

## **Regional Nutrition Education & Obesity Prevention Centers of Excellence (RNECE) Projects**

**Prepared by the National Coordination Center**

**University of Kentucky**

**Dr. Ann Vail, Principle Investigator**

### **North Central Region**

#### **Evaluating a Multi-Modal Community Nutrition Education Model within SNAP-Ed and EFNEP.**

September 1, 2015- August 31, 2016.

Jennifer McCaffrey, PhD, Assistant Dean of Family and Consumer Sciences, University of Illinois Extension

Ruopeng An, PhD, Assistant Professor, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign

Naiman Khan, PhD, Assistant Professor, Department of Kinesiology and Community Health, University of Illinois

Study aims are (1) Examine the impact of the University of Illinois Extension SNAP-Ed and EFNEP on participants' diet-related and physical activity behaviors as well as their home food environment; (2) Determine program impact on participants' weight status and adiposity; and (3) Examine the organizational structure and policy dynamics in relation to program effectiveness. To accomplish these goals, the study adopts a pre-post design where 200 study participants are measured three times (baseline, 3<sup>rd</sup> month, and 6<sup>th</sup> month) during a 6-month period. Measures include validated questionnaires as well as objectively-measured height/weight and body fat percentage. Hierarchical modeling will be performed to assess the impact of policy environment and dynamics on program effectiveness, whereas social network analysis will be used to analyze organizational social network structure and identify its strength and weaknesses that warrant improvement in order to increase program efficiency.

#### **Eat Smart in Parks: Youth Mapping and Photovoice to Inform Healthy Food Environments.**

September 1, 2015- January 31, 2017.

Sonja A. Wilhelm Stanis, PhD, Associate Professor Department of Parks, Recreation and Tourism, University of Missouri

Amy Dunaway, MPH, MA, Co-Director of the Health Communication Research Center, Missouri School of Journalism

Cindy DeBlauw, RD, LD, Extension Associate, Nutrition and Exercise Physiology Extension, University of Missouri

Kimberly Keller, PhD, CFLE, Assistant Research Professor, Department of Nutrition and Exercise Physiology, University of Missouri

This proposal seeks to strengthen the current SNAP-Ed *Eat Smart in Parks* (ESIP) initiative in a low-income and underserved community in Jackson County, MO which focuses on improving the healthfulness of menu choices that children have available in parks, by adding community voice and engagement to the ESIP activities. The project will conduct a youth community food mapping assessment and photovoice project, as well as hold a community gallery event, to increase community voice and empowerment beyond the current ESIP approach. Youth and community stakeholder surveys will be conducted to assess impacts of the photovoice project and community gallery event.

### **Northeast Region**

All NE-RNECE projects are designed to address the overarching question guiding the NE-RNECE's signature research: Does the combination of direct education and PSE changes have greater impact on obesity/dietary intake/physical activity than either alone? All projects incorporate multi-level approaches with experimental or quasi-experimental designs.

**Adopting Healthy Habits in Worksites: Increasing Adoption and Acceptability of Policy, Systems, and Environmental Changes within Agencies Serving Low-income Families.** September 1, 2015- August 31, 2016.

Amanda Root, Nutrition and Health Program Leader, Cornell Cooperative Extension in Jefferson County  
Denyse Variano, Family & Consumer Sciences Issue Leader, Cornell Cooperative Extension in Orange County

Project is a collaboration between the Center and Cornell Cooperative Extension associations in Jefferson and Orange counties to assess the effects of combining nutrition education with policy, systems and environmental changes in community agencies and day care centers to support healthy habits for employees and agency participants.

Quasi-experimental design: all groups are exposed to newly adopted agency wellness policies; employees and parents are randomly assigned to the intervention group which receives Healthy Children, Healthy Families: Parents Making a Difference! (HCHF) 8-session curriculum, or control which does not receive the HCHF curriculum at that time delivered in EFNEP.

**Nutrition Ed, Access and Texting (NEAT): Combining the Hartford Mobile Market with e-Marketing.** July 1, 2015- June 30, 2016.

