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component in the development of healthy eating practices and behaviors as it enhances children's knowledge and skills that they need to perform desired behaviors which may track to adulthood.

Objective: To identify factors associated with successful nutrition education interventions among children in promoting healthy behaviors.

Study Design, Setting, Participants, Intervention:

A systematic review of nutrition education interventions among children was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. Relevant studies published between 2009 and 2016 were identified through Pubmed, Medline, Web of Science, Science Direct, and Educational Resources Information Center (ERIC) database. Forty-eight studies met the inclusion criteria and were screened and determined the quality of the studies using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system. A total of 41 studies were included in the final analysis.

Outcome Measures and Analysis: The data from 41 studies were extracted. The studies were grouped and reviewed according to their target age groups: preschoolers, elementary and secondary school children. The primary analytic goal was to determine the overall effectiveness of nutrition education interventions according to their stated objective.

Results: Out of the 41 studies, 26 targeted elementary school children, eight targeted secondary school children, and seven studies targeted preschoolers. Seven overarching factors emerged as critical to successful nutrition education among children as follows: a multi-component (involving teachers and parents) and multi-level intervention (including the schools and home) approach; adequate duration and frequency of exposure; level of parental engagement; age-appropriate and hands-on experiences; fidelity as ensured by trained implementers and standardized protocol; environmental change for upstream and midstream outcome; and proper alignment between stated objectives, intervention, and desired outcome.

Conclusions and Implications: The critical components for effectiveness of children education interventions included strategies that were age appropriate, involved parents and environmental change, ensured fidelity, and had adequate duration.

Funding: None.

P94 Diet Diversity and Food Security in a Biodiverse Region of Madagascar

Alisha Farris, PhD, RDN, farrisar@appstate.edu, Appalachian State University, 287 Rivers Street, Boone, NC 28608; Sarah Misyak, PhD, Virginia Tech; Keely O'Keefe

Background (Background, Rationale, Prior Research, and/or Theory): One Health recognizes that the health of people is connected to the health of animals and

the environment. One Health solutions are increasingly important in the biodiverse regions of Madagascar, where approximately half of all children suffer from chronic malnutrition, often as the result of poor food security status and a lack of diet diversity.

Objective: The purpose of this pilot study was to assess the drivers of food choice and barriers to diet diversity for women and young children, who rely on the land for farming and economic opportunities.

Study Design, Setting, Participants, Intervention:

Primary caregivers of children under 12 years of age from 10 selected villages in a protected Natural Reserve region of northeast Madagascar, were recruited to participate in a questionnaire and focus group discussion. Three focus groups were conducted in community locations.

Outcome Measures and Analysis: The Madagascar Food Questionnaire assessed food practices and belief structures around the nutritional value of foods. The questionnaire data were analyzed for frequencies and descriptive statistics. Focus groups explored the participants' perceptions of the positive and negative aspects of the available foods and concerns about health. A thematic analysis of focus group discussions was conducted by the researchers. Discrepancies were discussed and resolved.

Results: A total of 137 participants completed the survey across 10 villages. Important factors identified when shopping and preparing foods were cleanliness, health, and child preferences. Diet diversity was reported least often as important. Energy-dense foods were most often reported as nutritious while many nutritious and low-cost foods were not valued or preferred. Many participants were not consuming animal protein consistently. A total of 23 women in three villages participated in focus groups. Food cost, availability, and health were identified as factors of concern and important in decision making.

Conclusions and Implications: Understanding the drivers of food choice and barriers to diet diversity are vital for developing appropriate programs or interventions that One Health conducts in Madagascar, and other developing countries.

Funding: St. Louis Zoo's Field Research for Conservation program.

P95 Dimensions of Body Image and Adiposity in African American Adult Women

Ingrid Richards Adams, PhD, LDN, RD, LDE, Richards.3@osu.edu, Ohio State University, Department of Extension, College of Food, Agriculture and Environmental Sciences; Medical Dietetics, School of Health and Rehabilitation Sciences, College of Medicine, 453 W 10th Avenue, Columbus, OH 43210; Wilson Figueroa, PhD, Ohio State University, Department of Extension, College of Food, Agriculture and Environmental Sciences and Medical Dietetics School of Health and Rehabilitation Sciences, College of Medicine; James Odei, PhD, Ohio State University, Department of Division of Biostatistics, College of Public Health; Joshua J. Joseph, MD, Ohio State University,

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College of Medicine; *Suzanne Leson, PhD, LD, RDN, FAND*, Ohio State University; *Sotso Prieto Mercedes, PhD*, Ohio State University, School of Applied Health Sciences and Wellness, College of Health Sciences and Professions; *Michika Nickerson, MPH, MS*, Ohio State University, Medical Dietetics, School of Health and Rehabilitation Sciences, College of Medicine

Background (Background, Rationale, Prior Research, and/or Theory): There is a discrepancy between African American women's (AAW) perception of weight versus actual weight. Further, AAW tend to have higher positive body image regardless of weight classification.

