O15 (continued)

Conclusions and Implications: The FVRQ is a simple, accurate instrument for assessing FV consumption among elementary students that is low-cost to administer and analyze.

Funding: FoodCorps, Inc.

O16 Examining the Influence of Time Constraints on Diet Quality

Stephanie Rogus, MA, BS, RD, sr2489@nyu.edu, New York University, 705 Shepherd Street NW, Washington, DC 20011

Objective: Much of the current research and policy aimed at understanding and mitigating disparities in diet quality between low-income and higher-income consumers has focused on food price and availability as barriers to healthy eating. Data on how consumers allocate their time could elucidate the relationship between food choice and the food environment, and also help researchers and policy-makers understand relationships between time constraints and dietary quality. This research examines the influence of time constraints on the nutritional quality of purchased foods.

Study Design, Setting, Participants, Intervention: This observational study analyzes data on food purchases from USDA's Food Acquisition and Purchase Survey of a nationally representative group of U.S. households.

Outcome Measures and Analysis: Our outcome measure was dietary quality, measured using the Healthy Eating Index 2010. Multivariate models assessed the influence of an objective (time spent in round-trip travel to work) and perceived (feeling too busy to prepare healthy food) time constraint on the quality of foods purchased by households.

Results: The perceived time constraint is found to be associated with a 2.5-point reduction in HEI score. Further, this relationship exists for higher-income households (those above 400% of the poverty line) and not low-income households.

Conclusions and Implications: Perceptions of being time-constrained influence the healthfulness of purchased foods while the objective time constraint does not. This relationship holds only for higher-income households, suggesting that they are better able to substitute money for time and likely eat out more often than time-constrained, low-income households. We recommend policy solutions, such as menu labeling and nutrition education that highlights time management skills and healthier convenience food substitutions.

Funding: None

O17 Association Between Eating Competence, Fruit and Vegetable Intake, and Body Mass Index Among Undergraduate College Students

Mary Robertson, MA, CHES, robertsonmarynelson@gmail.com, Mississippi State University, 360 Hardy Road,

Mississippi State, MS 39762; Jen Nickelson, PhD, RD, The University of Alabama; Sarah Chaffee, MA, Samford University; Seung Eun Jung, PhD, The University of Alabama

Objective: To examine the association between eating competence (EC), healthy eating [as indicated by fruit and vegetable intake (FVI)] and body mass index (BMI), and to determine if EC and FVI predict BMI.

Study Design, Setting, Participants: A sample of undergraduate students from a major southeastern university were recruited from undergraduate classes selected at random ($n = 421$).

Outcome Measures and Analysis: Participants completed an anonymous, one-time survey (47 questions) comprised of four sections: EC levels, FVI, child feeding intentions and demographics. Summary statistics, chi-square tests, ANOVAs, and multiple regression analyses were conducted ($\alpha = .05$).

Results: Students were 89.3% white and 55.6% female. The majority of participants (61.0%) were categorized as "competent eaters." Only 11.4% of participants consumed more than four cups of fruits and vegetables per day. Most participants (62.6%) were classified as normal weight, but 34.8% were overweight or obese. Controlling for other variables in the model, EC and gender were significantly negatively associated with BMI, but FVI was not [$F(4,400) = 5.95, p < .001, R^2 = .056$].

Conclusions and Implications: Whereas the findings from this cross-sectional study cannot show cause and effect, BMI tended to be higher among male students and those with lower EC scores. FVI was not associated with BMI, although it has been found to be in other studies. Further exploration of this phenomenon is warranted, as a focus on educating individuals to be eating competent may be more beneficial for weight control than encouraging FVI in and of itself.

Funding: None

O18 Analyses of DRD2/ANKK1 Polymorphisms Reveal a Potential Role of Dopamine Pathways in Eating Competence

Barbara Lohse, PhD, RD, CDN, balihtst@rit.edu, Rochester Institute of Technology, 180 Lomb Memorial Avenue CIMS 78-A622, Rochester, NY 14623; Tricia Psota, PhD, RD, Center for Nutrition Policy and Promotion; Deborah Grove, PhD, Pennsylvania State University; Penny Kris-Etherton, PhD, RD

Objective: Examine the relationship between eating competence (EC) and polymorphisms of DRD2/ANKK1, a dopamine gene with A1 allele associated with neuropsychological executive function.

Study Design, Setting, Participants: Baseline measures from a RCT of a nutrition/exercise intervention implemented with pre-menopausal, overweight/obese, central Pennsylvania females meeting behavioral/medical exclusion criteria.

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O18 (continued)

Outcome Measures and Analysis: Eating behaviors measured with Three Factor Eating Questionnaire (TFEQ), Satter Eating Competence Inventory (ecSI 2.0); BMI, waist circumference (WC), DRD2/ANKK1 allelic expression. Analyses included General Linear Modeling controlling for covariates.