Grace Damio, Director of Research & Training, Hispanic Health Council  
Rafael Pérez-Escamilla, Professor of Epidemiology & Public Health, Yale School of Public Health

Project will assess the effects of combining nutrition education with a text messaging campaign with information about recently launched mobile produce markets on participants' access to, purchase of, and intake of fruits and vegetables.

Randomized controlled trial design: the intervention group receives 4-session SNAP-Ed curriculum and daily text messages about produce markets and coupons; control group receives same SNAP-Ed sessions and daily non-health related text messages.

**Sustaining a Successful Youth-Leader Program as part of a Multi-Level, Multi-Component Food Environment/Behavioral Intervention.** July 1, 2015- June 30, 2016.

Joel Gittelsohn, Professor of International Health, Global Obesity Prevention Center, Johns Hopkins Bloomberg School of Public Health  
Lisa Lachenmayr, Director, Food Supplement Nutrition Education (FSNE), University of Maryland Extension  
Angela Trude, Senior Analyst, Johns Hopkins School of Public Health

Project will test a model to train youth to implement nutrition education and wellness policies at Baltimore recreation centers as part of a larger study assessing strategies to improve the local food environment.

Randomized controlled trial: 8 intervention centers in which teen council members are trained to deliver SNAP-Ed nutrition education curriculum, and with trainers/recreation center staff assess food

environment and implement wellness policy; 8 control centers receive delayed youth training and engagement in PSE changes.

**Transforming Lifestyles: Integrating Direct Nutrition Education with Physical Activity Using the Health Care System Expansion Model.** July 1, 2015- June 30, 2016.

Mira Mehta, Director, EFNEP, University of Maryland Extension, MD  
Hee-Jung Song, Co-PI, Assistant Professor, University of Maryland Extension  
Kavitha Sankavarm, Program Coordinator, EFNEP Outreach & Evaluation Coordinator, UMD Extension

Project will test the effectiveness of a system change involving engaging primary health care providers in assessing children's physical activity levels and providing information and referrals to local physical activity resources and nutrition education.

Quasi-experimental design: both control and intervention groups referred to 6-session EFNEP direct education; intervention group receives a physical activity assessment and educational materials on age-appropriate physical activity and local resources delivered by primary health care providers.

**Empowering Urban Schoolchildren to Increase Fruit and Vegetable Consumption through EFNEP-enhanced PSE Interventions.** July 1, 2015- June 30, 2016.

Linda Sebelia, PI for SNAP-Ed and Program Coordinator for EFNEP, University of Rhode Island  
Geoffrey Greene, Professor of Nutrition and Food Science, University of Rhode Island

Project will test an intervention to engage fifth-grade students in activities designed to engage them in activities to change the school food environment.

Randomized controlled trial: two randomly selected intervention schools, two control schools; 10-week teacher-provided SNAP-Ed nutrition education curriculum delivered in all groups; in intervention schools students will also participate in weekly PSE lessons, developed for EFNEP, which engage them in activities to change the school food environment such as conducting an environmental scan, writing letters to the school wellness committee and testing recipes to incorporate into the school's menu.

**Southern Region**

**Faithful Families in Tennessee: Improving the Health of Low Income Faith-Based Audiences.** July 1, 2015- June 30, 2016.

Karen Frank, University of Tennessee

The goal of this proposal entitled Faithful Families in Tennessee: Improving the Health of Low Income Faith-Based Audiences is to explore the feasibility of Faithful Families as an avenue for strengthening the evidence-base for EFNEP and SNAP-Ed—a priority of the RNECE South Sub-award. Implementing this project will expand EFNEP and SNAP-Ed reach with faith communities, explore the use of social media as a method for participant recruitment and retention and increase the adoption of effective policies, systems and environments interventions.

**Faithful Families: Implementation and Outcome Evaluation of Paraprofessional and Volunteer Delivery Methods in Low-income Faith Communities.** July 1, 2015- June 30, 2016.

