Tukey's HSD).

Results: Youth participating in the study were 13.7 ± 2.3 years old (51% female) and ethnically diverse (71% Latino). Forty percent were categorized as either overweight or obese. Males consumed 0.95 ± 1.4 ounce equivalents (oz. eq.) of whole grains per day and females consumed 0.72 ± 1.0 oz. eq. ($P < .001$). The overall percentage of grains that were whole grains (14% male and 13% female), did not meet recommended level of at least 50%. Most whole grain items were from a grocery store and very few from school cafeteria (< 1%). Whole grain intake significantly differed among ethnic group categories ($P < .05$) with highest consumption among African Americans (0.98 ± 1.6 oz. eq.) and lowest in Latinos (0.79 ± 1.1 oz. eq.). Whole grain intake for obese youth was lower than those in the normal weight category (0.70 ± 1.1 vs. 0.88 ± 1.3 oz. eq., $P = .041$).

Conclusion: Low-income youth in this sample are burdened by overweight/obesity and are far below the whole grain recommendations. Intervention is needed targeting whole grain consumption that is appropriate for ethnically diverse youth in low-income communities such as making more whole grain rich options available in school.

Funding: USDA.

Nutrition Education Program Design Implementation and Evaluation

P51 4-H Food Smart Families: Extension Engages Teens to Provide Youth and Families with Nutrition Education and Cooking Skills

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Objective: To engage teens as teachers to help plan and lead educational programs that equip youth and their families to make healthy living part of their everyday lives through increasing knowledge to adopt healthy eating and food preparation behaviors.

Use of Theory or Research: Research shows improving eating and physical activity behaviors is effective when implementing multiple changes at various levels of the Social-Ecological Model (SEM). This program focused on

SEM individual factors through partnerships with in-school and out-of-school community settings. Teen ambassadors were trained using the Experiential Learning Model.

Target Audience: Programming focused on urban low income youth and their families in five counties across the state. Teens, 16-19 years of age, were recruited as teen ambassadors.

Program Description: 4-H Food Smart Families aims to empower teens through youth-adult partnerships to be leaders in their communities and advocate for healthy lifestyle choices. Youth participants were provided with 10 hours of nutrition and physical activity focused programming that utilized research-based curricula. Families were encouraged to attend Family and Community Engagement events and teen led activation events.

Evaluation Methods: 4-H Common Measures was utilized to collect quantitative data and evaluate program impact in participants. Survey results and qualitative success stories were entered and analyzed in either Qualtrics or the PEARS reporting system. Quantitative post survey data was captured from teens.

Results: Eighteen Extension professionals and 16 teen ambassadors reached over 1,140 underserved youth and 2,540 family members. Two teen activation events were successfully delivered with the support of community partners. 92% of youth (n=816) and 100% of teens (n=10) indicated learning about healthy food choices. 45% of youth and 100% of teens indicated giving their family healthy meal or snack ideas. Youth reported paying attention to how much fruit (64%) and how many vegetables (55%) they eat each day.

Conclusions: Nebraska Extension professionals were able to empower teens to help deliver healthy lifestyle programs that improved the knowledge and behaviors of participants.

Funding: None.

P52 A Nutrition Education Intervention on Dietary Management of Chronic Diseases Among the Elderly in Delaware County, Indiana

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Background: Multiple factors, such as aging and lifestyle habits, contribute to chronic diseases within the aging population. In the United States, 80% of individuals ≥ 65y have been diagnosed with at least one type of chronic disease. Studies have indicated that nutrition education interventions have shown positive results in increasing nutrition knowledge and healthier food selections in older adults.

Objective: To provide older individuals with the knowledge needed to help manage chronic diseases by making healthier food selections. The two objectives were to determine if: the Pennsylvania State Cooperative Extension (PSCE) nutrition curriculum improves nutrition knowledge; and participants' attitudes toward dietary behavior changes were positive.

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Study Design, Settings, Participants: This study was conducted in three senior living centers in Indiana with one site set as the control. Subjects for this study were male and female individuals who were ≥ 60 y old. Implementation of the pilot-tested, PSCE nutrition education curricula was utilized. Six lessons were administered over six weeks immediately following the senior congregant lunch. Knowledge and intent to change eating behavior tests were administered after the lesson plan, and at the conclusion of the intervention.

