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measured for fruits and vegetables for 10 days pre- and post-intervention.

Outcome, Measures and Analysis: Fruit and vegetable intake pre- and post-intervention.

Results: Fruit and vegetable intake was positively related to recognition of fruits and vegetables reported during pre-interviews ($P < 0.05$). Vegetable intake increased at lunch with an additional vegetable choice but fruit intake decreased ($P < 0.01$) so combined fruit and vegetable intake did not change at this meal. Daily fruit intake increased with additional fruit choices at breakfast and snack ($P < 0.01$). The number of different fruits and vegetables consumed increased during the intervention ($P < 0.01$).

Conclusions and Implications: Fruit and vegetable intake increased among preschoolers as a result of additional choices and a nutrition education program. The addition of an additional vegetable choice at lunch resulted in less fruit eaten, which could indicate that an increase in food waste could occur if portion sizes are not adjusted. Dietary diversity is important for overall health, and offering more fruit and vegetable options increased intake of a variety of fruits and vegetables.

Funding: None.

P148 Food, Health & Choices: Validation of an Audience Response System (ARS)-Delivered Food and Activity Questionnaire for Youth

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Objective: To develop and validate the Food, Health and Choices food and activity questionnaire (FHC-Q) appropriate for youth delivered using Audience Response System (ARS) technology.

Theory, Prior Research, Rationale: Since ARS is a commonly used educational assessment tool, it is desirable to determine if it can be used as a valid and reliable method for collecting behavioral and psychosocial data in upper elementary school students.

Study Design, Setting, Participants, and Intervention: New York City public school student participants ranged in age from 9 to 13 years, predominantly Hispanic and African American (96%). The 132-item FHC-Q was administered via ARS in four classrooms (one school) twice, 2 weeks apart ($n = 62$). It was also administered in 4 classrooms (another school) ($n = 82$), followed 2 weeks later by in-class paper and pencil versions of validated questionnaires: Beverage and Snack Questionnaire (BSQ); Physical Activity Questionnaire (PAQ-C); and items from the School Physical Activity and Nutrition Questionnaire (SPAN).

Outcome, Measures and Analysis: Pearson correlations and intra-class correlations assessed test-retest reliability and validity for behavior and psychosocial mediator scales.

Results: Test-retest correlations for scales ranged from: 0.23-0.74. Intraclass correlations for scales ranged from: 0.36-0.85. Correlations with validated instruments were: physical activity: 0.51 ($p < .001$) sedentary behavior: 0.58 ($p < .001$); fruits and vegetables: 0.36 ($p < 0.01$); sweetened beverages: 0.55 ($p < .001$); processed packaged snacks: 0.60 ($p < 0.001$).

Conclusions and Implications: The FHC-Q is a valid and reliable instrument. ARS is a promising new technology for collecting behavioral and psychosocial data in upper elementary students that warrants further investigation.

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P149 Food, Health & Choices: Understanding Body Fatness in Urban Elementary School Youth

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Objective: To examine percent body fat (%BF) distribution within categories of body mass index (BMI)-for-age.

Theory, Prior Research, Rationale: Even though BMI is easy to obtain, it is unclear how reflective it is of adiposity; yet, there are no well-accepted body fat standards for defining adiposity in youth.

Study Design, Setting, Participants, and Intervention: BMI and percent body fat were examined in a cross-sectional design using baseline data from the Food, Health & Choices study. Participants were 10 to 13-year-old predominantly Hispanic and African American students (91%) from New York City public schools, ($n = 1,110$, 50% male).

Outcome, Measures and Analysis: Height, weight, and %BF (Tanita model SC-331S) were measured, and BMI was calculated (CDC BMI-for-age growth charts). For each BMI category, mean and range for %BF were calculated. Pearson correlations were used to examine associations between BMI-for-age and %BF.

Results: The correlation between BMI-for-age and %BF was .82 ($p < .001$), yet there were wide ranges for %BF within each BMI category: for underweight (3.9% of students), %BF range = 7.7-28.9, mean %BF = $12.1 \pm 3.7\%$; normal weight (51.4% of students), %BF range = 7.5-29.4, mean %BF = $18.7 \pm 4.6\%$; overweight (19.5% of students) BF% range = 16.3-35.2, mean %BF = $27.6 \pm 4.0\%$; and obese (25.1% of students) BF% range = 20.5-51.5, mean %BF = $36.6 \pm 5.8\%$.