Objective: To examine the association between the different facets of body image and adiposity in AAW.

Study Design, Setting, Participants, Intervention: A cross-sectional study of 74 AAW residing in the Southeast U.S. were recruited. The four measures of the MBSRQ-AS, Appearance Evaluation (AE), Appearance orientation (AO), Overweight preoccupation (OP), and Self-classified weight (SCW), were used to measure body image. Body fat percentage (BFP) was used to measure adiposity.

Outcome Measures and Analysis: Measures of adiposity and body image. Ordinal regressions and odds ratios were examined.

Results: Mean percent body fat was 38.8 (SD 11.0). Means for the subscales were: AE (3.52 [SD .73]), AO (3.72, SD [.56]), OP (2.54 [SD .90]), and SCW (3.53 [SD .70]). Results indicated that there was a negative association between AE and BFP ($P < .001$). For every 1% higher BFP there was an 8.4% lower odds that appearance would be rated favorably [OR 0.92, 95% CI (0.88, 0.96)]. SCW and OP were positively associated with BFP ($P < .05$). For every 1% higher BFP there was a 19% higher odds that participants would classify themselves as overweight and a 5% higher odds, they would be preoccupied about being overweight. AO was not associated with BFP.

Conclusions and Implications: Our sample had high ratings of body image even though, on average, they were overweight. Interestingly, different facets of body image were differentially associated with BFP. The higher BFP, the more likely they were concerned with being overweight, classified themselves as overweight, and were less satisfied with their appearance. AAW at higher levels of BFP may be more willing to engage in healthy weight interventions due to their dissatisfaction with body image.

Funding: The African American Research and Studies Program.

P96 Examination of Usefulness of a Meal Pattern Requirements Knowledge Assessment Tool

Danya Johnson, BS, JohnsonDanyaL@uams.edu, University of Arkansas for Medical Sciences, 521 Jack Stephens Drive #530, Little Rock, AR 72205; *Leanne Whiteside-Mansell, EdD; Taren Swindle, PhD*

Background (Background, Rationale, Prior Research, and/or Theory): Meal pattern requirements in the Child and Adult Care Food Program (CACFP) required for centers and day care homes are research-based and intended to support health and wellness for developing children. However, assessment of education to assure knowledge of the patterns is limited.

Objective: This study examined the psychometrics of a knowledge assessment of meal pattern requirements among child nutritional professionals.

Study Design, Setting, Participants, Intervention: Childcare nutrition professionals ($N = 267$) in a southern rural state enrolled in free educational training focused on new meal pattern requirements completed pre-post assessment. Enrollees were administrators (50%), cooks (25%), or a combination (25%). About half (47%) had an associate degree or more education. Most (56%) had more than 5 years of experience.

Outcome Measures and Analysis: Knowledge questions (9 pre and 20 post) were based on a training assessment created by the Institute of Child Nutrition. The nine items selected for administration both times targeted new regulations. Item analyses included an examination of item distribution. Pre/post regulations assessed include items related to serving juice, sugar, snacks, meat alternatives, and whole grain, in addition to use of formula for infants and food preparation. Change after education was assessed for items using McNemar's test and for the total correct score using pair t-tests.

Results: Most items (7/9) were scored incorrectly by over 25% of attendees at baseline. At post assessment, participants showed statistically significant knowledge gain on most (7/9) item and at least 75% accurately scored the regulation on 17/20 items. Pre-post test scores increased 14% ($M = 62\%$, $SD = 20\%$ to $M = 75\%$, $SD = 14\%$; $t(266) = -10.8$, $P = .000$). For the expanded assessment at posttest (20 items), the average score was 83% correct.

Conclusions and Implications: The tool demonstrated knowledge change before and after education. The short tool may be helpful in standardizing assessment across training to compare training quality.

Funding: USDA.

P97 Examining Dinnertime Photos of Foods Served by Low-Income Families to Inform a Home Food Environment Checklist

Savannah Hobbs, MEd, Colorado State University; *Morgan McCloskey, MSPH; Susan L. Johnson, PhD*, University of Colorado, Anschutz Medical Campus; *Richard E. Boles, PhD; Laura L. Bellows, PhD, MPH, RD, laura.bellows@colostate.edu*, Colorado State University, Department FSHN, 1571 Campus Delivery, Fort Collins, CO 80523-1571

Background (Background, Rationale, Prior Research, and/or Theory): The home food environment (HFE) plays an important role in food preferences, habits, and health as it encompasses foods recommended for a

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