Lisa Washburn, University of Arkansas

This study will provide direct nutrition education to low-income participants in conjunction with a policy, system, and environmental change component (PSE) to facilitate and promote behavior change among program participants. The project uses a quasi-experimental, non-equivalent groups design which will facilitate the study of short-term and medium-term effectiveness as well as process evaluation of Faithful Families Eating Smart and Moving More (FFESMM) in Arkansas. The project will implement FFESMM, delivered in two ways plus with and without social media, to twelve faith-based communities in six counties with the potential to reach 260 individual FFESMM participants and the larger faith community.

**Building Faith through Health in the Community and Online.** July 1, 2015- June 30, 2016.

Jennifer Walsh/Karla Shelnett, University of Florida

The objectives of this project are to work with two limited resource faith-based communities to (1) assess the feasibility of having the Faithful Families curriculum delivered by EFNEP paraprofessionals with PSE approaches implemented and supported by SNAP-Ed, and (2) determine whether the addition of a novel, interactive online complement to the Faithful Families curriculum increases the adoption of healthy eating and physical activity behaviors. In this quasi-experimental study, Faithful Families lessons will be offered by EFNEP at an intervention site and a control site with up to 20 members recruited for each. The intervention site will have access to an online, interactive dashboard designed to track personal progress and support existing or develop new community social media networks with key health concepts incorporated. No online component will be available to the control site. Both sites will receive PSE support from SNAP-Ed. The program will last 10 weeks with a 14-week follow-up. An online custom system will be designed to manage process and outcome evaluation data collection. Validated tools to assess diet quality and objective measures of physical activity will be used.

**Evaluation of Online Nutrition Education eLearning Program Tailored to SNAP-Ed Eligible Adult Georgians.** September 1, 2015- August 31, 2016.

Jung Sun Lee, University of Georgia

*{Still under consultation with RNECE-S Staff}* Objective is to evaluate a smartphone-based eLearning program by assessing users' expectations and experiences prior to, during, and after engaging in Food eTalk. Focus group with 40 participants at baseline and after three weeks of Food eTalk use to assess expectations and experiences. Semi-structured interviews and self-administered questionnaires with 20 participants at baseline, 3-weeks and 6-weeks to assess sociodemographic, health/digital literacy skills, self-efficacy, as well as experiences and behavior change. Quantitative research via a user tracking system installed in Food eTalk program to assess usage pattern data throughout program implementation and online surveys assessing health and weight status, neighborhood food environment, food insecurity, and sociodemographic and economic status.

**Creating and Disseminating a Planning Guide to Support Community-Based 5K Fun Walk/Run and Wellness Expo Events.** September 1, 2015- August 31, 2016.

Robert John, University of Oklahoma

*{Still under consultation with RNECE-S Staff}* Objective is to create and distribute a graphically appealing planning guide so that organizations and communities have a blue-print to implement and evaluate a walk/run and fitness expo similar to "Let's Get Midwest City Moving". Topics included in the planning guide include a social marketing approach, configuration of event environment, recruiting and working

with partners/sponsors, budgeting for event activities and supplies, program supplies and checklist, vendor recruitment, organizing and training of volunteers, event logistics and program evaluation.

**Social Media Educational Activities Pilot Study. Insert Timeline**

Lorelei Jones, North Carolina State University  
David Cavallo, Case Western University  
Emily Foley, North Carolina State University

Objectives are to identify characteristics and needs of current social media participants to inform the development of additional targeting social media practices and content, measure the impact of social media-enhanced EFNEP/SNAP-Ed lessons on health-related behavior change in comparison with standard EFNEP/SNAP-Ed lessons, and to determine the feasibility of using social media to reach key stakeholders and policymakers. Currently, we have been working with the EFNEP Social Media Working Group on this effort, but we will be developing and testing social media communications guidance materials through our continuation funds.

**PSE Implementation & Evaluation Barriers Assessment. Insert Timeline**

Molly De Marco, UNC Chapel Hill and staff  
Amy DiLisio, Public Health Institute

In collaboration with PHI, we are conducting surveys of all SNAP-Ed and EFNEP implementers in the RNECE-South region to assessment existing implementation of policy, systems, and environmental change (PSE) activities, evaluation of those activities, and barriers to successful implementation and evaluation. PHI has also conducted key informant interviews with SNAP-Ed stakeholders to gauge where the greatest need for training is. Armed with these findings, webinars, technical assistance, and face-to-face workshops are being planned.

