P181 (continued)

Conclusions and Implications: Enhanced efforts in teaching consumers to use food labels for dietary purposes are needed.

Funding: None.

P182 Students' Feedback to Improve the USDA Fresh Fruit and Vegetable Program (FFVP) in Indiana

Yi-Chun Lin, MS, lin42@indiana.edu, Indiana University, 1025 E. 7th Street, Room 116, Bloomington, IN 47405; E. Foland, MS, RD, Indiana Department of Education; A. Fly, PhD, Indiana University

Objective: To identify salient student responses to program fruit and vegetables (FV) and formulate recommendations.

Design, Setting and Participants: FFVP is a federally-funded free-FV distribution program. Students receive FV as snacks at program schools. Data were previously collected in classrooms from 4-6th graders in 32 randomly-selected Indiana FFVP-schools during academic year 2011-12. Volunteers completed anonymous post-program questionnaires with an open-ended item, "Do you have any comments to make about FFVP?"

Outcome Measures and Analysis: Content analyses were applied to 800 responses that were randomly sampled from 2086 responses. Responses were analyzed to identify themes then summarized within theme.

Results: Among responses, 40% pertained to overall program attributes, 33% to fruit- and 19% to vegetables served in FFVP, with 8% unrelated random comments. Within fruit responses, students most frequently reported liking program fruits with either no reason given (27.4%), flavor (tasty/juicy/sweet:18.5%), or because the program provided types they liked (strawberries/apples; 12.3%). Only 1.1% reported disliking fruit, while 40.7% suggested serving fruit more frequently, and greater variety. Within vegetable responses, students most commonly reported liking vegetables because, either they are healthy for the body (5.7%), or they like certain types of vegetables (carrots/lettuce; 22.8%), and disliking vegetables for either no reason (17.9%) or flavor (nasty/weird-tasting/gross; 19.9%). They suggested vegetable service include dipping sauce (14.8%) and more variety (18.9%).

Conclusions and Implications: Student reports herein (that they like fruit) help explain why this intervention improves fruit intake. Program planners should consider adopting students' salient suggestions to improve the taste of vegetables by service with dipping sauces and providing a wide variety of mild-flavored vegetables.

Funding: None.

P183 The Less the Better? Lipid Effects on Depression in Healthy Population

Sunsin Kim, PhD, MD, kimss@snuh.org, Seoul National University Hospital, Health Care System Gangnam Center, 39th FL, GFC Building 152 Teheran Ro, Gangnam-gu Seoul, 135-984, Republic of Korea; S. Lee, PhD, MD; S. Cho, PhD, MD

Objective: The objective of this study was to examine the relationship among the serum lipid level, diet behaviors and depression.

Design, Setting and Participants: 14,272 subjects who visited to the Seoul National University Hospital Gangnam Center from January 2013 for December 2013 for a routine health check-up were enrolled. 6,635 were female and 7,737 were male. The mean age is 50.28 ± 11.45 years old. Any subject who has medication was excluded.

Outcome Measures and Analysis: All subjects completed Beck Depression Inventory and questionnaire for healthy diet behaviors. The healthy diet behavior was measured by modified "Health eating index". They also completed blood test for lipid profile. Statistical Analysis was performed using the statistical program SPSS.

Results: Partial correlation after adjustment for age was used to evaluate the relationships among the serum lipid levels, the score of healthy diet behaviors and BDI score. The healthy diet behavior score was negatively correlated with BDI score ($r = -0.175$, $p < 0.01$). The Triglyceride (TG) and Low density Lipoprotein (LDL) were negatively correlated with BDI ($r = -0.030$, $p < 0.01$ and $r = -0.037$, $p < 0.01$ respectively).

Conclusions and Implications: We can conclude that there is a significant relationship between low LDL level and depression. Tendency of depression and healthy diet behavior had significant relationship. This study suggests that nutrition educators need to address depression to provide a appropriate guideline for adequate lipid intake.

Funding: None.

P184 Nutrition Education Intervention: Using Train the Trainer Approach to Reach Populations With Low Literacy in Turkana, Kenya

Teresia Mbogori, MS, teresia.mbogori@ttu.edu, Texas Tech University, 2619 19th Street, Lubbock, TX 79410; M. Murimi, PhD, RD, LDN; A. Ruhul, MPH, MS

Objective: The purpose of this study was to improve child feeding practices by educating mothers on optimal child care practices, with an ultimate purpose of reducing stunting rate for under five year old children in Turkana which is currently 35%.

Design, Setting and Participants: Seventy three women with children under 5 years from Turkana County Kenya were randomly selected to participate in this study through community leaders. To ensure sustainability of the learned practices, 5 community health workers underwent the intervention before and with the participants and were provided with teaching materials. The following topics were covered: food selection and preparation, breastfeeding and weaning foods, and hygiene and sanitation. The teachings included cooking demonstration with hands on activities by the women and tasting sessions.

Outcome Measures and Analysis: A questionnaire based on the topics included in the intervention was

Continued on page S82

P184 (continued)

developed, validated and pilot tested to assess nutrition knowledge. Paired T test and McNemar tests were used to assess change in nutritional knowledge.

