NP34 The HEROs Study Year 3: Engaging Families to Promote Healthy Eating and Activity Behaviors in Early Childhood

Laura Bellows, PhD, MPH, RD, laura.bellows@colostate.edu, Colorado State University, Department of Food Science and Human Nutrition, Fort Collins, CO 80523-1571; Susan L. Johnson, PhD, University of Colorado Anschutz Medical Campus; Morgan McCloskey, MSPH, Colorado State University; Darcy Thompson, MPH, MD, University of Colorado Anschutz Medical Campus; Barbara Chamberlin, PhD, New Mexico State University; Traci Bekelman, PhD, University of Colorado Anschutz Medical Campus; Lauren Clark, PhD, University of Utah

Objective: The objective of the HEROs Study (HEalthy EnviRONments Study) is to develop a technology-based, interactive family intervention to promote healthy lifestyles and weight outcomes for young children in the family setting.

Description: The project aims to improve family routines and parent-child eating and physical activity (PA) interactions. Research activities will be conducted through four key objectives: formative research; intervention design; intervention testing; and education.

Evaluation: Year 3 focused on completion of the formative research and initialization of intervention design and plans for intervention testing. Parents and caregivers provided input on four key topic areas: food behaviors and environments (mealtime environment survey, $n = 120$; remote food photography method, $n = 31$ parent-child dyads; parent focus group, $n = 7$ groups, 29 participants); physical activity behaviors and environments (parent interview and parent practices survey; $n = 31$); mobile device use (results reported in Year 2); and daily life (ecocultural family interview; $n = 30$). A mixed methods approach is being utilized to synthesize findings from quantitative and qualitative assessments to provide a holistic understanding of participant behaviors, beliefs, attitudes and values related to each topic area. Intervention mapping is being employed as a framework to integrate formative research findings alongside theory, findings from the literature and previous research outcomes to design the HEROs intervention. Year 3 also included the development and testing of prototypes of nutrition and physical activity mobile applications that will serve as key intervention components.

Conclusions and Implications: The HEROs intervention map will be used as a framework for intervention development. Subsequently in Year 4, an implementation study will be conducted utilizing the Plan-Do-Study-Act (PDSA) framework to test intervention components with a subset of families. Intervention module cycles will be studied to understand which of the key intervention components resonates with and drives participants towards behavior change.

Funding: 2015-68001-23240.

NP35 Use of Engaging Online Videos in Conjunction with New Feeding Content to Enhance a Current EFNEP Program

Sheryl O. Hughes, PhD, shughes@bcm.edu, Baylor College of Medicine, 1100 Bates Street, Houston, TX 77030; Thomas G. Power, PhD, Washington State University; Susan S. Baker, EdD, Colorado State University; Karen V. Barale, MS, Washington State University; Jane Lanigan, PhD; Louise Parker, PhD; M. Catalina Aragon, MS; Karina Silva Garcia, MS

Objective: The overall purpose of the study is to examine the effectiveness of disseminating child feeding content through the Expanded Food and Nutrition Education Program (EFNEP) in Washington State and Colorado Extension. Two implementation methods are being compared: an in-class implementation where videos and in-class activities were added to the Eating Smart * Being Active (ESBA) curriculum and an online implementation where the participants view online videos and complete online activities after the in-person ESBA classes. The design is a randomized controlled trial (RCT) where participants are randomly assigned to one of the two implementation conditions or to an ESBA only control group.

Description: Videos from a previous study were modified and additional footage was added to enhance the newly developed in-person and online child feeding content. In-class activities and online games were developed to support material in the videos. Participants are parents with a child aged 2–8 years participating in the EFNEP in Colorado and Washington State. The online and in-person curriculum was piloted with 30 low-income parents.

Evaluation: Preliminary results based on the pilot data showed significant increases in parental responsiveness during feeding, child involvement in food preparation, use of measured portions, responsiveness to child satiety cues, and offering new foods. The RCT is currently being conducted in two counties in Colorado and three counties in Washington. To date, 137 parents in Washington and 152 parents in Colorado have been enrolled; 350 parents are expected to participate by the end of the study.

Conclusions and Implications: Extension appears to be an effective way to disseminate feeding information to low-income parents through the EFNEP program. Results from the study will be available for presentation.

Funding: 2015-68001-23311.

