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interactive nutrition and physical activity education intervention for K-2 students. SEKP was delivered to more than 12,000 students over 4 years in a metropolitan school district. A concurrent mixed methods design was used to combine quantitative data collected over four years (student pre/post-tests, one year follow-up student surveys, and follow-up teacher surveys) with qualitative data collected over one year (interviews, observations, and document analysis).

Outcome Measures and Analysis: Quantitative responses were calculated as frequencies and percentages, and year to year responses were analyzed through t-tests. Qualitative data was coded, reduced, and grouped into themes. All data were merged into similar themes with supporting evidence.

Results: Three themes were identified with perceived influence, students demonstrated an increase in knowledge all four years ($p < 0.05$), and an increase in vegetable ($p = 0.042$) and breakfast intake ($p = 0.025$) one year post-intervention. Teachers believed the innovative curriculum and the teacher influenced students. The second theme was positive self-perception. Teachers reported improvements in perceived knowledge, confidence ($p < 0.05$), and behavior. Teachers described themselves as having various positive, impactful roles in nutrition education. The third theme was barriers and motivation. Surveys and interviews identified barriers, including family, time, and resources. Despite barriers, teachers expressed strong motivation to help students develop healthier habits.

Conclusions and Implications: SEKP is effective at improving nutrition knowledge and behavior in K-2 students. Teachers express multiple positive perspectives regarding the curriculum and their role. Further research should be conducted to determine a causal linkage between teachers' perceptions and actual influence on students.

Funding: USDA

P122 Poor Dietary Intake with High Incidences of Infectious Diseases Are Associated with Childhood Malnutrition in Turkana Kenya

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Objective: Childhood malnutrition in Turkana county, Kenya is very high with 21% and 23% of children under 5 years old being wasted and stunted respectively. The objective of this study was to determine the immediate causes of childhood malnutrition based on the World Health Organization (WHO) conceptual framework of the Determinants of Maternal and Infant Malnutrition.

Study Design, Setting, Participants: A cross sectional study was conducted in Turkana Kenya in 2015. Two hundred and four children aged five years and below were randomly selected to participate in the study.

Outcome Measures and Analysis: Breastfeeding rates and dietary intake (quality and quantity) were assessed

based on WHO recommendations on infant and young child feeding practices. Health status of the children was determined by the incidences of infectious diseases and access to preventative care. data was analyzed using SPSS software.

Results: Ninety-eight percent of the children had been breastfed with 73% exclusively breastfed for 6 months. Dietary diversity was poor with most children consuming porridge, mashed potatoes and either goat or cow milk. Tea with or without milk was also fed to about 25% of the children. Quantities consumed were below the age specific WHO recommendations. Fifty-eight percent of all the children had suffered from diarrhea and 48% from malaria in the 3 months preceding the study. All children had received the required immunizations and Vitamin A supplements.

Conclusions and Implications: This study concluded that poor dietary intake, both quality and quantity, and infections were the possible causes of childhood malnutrition in Turkana. These results imply that interventions to improve food security and to reduce infectious diseases are required to reduce childhood malnutrition in this population.

Funding: None

P123 Refinement of the Illinois Junior Chefs Survey Using Factor Analysis and Cognitive Interviews

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Objective: Refine the Illinois Junior Chefs (IJC) survey through statistical examination of factor structure, pilot testing, and participant interviews.

Theory, Prior Research, Rationale: Lengthy surveys are a challenge in community based nutrition education program participants, especially for youth audiences at varying levels of literacy and cognitive development. Evaluation using pre- and post-intervention surveys is common, however, rigorous and comprehensive research to assess survey validity and refine survey instruments is often overlooked. This research builds upon IJC survey validation to establish a feasible instrument.

Description: Target audience was low income youth, target age 8-14 (average age = 9.6). IJC is a statewide hands-on culinary education program taught over five 2-hour lessons, each of which includes nutrition education, food tasting, and hands-on recipe preparation activities. During summer 2016, youth participants ($n = 1256$) completed the IJC pre- and post-intervention surveys assessing their culinary and dietary attitudes and behaviors.

Evaluation: Analyses used survey scores to examine the underlying factor structure of the IJC survey. Questions

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with factor loadings less than 0.40 were eliminated, and a modified IJC survey was developed based on these findings. Next, the survey was re-piloted with youth participants in IJC, and data on survey completion time was collected. Researchers also conducted cognitive interviews with participants that investigated their understanding of the modified survey, and analyzed differences between the original and modified survey in regards to participants' preferences and ability to complete the survey.

Conclusions and Implications: A modified IJC survey was developed that decreased participant burden in time and ease of administration which will result in the collection of higher quality data and survey completion rate from youth participants.

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P124 Repeated Exposure Increases Children's Intake of Idaho Trout: A Pilot Study with Young Children

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Objective: Determine whether RE increases children's preference and consumption of trout.

Study Design, Setting, Participants: Children's consumption of trout is supportive of overall health, but intake is below recommendations. Early childhood is a critical period for developing food preferences, particularly with repeated taste exposure (RE). However, RE of trout has not been evaluated in early childhood. Children ages 3-6 years (n=11) attending a Child Development Lab were recruited to participate. All children completed a baseline activity, 8 repeated exposure activities, and a final tasting activity. Trout raised on four different diets were steamed and unseasoned, then offered to children in three bite sized portions.

Outcome Measures and Analysis: Descriptive statistics were reported. Differences in intake at baseline and final activities were determined using a t-test and differences in reported liking were determined using Wilcoxin signed-rank test.

Results: Children's age ranged from 25-59 months. Eight children were male (62%) and 5 were female (38%). The majority were from higher SES families (61% at \$59,000 or above), and primarily Caucasian (92%). For all trout samples, children's intake increased from baseline to final exposure, with a significant increase [t(21)=2.48, p<.001] in one trout sample (μ 2g baseline, μ 9g final activity). Children's sum ranks for all trout samples from baseline to final activity indicated

an increase in the reported liking, but was not statistically significant.

Conclusions and Implications: These results support previous literature on the benefit of repeated taste exposure, and indicate the need to continually offer trout to increase consumption that would support children's overall health.

Funding: None

P125 Risk Characteristics and Behaviors for Ultra-processed Food Consumption in a Sample of Brazilian Children

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Objective: Identify food patterns among 2-9 year olds, and explore potential associations among less healthy dietary patterns, parental feeding practices and parent and child characteristics.

Study Design, Setting, Participants, Outcome Measures, Analysis: Cross-sectional study. Participants were parents of 2-9 year old children enrolled in private schools of São Paulo and Campinas, Brazil (n=929). Parents completed a Food Frequency Questionnaire, feeding practices measured using a validated Brazilian version of the Comprehensive Feeding Practices Questionnaire and questionnaires regarding parent and child characteristics. First, we conducted a factor analysis on the Food Frequency Questionnaire to derive food patterns, followed by a univariate and a multivariate logistic regression model to identify predictors of less healthy dietary patterns.

Results: Two dietary patterns emerged: traditional foods, and ultra-processed foods. 'Healthy Eating Guidance' and 'Monitoring', factors of the Comprehensive Feeding Practices Questionnaire, were negatively associated with the ultra-processed food pattern, while the screen use during mealtimes, lower perceived parental responsibility for adequacy of food groups' intake, lower maternal education, and higher maternal weight status were positively associated with this pattern.

Conclusions and Implications: This is the first study to evaluate associations between less healthy dietary patterns of Brazilian 2-9 year olds, parental feeding practices and other risk characteristics. Our findings highlight demographic and behavioral factors within families that could be used to target tailored policies and interventions in risk populations for obesity and its consequences.

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