Results: The intervention improved nutrition knowledge on food selection by 17% ($P < 0.001$), food storage by 16% ($P < 0.001$), timely initiation of breastfeeding by 12.1% ($P = 0.01$) and benefits of timely introduction of complementary feeding by 15.1% ($P = 0.002$). All the participants (100%) identified the appropriate method of cooking vegetables and the right time to start complementary feeding as 6 months.

Conclusions and Implications: Results of this study indicate that a demonstration based nutrition education intervention improved nutrition knowledge of women which may lead to improved child feeding practices hence reduction in child malnutrition.

Funding: None.

P185 Why Low-Income, Hispanic Mothers Don't Exclusively Breastfeed Their Babies: Preliminary Findings

Cheng Li, MS, cl852@scarletmail.rutgers.edu, Rutgers University, 203 11 Suydam Street 2nd Floor, New Brunswick, NJ 08901; K. Lazarowitz, North Hudson WIC Program; D. Palmer-Keenan, PhD, Rutgers University

Objective: The objective of this research was to examine Women, Infants, and Children (WIC) staff's perceptions of the barriers that prevent Hispanic women from exclusively breastfeeding their babies.

Design, Setting and Participants: Semi-structured interviews were conducted with all nutrition educators (6 professional staff and 7 peer counselors) at the North Hudson, NJ WIC. Staff were asked what they had heard mothers say or seen them do that reflected less than optimal infant feeding practices (including not exclusively breastfeeding).

Outcome Measures and Analysis: Content analysis was employed to catalogue and categorize responses.

Results: Seven reasons for not exclusively breastfeeding were identified. These were: perceptions of having insufficient milk supplies; beliefs that breast milk alone is inadequate for baby's optimal health; lack of family or physician support; need to return to work or school; perception that formula feeding is the norm in the US; beliefs that since WIC provides formula that it is the nutritious choice; cultural myths (e.g., beliefs that the mother's consumption of certain foods or her emotional state can reduce breast milk quality).

Conclusions and Implications: WIC educators have heard low-income Hispanic women state seven categories of perceptions, beliefs and barriers that impact their choices to exclusively breastfeeding their babies. Future breastfeeding education for low-income Hispanic women should provide culturally appropriate information that takes into account these findings when encouraging low-income, Hispanic mothers to exclusively breastfeed. These findings should also be verified in other locations.

Funding: Supplemental Nutrition Assistance Program - Education.

P186 Influence of Age on Participation and Preferences for Education Strategies in a Multi-Component Intervention

Jessica Li, jessli@vt.edu, Virginia Tech, 1981 Kraft Drive (MC 0913), 1003 ISLB, Blacksburg, VA 24060; K. Porter, PhD, RD; A. Bailey, MA; N. Woodford, BS; J. Zoellner, PhD, RD

Objective: To explore whether age impacts participation in a multi-component intervention and influences likes and dislikes of the different components.

Design, Setting and Participants: This is a secondary analysis of Talking Health, a six-month, community-based RCT testing the efficacy of a sugar-sweetened beverage intervention against a matched-control comparison condition. Both conditions consist of three group classes, 11 interactive voice response telephone (IVR) calls, and one teach-back call. Participants also complete personal action plans and behavioral diaries. Of the 301 participants, the majority were female (81.8%), Caucasian (94%), earned $< \$20,000/\text{year}$ (52%). Additionally, 74% completed the 6-month evaluation.

Outcome Measures and Analysis: Data sources included adherence data and an interview-administered summative evaluation with scaled and open-ended questions. Responses to open-ended questions were content coded, and number of responses per code were tallied. ANOVAs and Chi-Squares assessed differences by three generational groups: Millennials (1982-1996, 26%), GenXers (1961-1981, 50%), and BoomersPlus (≥ 1960 , 24%).

Results: Compared to GenXers and BoomersPlus, Millennials were less likely to attend group classes ($p < 0.001$), complete the teach-back call ($p < 0.001$), and complete IVR calls ($p < 0.001$). Generational groups attended the six-month assessment at similar rates. There were no differences in types of likes and dislikes for classes, IVR calls, personal action plans, and behavioral diaries mentioned across groups. More Millennials and BoomersPlus described the behavioral diaries as motivating ($p < 0.01$) compared to GenXers.

Conclusions and Implications: Age is rarely considered when tailoring interventions, yet may influence participation in nutrition education interventions for adults. Researchers and interventionists should consider differences in age when designing and delivering interventions for a broad range of adults.

Funding: NIH.

P187 Rethinking Regulations on State Fair Foods: What's Wrong With a Fried Butter Stick?

John Brand, PhD, foodandbrandlab@cornell.edu, Cornell University, 475 Warren Hall, Ithaca, NY 14853; B. Wansink, PhD

Objective: To investigate extreme fair food (e.g., deep-fried Oreos) regulation beliefs.

Theory, Prior Research, Rationale: Extreme fair foods prompt calls for increased regulations; yet, given their rarity in diets, little research examines this issue. Understanding regulation beliefs could elucidate extreme food eating habits and inform public policy.

Continued on page S83