P192 Trigger Healthy: Healthy Samples Induce Healthy Shopping

Aner Tal, PhD, at425@cornell.edu, Cornell University, 38 Meadowlark Drive Lowee, Ithaca, NY 14850;
B. Wansink, PhD

Objective: The studies aimed to examine the influence of food samples on subsequent grocery shopping. We wished to see whether healthier (less healthy) samples trigger healthier (less healthy) purchases.

Study Design, Setting, Participants, and Intervention: Participants in three studies received more or less healthy (e.g., apple) or unhealthy (e.g., cookie) samples and subsequently shopped in a virtual (studies 1, 3) or actual (study 2) grocery store. In the virtual grocery store, participants were offered healthier and less healthy items to choose from.

Outcome, Measures and Analysis: For the lab studies, we counted healthier and less healthy choices. We then calculated the net number of healthy items (healthy items - unhealthy items). For the grocery store study, we analyzed spending on fruits and vegetables. Analysis was done via t-tests.

Results: For both different food type samples (studies 1-2) and different framing of samples (study 3) we found that healthy samples lead to more healthful choices. In study 1, participants imagining eating an apple (vs. a cookie) chose a greater net of healthier items (4.1) than those imagining sampling a cookie (1.3). In study 2, grocery shoppers sampling an apple spent more money on fruits and vegetables (\$6.41) than those sampling a cookie (\$5.68) or no sample (\$5.02). In study 3, participants (N = 118) drinking milk advertised as “healthy” selected a greater net of healthier items (3.55) than those drinking milk advertised as “indulgent” (1.65), or no sample (.69), $p = .02$.

Conclusions and Implications: The current findings suggest consumers choose products similar in healthiness to samples, even with product choices that are determined by situation rather than their own independent choice.

Funding: Cornell University

P193 Infant Feeding Risks Differ by Language Preference and Age Group: Implications for Nutrition Educators

Lauren Haldeman, PhD, lahaldem@uncg.edu, University of North Carolina, Greensboro, P.O. Box 26170, 313 Stone Building, Greensboro, NC 27244; K. Towery, BS;
R. Coltery, BS, University of Ulster, Northern Ireland

Objective: To identify the level of feeding risks among infants aged 0-24 months and examine relationships between risk scores and demographic characteristics.

Study Design, Setting, Participants, and Intervention: Infant feeding surveys were collected from caretakers of infant patients at a low-income medical clinic. Survey questions assessed caretaker feeding behaviors and infant consumption. Participants completed the survey in English (n=2,305) or Spanish (n=1,162).

Outcome, Measures and Analysis: Additive risk scores were calculated for unhealthy eating (scale 0-7), tooth decay (0-5), choking (0-6), and total risk (0-18). Bivariate analyses assessed the relationship of risk level with age group in months (0-6, 7-12, 13-18 and 19-24), gender, and language preference. Linear regression identified predictors of unhealthy eating, tooth decay, choking, and total risk.

Results: Participating infants (n=3,467) were primarily 0-6 month old (51%) males (51%) and females (49%). Older infants had higher risk scores for unhealthy eating and tooth decay. Bivariate analysis revealed unhealthy eating risk scores were significantly higher for English versus Spanish speakers (1.3 vs. 0.88, $p < 0.001$, respectively), and increased with age for both groups. Tooth decay risk scores were significantly higher for Spanish speakers ($p < 0.001$). Older infants of English speakers showed significantly higher choking risk than older infants of Spanish speakers ($p < 0.005$). No significant gender differences were found. In multivariate analysis language preference and age group predicted unhealthy eating, tooth decay, and total risk. Age group predicted choking risk.

Conclusions and Implications: Nutrition educators may utilize this information to better target gaps in infant feeding education and to address certain risk concerns with caretakers, tailored to their needs and greatest risks of the infant.

Funding: None

P194 Change in Nutrition and Physical Activity Behaviors Among SNAP-Eligible 4th and 5th Grade Students: A Multi-County Study

Traci Armstrong Florian, MS, RD, tarmstro@cals.arizona.edu, The University of Arizona, 4341 East Broadway Road, Phoenix, AZ 85040; L. Jacobs, DrPH, MPH; S. Martinez, BS; J. W. Bea, PhD; V. Farrell, PhD, RD; V. Hartz, MS; S. Misner, PhD, RD

Objective: To measure change in nutrition and physical activity behaviors through SNAP-Ed instruction among limited-income 4th and 5th graders.

Study Design, Setting, Participants, and Intervention: The University of Arizona Nutrition Network (UANN) provides nutrition education, training, and materials, aligned with USDA guidelines, to teachers at participating schools with >50% free/reduced lunch. The UANN administered pre/post nutrition and physical activity surveys to students in 11.1% of participating 4th and 5th grade classrooms in five Arizona counties.

Outcome, Measures and Analysis: Descriptive statistics were calculated for student demographics. Due to anonymity of surveys, paired t-tests were used to evaluate change in pre/post surveys. Significance was set at $p < 0.05$.