Results: Sixty two participants (49% male/female) with a mean age range of 70-79 y completed the study, and 63% indicated they had at least one chronic condition. Wilcoxon Signed Rank indicated a significant improvement in nutrition knowledge of participants who completed the post intervention test ($z = -2.56, P = .01$). One-way ANOVA indicated that after the grains lesson plan, the intervention participants ($N = 32$) intent to change behavior as reported in "I will eat ≥ 3 oz of grain/d next month" was significant, $P = .05$.

Conclusion: There was a significant improvement in knowledge change. Intent to change behavior was significant after the grains intervention, but not after the other five lessons. Some seniors indicated older age > 85 y was a barrier to change since they "made it that far." Designing interventions for seniors needs to be age specific targeting younger seniors for behavior change.

Funding: Ball State University.

P53 Awareness and Perceptions of Maine SNAP-Ed Among Maine SNAP Recipients

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Background: Contracted by the State of Maine—DHHS Office for Family Independence (OFI), Altarum has served as the external evaluator for Maine Supplemental Nutrition Assistance Program-Education (SNAP-Ed) since 2013.

Objective: Assess awareness, perceived value, and barriers to accessing Maine SNAP-Ed direct education classes among Maine SNAP recipients.

Study Design, Settings, Participants: Altarum conducted a cross-sectional telephone survey using a list of adult Maine SNAP recipients provided by the State of Maine—DHHS OFI.

Measurable Outcome/Analysis: Respondents were asked about awareness, perceived value, and barriers to participation in Maine SNAP-Ed direct education classes. Results were weighted to reflect characteristics of Maine SNAP recipients. Descriptive statistics and 95% confidence intervals were calculated to identify significant differences between groups.

Results: Approximately half of Maine SNAP recipients (49%) were aware of Maine SNAP-Ed. Many SNAP recipients (45%) learned about SNAP-Ed classes through other

assistance programs (e.g., WIC). A majority (61%) recognized one or more of Maine SNAP-Ed's direct education classes by name. Only 7% of SNAP recipients had taken a Maine SNAP-Ed direct education class. However, most SNAP recipients (72%) were "somewhat" or "very interested" in learning how to eat healthy. Those who had taken a Maine SNAP-Ed class reported that the program helped them plan healthy meals for themselves and their family (96%), try a new recipe (91%), and think about making healthier food choices (91%). Barriers to participation mentioned by those who had not taken a Maine SNAP-Ed class included: being unaware that nutrition education classes were offered (52%), difficulty with the locations (43%), disbelieving classes would change behaviors (40%), and being too busy (35%). Approximately 4 in 10 who had not participated (41%) were uninterested in taking a nutrition education class.

Conclusion: The majority of Maine SNAP recipients were aware of SNAP-Ed and interested in learning to eat healthy. Maine SNAP-Ed may be able to increase program participation by addressing identified barriers.

Funding: SNAP-Ed.

P54 Outcome Evaluation of the University of Tennessee Extension Farmers' Market Fresh Nutrition Education Program

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Background: In 2015, University of Tennessee Extension (UT Extension) piloted the nutrition education program Farmers' Market Fresh (FMF) with a primary objective of encouraging fruit/vegetable (FV) consumption by limited-resource families through purchases at farmers' markets. FMF is funded by the Supplemental Nutrition Assistance Program-Education (SNAP-Ed) and has since been expanded to over 30 markets statewide.

Objective: To measure the effectiveness of FMF among limited-resource families.

Study Design, Settings, Participants: Altarum conducted an outcome evaluation to assess exposure, changes in attitudes and behavior, and demographics. Adults were surveyed at SNAP-Ed eligible farmers' markets with FMF (intervention) and without FMF (comparison) in July and August 2018.

Measurable Outcome/Analysis: Descriptive statistics described the sample and outcome variables. Confidence intervals estimated associations between FMF and outcomes.

Multivariate logistic regression models were conducted to determine the impact of FMF on outcomes, controlling for demographic characteristics.

Results: A total of 382 surveys were completed; 211 intervention and 171 comparison. Intervention respondents

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