Results: Of 65 (mean age 40.6 ± 5.2 y; BMI 31.2 ± 4.4) providing DRD2/ANKK1 data, 60 completed ecSI 2.0 and/or TFEQ; 14% were eating competent (EC), mean ecSI 2.0 score was 26.1 ± 6.1 . ecSI 2.0 was not associated with BMI or WC, but significantly inversely correlated with TFEQ cognitive restraint (CR), emotional eating (EE), and uncontrolled eating (all $P < 0.05$). ANKK1/DRD2 allele distribution was AA-1, AG-25, and GG-39. When controlled for TFEQ-EE, ecSI 2.0 was higher ($P = 0.035$) in GG ($27.4 \pm 177; 0.9$) than AG ($24.1 \pm 177; 1.3$). ecSI 2.0 Food Acceptance subscale, which was significantly greater in GG without any controls ($P = 0.009$) remained significant when controlling for TFEQ-EE ($P = 0.008$). ecSI 2.0 contextual skills tended to be greater in GG ($P = 0.06$), continuing so when controlling for TFEQ-EE ($P = 0.07$) and significant when controlling for TFEQ-CR ($P = 0.047$).

Conclusions and Implications: EC was related to ANKK1/DRD2 polymorphisms; ecSI 2.0 scores were lower for heterozygotes carrying the A1 allele associated with cognitive behaviors interfering with healthful eating. These findings provide support for the design of genetically personalized EC education and suggest further research into the role of dopamine in EC.

Funding: USDA, Rochester Institute of Technology

O19 Beyond Health: Extending Teaching About Sustainability of the Mediterranean Diet in Malta

Suzanne Piscopo, PhD, suzanne.piscopo@um.edu.mt, R. Nutritionist, R. Eur Health Prom Practitioner, University of Malta, Room 324, Faculty of Education, University of Malta, Tal-Qroqq, Msida Malta MSD2080

Objective: To assess whether educational reforms in Malta are promoting a holistic valuation of the Mediterranean Diet (MD).

Target Audience: University and Secondary students.

Theory, Prior Research, Rationale: Recently, there were developments in the Maltese national Secondary level curriculum and in the undergraduate Home Economics (HE) training at the University of Malta. Simultaneously, promotion of the value of the MD has expanded and increased by national health authorities and by international experts.

Description of Course and Curriculum: The BSc HE program and the learning outcomes of various Secondary school subjects were analysed to identify the extent to which they promoted the four dimensions of a recently proposed framework on sustainability of the MD.

Evaluation: Results indicate that the health and nutrition benefits of the MD are tackled most, though to varying levels, in both the degree program and different school subjects. The HE degree also addresses the other three dimensions – namely richness in biodiversity and low environmental impact, high socio-cultural food value, and positive local economic returns – though in less detail. The Core Science Secondary school subject has good potential for including the biodiversity and environmental impact dimension; whereas Personal, Social and Career Development and Social Studies have good potential for incorporating the socio-cultural and economic dimensions. There is some coverage of the latter dimensions in HE; yet potential for integration is much higher.

Conclusions and Implications: In Maltese Secondary and Tertiary education there is moderate coverage of the health benefits of the MD. Attention is required to expand students' appreciation of the other sustainability dimensions of this diet to help strengthen adherence to it for individual and community wellbeing.

Funding: None

O20 Cultivating Healthful Eating in Families (CHEF): A Family-Based Program Targeting Whole Plant Foods

Tonja Nansel, PhD, nanselt@mail.nih.gov, Eunice Kennedy Shriver National Institute of Child Health and Human Development, 6710B Rockledge Drive, Bethesda, MD 20817-7004; Leah Lipsky, PhD, Eunice Kennedy Shriver National Institute of Child Health and Human Development

Objective: To create a family-based program for improving diet quality.

Target Audience: This program is applicable to families seeking to improve dietary quality in a clinic-based setting, and could be used by nutrition researchers, extension workers, and practitioners conducting behavioral nutrition interventions and programs.

Theory, Prior Research, Rationale: The approach was guided by self-regulation, social cognitive, and self-determination theories. An applied problem-solving structure, which has demonstrated efficacy in improving various health behaviors, was adapted for application to eating behaviors.

Description: The curriculum comprises six core and three booster sessions, and can be delivered by non-professionals or professionals. Sessions integrate a motivational interviewing style of interaction to increase internal motivation for healthful eating, active learning to facilitate skill-building and engagement with the educational information, and applied problem-solving to facilitate goal-directed behavior and self-regulation skills. An initial overview session addresses key principles of healthy eating, focusing on whole plant foods (fruits, vegetables, whole grains, legumes, nuts, seeds). The next five sessions apply these principles to specific eating contexts - breakfast, lunch, dinner, snacks, and eating away-from-home. Three booster sessions address overcoming challenges associated

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