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Conclusions and Implications: The high correlation between BMI-for-age and %BF indicates that BMI is a good group-level proxy for %BF in this cohort. Yet, the wide range of %BF within BMI-for-age categories suggests the need for further studies that measure %BF in youth using a validated and robust approach (eg, multi-compartment model) for the purpose of setting standards in youth.

Funding: USDA.

P150 Food Health & Choices: Understanding Relationships among Food and Activity Behaviors and Theory-Based Mediators

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Objective: To examine cross-sectional relationships among upper elementary students' food and activity behaviors and theory-based mediators using data from the Food, Health & Choices baseline assessment.

Theory, Prior Research, Rationale: Nutrition education interventions could be more effective if they focus on the mediators that are predictive of behaviors for their study population.

Study Design, Setting, Participants, and Intervention: Fourth and 5th graders from 19 New York city public schools participated (n=1364); students ranged in age from 9 to 13 years, predominantly Hispanic and African American (96%). Students completed a 132-item Food, Health & Choices food and activity questionnaire (FHC-Q) administered via Audience Response System (ARS) technology.

Outcome, Measures and Analysis: Regression analyses, controlled for gender and social desirability, determined which mediators significantly predict each of target behaviors.

Results: Every behavior had some predictive mediators: Fruits and vegetables: amotivation (p=.031); self-efficacy (p<.001); habit strength (p<.001); Physical activity: autonomous motivation (p=.034); self-efficacy (p<.001); habit strength (p=.002); Sweetened beverages: controlled motivation (p=.04); outcome expectation (p<.001); habit strength (p<.001); Processed packaged snacks: outcome expectation (p<.001); behavioral intention (p=.005); habit strength (p<.001); knowledge (p=.047); Fast Food: a motivation (p=.012); competence (p=.018); habit strength (p<.001); knowledge (p=.007); Recreational screentime: habit strength (p<.001); outcome expectation (p<.001); self-efficacy (p<.001); goal setting (p=.25).

Conclusions and Implications: The results show that different behaviors have different predictive mediators, suggesting that targeting the appropriate mediators for each behavior can increase effectiveness of nutrition education interventions. Habit strength was a significant predictor for all behaviors.

Funding: USDA.

P151 Belief That Exclusive Breast Milk Is Best: Breastfeeding Knowledge and Country of Origin in Low-Income Latina Pregnant Women

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Objective: Examine relationship between belief that exclusive breast milk is the best way to feed a baby and breastfeeding knowledge and country of origin in low-income Latina pregnant women.

Theory, Prior Research, Rationale: Despite high breastfeeding rates in low-income Latina mothers, the vast majority combination feed breast milk and formula; little research addresses differences in these practices by breastfeeding knowledge and country of origin.

Study Design, Setting, Participants, and Intervention: Cross-sectional survey conducted during an obstetrical visit at an urban public hospital during enrollment in Starting Early, a 3-year child obesity prevention intervention.

Outcome, Measures and Analysis: Dependent variable: Belief that exclusive breast milk is the best way to feed. Independent variables: Country of origin (Mexico vs. others); knowledge of breast feeding benefits using Infant Feeding Practices Study II questions (low vs. high). In logistic regression, adjusting for age, parity, married and US born, we analyzed associations between belief that exclusive breast milk is best and breastfeeding knowledge and country of origin.

Results: 120 pregnant women: 22% US born, 43% Mexican born, 35% from other South/Central American countries, 59% multiparous, 65% married. 55% believed exclusive breast milk is best; 36% with low BF knowledge. In adjusted analyses, women with higher breastfeeding knowledge (AOR 3.6, 95% CI 1.4 to 9.3) and Mexican origin (AOR 3.3, 95% CI 1.2 to 9.1) were more likely to believe that exclusive breast milk was best.

Conclusions and Implications: Women with higher breastfeeding knowledge and Mexican origin are more likely to believe that exclusive breastfeeding is best. Programs which increase breastfeeding knowledge may increase exclusive breastfeeding; Latina women of non-Mexican heritage may need increased support.

Funding: USDA.

P152 Food, Health & Choices: Development and Implementation a Classroom Wellness Intervention "Positively Healthful Classrooms"

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