**Western Region**

**Youth Participatory Action Research (YPAR). April 2015- September 2017.**

Sharon Sugerman, Program Director, Public Health Institute

The RNECE-West is contracting with the Public Health Institute (PHI) to complete a two-year assessment of Youth Participatory Action Research (YPAR) in Hawaii and Los Angeles, California. There is also a possibility for a one year assessment of YPAR in a California Cooperative Extension rural site in FFY 2017. YPAR is a practice-based intervention according to SNAP-Ed Strategies and Intervention: An Obesity Prevention Toolkit for States, May 2014. This evaluation will assess if the program should: 1) continue use of the intervention without change; 2) strengthen the intervention to be more effective; or, 3) de-emphasize or discontinue the intervention because the evidence of its effectiveness is limited. YPAR is currently used in SNAP-Ed programs resulting in meaningful youth-driven policy, systems and environmental change (PSE) change.

**Testing of Strategies to Reach Direct Education Participants Long-Term. March 2015- May 2016.**

Garry Auld, Professor, Department of Food Science and Human Nutrition, Colorado State University

The RNECE-West is conducting formative evaluation in preparation for carrying out a long-term follow-up evaluation of EFNEP and SNAP-Ed participants. Long-term follow-up will require contacting program graduates at 6 and 12 months post-graduation. The results of this project will help determine the

best approaches to finding and recruiting graduates to measure how well behavior changes are sustained long-term. Protocols were developed for use by researchers to test different strategies for reaching participants post-graduation.

The pilot arm of this project conducted in Colorado yielded 120 EFNEP and SNAP-Ed graduates at both 6 and 12 months post-graduation randomly assigned to one of six follow-up strategies: postal mail, email, text from educator, text from state program office, phone call from educator, and phone call from state program office. Those reached were asked to complete the behavior checklist questionnaire and a short survey asking their willingness to provide other types of data (BMI, blood pressure, dietary intake).

Response rates for each strategy as follows:

- Postal mail: 22.5%
- Email: 22.5%
- Text from educator: 32.5%
- Text from state office: 12.5%
- Phone call from educator: 25%
- Phone call from state office: 20%

Analysis of the data collected from the participants reached demonstrates that participants maintained and in some cases improved, many of the behaviors at 6 and 12 months. Results also showed that a substantial percent of respondents also expressed willingness to provide objective data. The RNECE-West Leadership Team is identifying five states to replicate this project in their state to broaden the generalizability of results.

**Long-Term Follow-Up Evaluation of *Eating Smart • Being Active (ESBA)*.** August 2015- August 2018.

Garry Auld, Professor & Susan Baker, Associate Professor, Department of Food Science and Human Nutrition, Colorado State University; Karen Barale, State EFNEP Program Leader, Washington State University

The RNECE-West will collect longitudinal data, including biometric data (BMI and blood pressure), from EFNEP and SNAP-Ed class participants at pre, post and 6 (or 12) months. The EFNEP Behavior Checklist (BCL) and biometric data will be compared to demonstrate program outcomes long-term.

These studies will be conducted initially in Colorado and Washington. Once protocols are established, six additional programs (at least one from each NIFA region) using *ESBA* will be recruited to provide a broader reach and generalizability to findings. The long-term follow-up evaluation will provide objective outcome data and assess how behaviors change after graduation, i.e., do they continue to improve, maintain or regress.

**Developing Environmental Support Activities for Use in Conjunction with Direct Education.** September 2015- August 2018.

Susan Baker, Associate Professor, Department of Food Science and Human Nutrition, Colorado State University

Karen Barale, State EFNEP Program Leader, Washington State University

The RNECE-West will develop, pilot and evaluate six environmental support activities to complement direct nutrition education curricula. The purpose of this project is to help bridge the gap between direct

education and PSE interventions and provide new educational resources for EFNEP and SNAP-Ed to incorporate participant engagement specifically related to change in their micro-environment. These new activities will be designed to be added to existing direct education curricula and will add to the body of knowledge that behavior change related to healthy eating and active living may be improved and sustained by addressing multiple levels of the SEM. A literature review has begun and the other preliminary steps for this project will begin late Fall 2015.