Results: Forty-two classrooms participated (students (N) 854=pre, 899=post). Participant characteristics: 59.1% fifth-graders, 51.4% female, mean age 9.83 years (pre). Students reported consuming whole grains 1.12 (± 0.33) times/day and fruit 1.74 (± 0.39) times/day on pre-surveys. Reported intakes increased 12.2% ($p = .056$) and 5% ($p = .039$), respectively, on post-surveys. Total beverage

Continued on page S184

P194 (continued)

consumption, including water, milk, and sugar-sweetened beverages increased 3.1% ($p=.045$). After-school physical activity increased 14.2% ($p<.0001$). Additionally, 8.8% more students reported being active during their lunch breaks ($p=.003$).

Conclusions and Implications: General nutrition education and physical activity efforts are associated with a trend toward an increase in reported whole grain, fruit and total beverage consumption as well as increased after-school and lunch-break physical activity. Greater changes in all consumption and physical activity behavior may be seen with a more targeted nutrition education and physical activity approach in schools.

Funding: Supplemental Nutrition Assistance Program - Education

P195 Coming Together: Family Relationships and Healthy Food Preparation

James Bates, PhD, bates.402@osu.edu, The Ohio State University, 1787 Neil Avenue, 151c Campbell Hall, Columbus, OH 43210; A. White, PhD, University of Maine; D. Mathews, MS, RD; S. Colby, PhD, RD, University of Tennessee; L. Franzen-Castle, PhD, RD, University of Nebraska- Lincoln; K. Kattelman, PhD, RD, LDN, South Dakota State University; M. Olfert, PhD, RD, LDN, West Virginia University

Objective: The cultivation and consumption of food at family mealtime have been central organizing and sustaining activities of human beings throughout history. The gathering of kin around food not only sustains human life but unifies family members and strengthen relationships. Programmatic efforts to either improve healthy meal preparation or strengthen family relationships rarely co-occur. This proposal reports pilot data from a five-state family intervention designed to enhance family relationships and improve healthy meal preparation.

Study Design, Setting, Participants, and Intervention: This multistate family intervention pilot occurred in one eastern, two Appalachian, and two mid-western states. Participants included 50 parents and their child involved in 4-H. Participants were recruited through 4-H programs and participated in a six-week series where parents and youth received instruction in healthy meal preparation and participated in activities designed to enhance family relationships. Parents' data is reported.

Outcome, Measures and Analysis: Measures included the Family Adaptability and Cohesion Scale, which assessed family cohesion, flexibility and communication on a 5-point Likert scale. Quality of life was assessed using the CDC Quality of Life Scale. The Cooperative Extension Behavior Checklist and the Birch Child Feeding Questionnaire both assessed aspects of family eating and feeding with Likert scales. Demographic information were also obtained.

Results: Results of correlational analyses indicate that various aspects of mealtime preparation activities and family relationships are significantly associated with each other. Regression models suggest that numerous factors

contribute to the enhancement of family relationships. Further details will be provided.

Conclusions and Implications: Implications for family intervention projects with components of food preparation and healthy nutrition will be discussed.

Funding: NIFA

P196 The Impact of Cafeteria Noise on School Lunch Consumption: A Plate Waste Study

Carmen Byker, PhD, carmen.byker@montana.edu, Montana State University, 222 Romney Gym, Bozeman, MT 59718; E. Serrano, PhD, Virginia Tech; M. Ermann, MArch; A. Farris, MS, RD

Objective: Although there is an established relationship between noise and youth's cognitive performance, little research exists to test the impact of noise in the lunchroom setting. This research examined the degree that school cafeteria noise effects food consumption through plate waste measurements.

Study Design, Setting, Participants, and Intervention: During the initial study stage, noise and sound levels were measured at four elementary schools within pre-kindergarten and kindergarten classes for one day. Two schools, with the highest and lowest noise and sound levels, were selected for study inclusion.

Outcome, Measures and Analysis: Noise, sound, potential mediators, and plate waste (to assess food consumption) among were measured for five days.

Results: During the initial study phase, food waste observations were made for 304 meals with one pre-kindergarten class and four kindergarten classes in one school during one week. The research team collected school lunch trays and meal components were separated into bins relative to each food or beverage appearing on the school's daily menu. Bins were weighed in grams and converted to ounces at the end of each lunch period. For study inclusion, 145 meals were observed in the school with the highest level of noise and 128 meals were observed in the school with the lowest level of noise. Findings will be reviewed and show that school noise may be a contributor to varying levels of waste within food groups.

Conclusions and Implications: Focusing on school noise in the cafeteria may be one generalizable and low-cost approach to increase healthy food consumption and reducing plate waste.

Funding: Cornell Center for Behavioral Economics in Nutrition

P197 Consumer Perceptions of Gluten-Free Products and the Healthfulness of Gluten-Free Diets

Caroline Dunn, MS, RD, cgdunn@ufl.edu, University of Florida, 3038 McCarty Hall D, Gainesville, FL 32611; L. House, PhD; K. P. Sheltnutt, PhD, RD

Objective: To determine if gluten-free food labels impact consumers' perceptions of overall likeability, flavor and

Continued on page S185