NP36 Using the Child as Change Agent for Preventing Childhood Obesity in Rural Georgia: Home Environment Results

Marsha Davis, PhD, University of Georgia; Courtney Brown, PhD, RDN, courtms@uga.edu, University of Georgia, 116 Rhodes Hall, University of Georgia Health Sciences Campus, Athens, GA 30602; Andrea Scarrow, MAL; Frances McCarty, PhD; Richard Christiana, PhD, Appalachian State University; Richard Lewis, PhD, University of Georgia; Rebecca Mullis, PhD, RD

Continued on page S123

NP36 (continued)

Objective: The objective of this study was to determine if the Action Pack Families child as change agent intervention resulted in changes in the home food and physical activity environment of children over the course of a 3-year intervention.

Description: This study was a group-randomized intervention that included all 10 elementary schools in a county in rural Georgia. Action Pack Families was a child as change agent nutrition and physical activity intervention with school, home, and community based components. The intervention was delivered by trained family nutrition educators in partnership with University of Georgia Extension. The school curriculum was designed to be physically active and experiential. Students were taught strategies for sharing what they learned with their families. In addition to the school-to-home activities that engaged families in intervention activities at home, the family component of the intervention included community events, family fun nights, and communication via Facebook. Community recognition and support of the program was enhanced by participation in local events.

Evaluation: Child height and weight were collected at school by the research team; diet, physical activity, and home environment factors were self-reported by parents using a paper-pencil survey. Anthropometric data were collected at the beginning and end of each school year from 3rd through 5th grade. Parent survey data were collected at the beginning of each school year as well as at the end of 5th grade.

Conclusions and Implications: Previous cross-sectional analyses of baseline data from this study suggested that the home environment does not necessarily influence the dietary behavior of children in the same way across all racial/ethnic groups. An analysis of intervention effects on home environment, dietary, and activity variables showed that the intervention impacted key variables for positive changes in the home environment with the effect varying across racial/ethnic groups. Using children as change agents might be effective in altering some home environment variables that could aid in preventing childhood obesity.

Funding: 2012-68001-19625.

NP37 Wave~Ripples for Change (Year 5 of 5): 2-Y Childhood Obesity Prevention Intervention Preliminary Findings and Project Outputs

Siew Sun Wong, PhD, MS,

siewsun.wong@oregonstate.edu, Oregon State
University, Ballard Hall 105E, Corvallis, OR 97331;

Melinda Manore, PhD, RDN, FACSM;

Megan Patton-Lopez, DPH, RDN, Western Oregon
University; John Schuna, PhD; Christopher Scaffidi, PhD;
Tonya Johnson, MPH; Yu Meng, MS; Cristian Curiel, BS;
Darcie Hill, MPH, RDN, Western Washington University;
Jonathon Richter, PhD, Salish Kootenai College;
Gretchen Dursch, MA, Oregon State University

Objective: Prevent childhood obesity among high school soccer players (HSSP) ages 14–19 years-old in Oregon.

Description: In June 2017 we concluded the 2-y intervention. This 5-year project will conclude in May 2018. Three key program outputs include: A field-tested, 4-lesson, high school sport nutrition curriculum supplemented with three life-skill team-building workshops, and a 3-D animation computer game for experiential learning. The curriculum is being peer-reviewed now; an enhanced cloud-based system named WavePipe field-tested to manage human studies data collection, monitoring, and automated analyses and report generation; and development of a sports mobile game application prototype concept and wireframe.

Evaluation: Among 388 HSSP who completed the study (51% attrition rate in 2-y; intervention group n = 278; comparison group n = 110), 58% were females, 38% were Latino, 38% participated in school breakfast program and/or national school lunch program, mean age was 15.3 (1.1 years). Compared to the comparison group, the intervention group significantly decreased in added sugar intake by 12g/d, but had no changes in fruits and vegetable (FV) and saturated fat consumption. Physical activity (PA) was significantly higher in-soccer season than out-of-soccer season for both intervention and comparison groups.

Conclusions and Implications: This is the first study to engage HSSP in a 2-y obesity prevention program targeting sport nutrition education, healthy eating behaviors for growth, performance and health, emphasizing the importance of daily PA and life-skills experiential learning. Overall, FV intakes were maintained over the 2-y intervention but were below the dietary recommendations, although higher than those typically reported in the literature for youth and youth athletes. The 2-y intervention significantly decreased added sugar intake, by lowering the frequency of selecting cake/cookies and ice cream foods. PA recommendations were met during soccer season, but below recommendations out-of-season. Thus, it is important to engage active youth yearlong, helping them to make daily PA a priority in their lifestyle.

Funding: 2013-67001-2041.