O36 (continued)

Objective: Examine the association between cafeteria noise and selected environmental factors and FV consumption among elementary school students.

Study Design, Setting, Participants: This cross-sectional study was conducted at 20 public elementary schools from 8 states in the U.S. (65% urban; 77% free/reduced price eligible) participating in the National School Lunch Program. Lunch-tray photo observations of 2nd and 3rd grade students lunch trays (n=2,571) was conducted.

Outcome Measures and Analysis: Digital photography was used to assess FV consumption on two consecutive days at each school and photos were visually analyzed (83% inter-rater agreement). Cafeteria noise continuous average exposure was measured via sound level meter (SP-DL-2-1/3; Quest Diagnostics, Oconomowoc, WI). Environmental factors (recess before lunch, time for lunch, presence of a salad bar, and number of FV items offered) were assessed using an observational checklist. Multilevel linear models examined the association between FV consumption (square-root transformed) and all environmental factors, controlling for school-level covariates.

Results: Mean (SD) FV consumption was 0.45 (0.40) cup-equivalents. Mean school cafeteria noise was 79.7 DbA (range=70.1-83.1) and the mean time for lunch was 27.9 minutes (range=20.5-38.5); 27% of students had recess before lunch and 60% had access to a salad bar, with a mean of 7.4 FV items offered (range=3-14). FV consumption was negatively associated with noise ($B=-0.017$; $SE=0.004$; $P<0.001$) and positively associated with recess before lunch ($B=0.096$; $SE=0.023$; $P<0.001$). Time for lunch and presence of a salad bar were not associated with FV consumption.

Conclusions and Implications: Environmental factors, including the cafeteria noise level and recess before lunch, are modestly associated with FV consumption at school lunch and should be considered in future research.

Funding: FoodCorps, Inc.

O37 Factors Associated with Food Insecurity in Rural Central Appalachia

Frances Hardin-Fanning, PhD, RN, fdbowe2@uky.edu, University of Kentucky, 751 Rose Street, Lexington, KY 40536; Cheryl Witt, RN, MSN, University of Kentucky; Mary Kay Rayens, PhD

Objective: The impoverished rural counties of Central Appalachia have low rates of household food insecurity. Food costs are higher in this region when compared to nearby non-Appalachian counties. The purpose of our cross-sectional study was to explore factors associated with food insecurity and fruit/vegetable consumption in rural Central Appalachia.

Study Design, Setting, Participants: Participants (n = 123) enrolled in a 12-month nutrition education/cooking

skills intervention completed a demographics questionnaire, BLOCK Fruit/Vegetable Screener and USDA Household Food Security Survey Module at baseline of the intervention.

Outcome Measures and Analysis: Bivariate associations among all covariates (i.e., age, gender, education, household income) and dependent variables (i.e., food insecurity and fruit/vegetable consumption) were analyzed using Spearman's rank correlation and two-sample t-test. Multivariable associations of food security with other study variables were assessed using linear regression.

Results: In the bivariate analysis, age was positively associated with baseline fruit/vegetable consumption ($\rho = .20$, $p = 0.01$) and negatively associated with food security ($\rho = -0.31$, $p = 0.0004$). Household income was negatively associated with food security ($\rho = -0.30$, $p = 0.0006$) and fruit/vegetable consumption was negatively associated with food security ($r = -0.21$, $p = 0.001$). In the multiple regression, controlling for age, gender, income and education, greater food insecurity was predictive of lower fruit/vegetable consumption.

Conclusions and Implications: High rates of food insecurity influence fruit and vegetable consumption in Appalachia and should be considered during development of nutrition interventions targeting individuals living in this region. Additional research is needed to determine nutrition policies most effective in reducing this barrier to healthy dietary habits in Appalachia.

Funding: NIH

O38 Nutrition Environment Food Pantry Assessment Tool (NEFPAT): Development and Evaluation

Cassandra J. Nikolaus, MS, cjnikol2@illinois.edu, University of Illinois at Urbana-Champaign, 905 South Goodwin Ave., Urbana, IL 61801; Emily Loehmer, MS, LDN, RD, University of Illinois at Urbana-Champaign; Emily Laurent, BS, University of Minnesota; Ruopeng An, PhD, University of Illinois at Urbana-Champaign; Naiman Khan, PhD, RD; Jennifer McCaffrey, PhD, MPH, RD

Objective: This study develops and evaluates an assessment tool for the nutrition environment and implementation of recommended practices in food pantries with diverse settings.

Study Design and Setting: The Nutrition Environment Food Pantry Assessment Tool (NEFPAT) was developed as an observational assessment tool that measures six objectives (increasing client choice, "nudging" healthful foods, diversifying fruit/vegetable forms, diversifying fruit/vegetable types, promoting additional resources, and accommodating alternate eating patterns) within the food pantry environment. The NEFPAT was administered in