P151 Testing of Educational Materials to Increase Visual Exposure of MyPlate Foods in Preschoolers

Jessica Barnes, MS, RD, LDN, jessica.l.barnes@gmail.com, Texas Woman's University, 3605 Moroney Drive, Richardson, TX 75082; C. Warren, PhD

Objective: Food preferences are established early in life and play a role in chronic disease development. Visually exposing children to new foods provides caregivers with an inexpensive method of increasing familiarity and consumption of nutritious foods. Five books depicting various aspects of USDA's MyPlate food groups were developed at TWU and pilot tested in one preschool. Results showed an increase in vegetable and dairy consumption, however, results were not statistically significant. The purpose of this study is to test whether or not exposure to each book leads to an increase in consumption of these foods in a larger sample of preschoolers.

Design, Setting and Participants: Three and four year old students from North Texas childcare centers were recruited to participate. Preschoolers in the intervention group were read one of five food group books (fruit, vegetable, grain, dairy or protein) once a day for two weeks as compared to no exposure to the books (control group). Pre- and post-intervention photographic food diaries were collected at childcare centers for two days.

Outcome Measures and Analysis: ANOVA for repeated measures within and between groups was used to analyze changes in diet intake.

Results: One hundred and ninety-two preschoolers from 17 childcare centers were given consent. Researchers expect that preschoolers who have been exposed to one of the five food group books will have an increase in consumption of that particular food group as compared to the control group.

Conclusions and Implications: Books of this nature offer an inexpensive way to teach preschoolers about nutritious foods and help start them on a path towards healthy eating.

Funding: TWU New Investigator Research Enhancement Program, TWU Small Grants Program.

P152 Instructor Influence on Self-Efficacy in Women With Gestational Diabetes Mellitus

Julie Buck, EdD, MHE, RD, jhbuck@uidaho.edu, University of Idaho Extension, Bannock County, 10560 North Fairground Road, Building A, Pocatello, ID 83202

Objective: Gestational diabetes mellitus (GDM) develops during pregnancy with national occurrence rates of approximately 7.5% of pregnant women or about 88% of all cases of diabetes in pregnancy. Adverse outcomes associated with GDM create higher medical costs for prenatal care, labor and delivery of baby, and extended postpartum recovery. Education, using experiential learning, for self-care practices of meal management and blood sugar monitoring is a vital component of GDM treatment. The

purpose of this descriptive study is to examine participants' perceptions of instructor influence on participants' self-efficacy and gestational diabetes knowledge and practice.

Design, Setting and Participants: A Diabetes Self-efficacy scale (DSES) was given to 12 women with GDM in three Southeast Idaho locations. The 18-item DSES developed by Hurley & Shea (1992) was used, with three additional question added to assess teacher influence and number of visits for diabetes education.

Outcome Measures and Analysis: Although no significance was shown among responses, an increasing trend occurred in certainty of perceived ability to perform diabetes self-care practices in all areas except exercise. Two of the descriptive questions to describe instructor influence provided valuable narrative to inform practitioners about their influence on their client's GDM education.

Results: The participants' positive descriptive comments indicated a correlation with the instructor influence on perceived self-confidence to perform diabetes self-care practices. The participants' level of self-efficacy increased with more visits to the certified diabetes educator.

Conclusions and Implications: This information demonstrates the importance of including self-efficacy assessment as part of a teaching program and asking for anonymous comments from participants to inform instructors of their influence with students.

Funding: None.

P153 An Educational Program Based on Self-Determination Theory to Address Childhood Obesity in Primary Care Settings

Angelina Maia, MS, RD, LDN, angelina.maia@maine.edu, University of Maine, 5735 Hitchner Hall, Orono, ME 04426; A. White, PhD, RD

Objective: To test a nutrition education program implemented in primary care settings based on the self-determination theory (SDT) with motivational interviewing counseling techniques.

Design, Setting and Participants: Design was a pre-post- assessment, treatment/wait-listed control for 9-11 year old overweight/obese children and their parents (n=31 family pairs). The intervention was six-biweekly, hour-long individual sessions for family pairs over a 12-week period. Telephone calls were made on non-session weeks providing encouragement and problem-solving assistance. Parents participated in three, 90-minute group sessions.

Outcome Measures and Analysis: Child pre- post-measurements included anthropometrics (weight, height, waist circumference); blood pressure; Block Food and Physical Activity Screener; self-esteem; body image and the SDT constructs - motivation, autonomy, competence, relatedness. Adults received companion surveys for comparisons. Participants provided information on researcher's support of autonomy. SPSS analysis included one-way ANOVA and paired t-tests.

Continued on page S70

P153 (continued)

Results: Treatment children (mean age=10.3±0.8 years) decreased from pre to post body mass index (BMI) percentile ($P=0.015$) and waist circumference ($P=0.001$); increased self-esteem ($P=0.048$) and autonomous motivation ($P=0.048$). Positive trends were reported in dietary intake and physical activity. Treatment parents reported increase in autonomous motivation ($P=0.030$); perceived competence ($P=0.001$); relatedness ($P=0.025$); self-esteem ($P=0.031$); and decreased controlled motivation ($P=0.023$). Children and parents reported feeling their autonomy was supported by the researcher. Wait-listed control children increased weight ($P=0.001$); BMI percentile ($P=0.001$) and waist circumference ($P=0.004$); and decreased body dissatisfaction ($P=0.047$).

Conclusions and Implications: Positive outcomes were seen when using an SDT-based nutrition education program to support development of autonomy, motivation, competence, and relatedness. This family-centered intervention to address childhood obesity was successful in primary care settings.

Funding: Maine Agricultural and Forest Experiment Station and the Faculty Research Fund.

P154 Factors Influencing Grandmothers' Feeding Practices, Barriers, and Needs in Nutrition Education for Feeding Grandchildren

Nicole Hodac, BS, nmhodac@gmail.com, University of Cincinnati, 3202 Eden Avenue, Cincinnati, OH 45267; E. Bennett, BS; E. Komoroski, MD, Northside Health Center; D. Krummel, PhD, RD, LDN, FAND, University of Cincinnati; S. Y. Lee, PhD

Objective: To explore factors influencing grandmothers' feeding practices, barriers to feeding, and needs for nutrition education.

Design, Setting and Participants: A qualitative study (20 in-depth interviews) of grandmothers (aged 53 ± 6 years, 75% African American) with partial or full responsibility for feeding their grandchildren were recruited from an urban community clinic.

Outcome Measures and Analysis: Audio-recorded, in-depth interviews were transcribed verbatim and analyzed using content analysis with NVIVO 10 software.

Results: Grandmothers' own and their grandchildren's taste preferences, health condition, food availability at home, convenience, and cooking ability were all major influencing factors for feeding their grandchildren. Their perception of healthy vs. unhealthy foods contributed to the formulation of rules or restrictions on feeding. Their health conditions were identified as a barrier to feeding their grandchildren along with a limited availability of foods. Grandmothers' efforts to feed healthy foods were more for disease prevention than growth or development. Half of grandmothers reported either positive (healthier food selection, regular meal consumption, etc.) or negative (reduced portions, skipped meals, etc.) influences on their own diet from feeding grandchildren. Grandmothers rarely had concerns regarding their grandchild's weight status but were concerned with overconsumption of

sweets. Most grandmothers did not receive any education regarding how and what to feed their grandchildren; however, they were interested in acquiring knowledge and skills for adequately feeding their grandchildren.

Conclusions and Implications: Considering the revealed barriers and lack of received education for feeding, nutrition education targeting grandmothers should include guidance for feeding their grandchildren as well as coping strategies that address food insecurity and their own health conditions.

Funding: University of Cincinnati College of Allied Health Sciences Research Fund.

P155 Perceptions of Food Access by African American Women With Children in an Urban Post-Industrial North Central American City

Kellie Mayfield, MS, mayfie16@msu.edu, Michigan State University, Food Science and Human Nutrition, 469 Wilson Road, East Lansing, MI 48824; M. Carolan, PhD; L. Weatherspoon, PhD, RD; K. Chung, PhD; S. L. Hoerr, PhD, RD, FACN

Objective: To describe the perceptions of food access within the context of social ecological model of the nutrition environment and a womanist theory of African American women with children living in a city with limited access.

Design, Setting and Participants: A community-based, qualitative approach was used to conduct four focus groups with 17 African American women ages 21-50 years, each with child <18 years old in the home to explore their perceptions of access in a North Central post-industrial urban city. Volunteers from community collaboratives recruited participants via snowball sampling.

Outcome Measures and Analysis: Transcriptions were open coded within each focus group; then axial codes were determined and compared across the focus groups. Two coders came to consensus on recurring categories.

Results: The two main themes were the necessity of free food from gardens, food banks and food pantries, and the impact of intersectionality wherein participants' perceived that discrimination were experienced based on gender, race, income and/or religious practice. Access to free food was most mentioned 41 times and constituted positive experiences (21), negative experiences (13), neutral experiences (1) and gardens as a free food source (6). The impact of intersectionality was mentioned 27 times.

Conclusions and Implications: Results demonstrate how low-income African American women in this environment obtain food. Understanding these barriers provides useful information for community organizations and other institutions that serve the community. In this environment, low-income African American women with children were keenly aware of the free community resources available and barriers to access. Their revealed experiences can be used for facilitating local food policy assistance decisions and interventions.

Continued on page S71