**Behavior Checklist Validation.** Previous work has been underway for 3 years- September 2016.

Garry Auld, Professor, Department of Food Science and Human Nutrition, Colorado State University  
Susan Baker, Associate Professor, Department of Food Science and Human Nutrition, Colorado State University

Karen Barale, State EFNEP Program Leader, Washington State University

NC2169, the multi-state Agricultural Experiment Station (AES) research project looking at EFNEP evaluations, is coordinating with several EFNEP volunteer committees to develop a new Behavior Checklist Questionnaire (BCL). Since the BCL is used by all EFNEP programs as well as many SNAP-Ed programs, the timely development of a new, validated tool is critical to building the evidence base for both EFNEP and SNAP-Ed. The RNECE-West will work in conjunction with NC2169 and the EFNEP Behavior Checklist Committees to finalize the validation (including reliability and construct validity testing) on the newly developed questions for the nutrition domain.

**Secondary Data Analysis.** January 2015- February 2016.

Garry Auld, Professor, Department of Food Science and Human Nutrition, Colorado State University

RNECE-West is conducting a secondary data analyses of national EFNEP evaluation data set from 2007-2014. Data merging steps have confirmed that there are over 500,000 subjects with complete outcome data (matched pre/post behavior checklists and 24-hour dietary recalls). Although this is EFNEP data, many SNAP-Ed programs collect similar data.

Preliminary data analyses confirm that pretest scores are consistent over time as are change scores (gains from pre to post). This consistency suggests that EFNEP's impacts remain consistent over the years. The secondary data also confirms that, nationwide EFNEP participants are approximately 30% each Hispanic, African American and White.

**RNECE-West Needs Assessment.** December 2014- December 2015.

Karen Barale, Associate Professor and EFNEP Program Leader, Washington State University Extension  
Garry Auld, Professor, Department of Food Science and Human Nutrition, Colorado State University

RNECE-West is conducting a needs assessment to understand the regional implementation of nutrition education and obesity prevention public health approaches. We are assessing gaps in interventions to inform research priorities and staff development needs through a review of the literature and public health data, as well as surveying program leaders in NIFA's Western Region on direct education and PSE efforts.

- **Direct Education Program Leader Survey**

The Center released a survey to the NIFA Western Region EFNEP and SNAP-Ed program leaders in Spring 2015. The survey aimed to assess current direct education efforts in the region.

Despite sending the survey link to program list serves multiple times, the response rate to this survey was low. Data is currently being analyzing.

- **PSE Program Leader Survey**

A survey on current PSE activities and interventions plus staff development needs will be sent to EFNEP program leaders and SNAP-Ed implementing agencies in the NIFA Western Region. The survey will be distributed in Fall 2015. Results will be analyzed and incorporated into the RNECE-West needs assessment.

**Food Bank Scans.** January 2015- August 2016.

Karen Barale, Associate Professor and EFNEP Program Leader, Washington State University Extension

The RNECE-West is currently exploring avenues to pursue the development, field testing and validation of a food pantry environmental survey. This environmental survey also referred to as an “e-scan”, will be used in coordination with EFNEP supervisors and SNAP-Ed managers to measure and report changes in the food pantry environment. Environmental data and data gathered from USDA food assistance program clients will strengthen the evidence for policy actions that support environmental adaptations making the healthiest choice the easiest choice for food bank clients.

**Creating Professional Development Training Modules for the Best Practices in Nutrition Education with Low-Income Audiences.** January 2015- August 2016.

Susan Baker, Associate Professor, Department of Food Science and Human Nutrition, Colorado State University

Garry Auld, Professor, Department of Food Science and Human Nutrition, Colorado State University

The RNECE-West is creating professional development training modules based upon *Best Practices in Nutrition Education for Low Income Audiences*<sup>1</sup>. In the fall of 2014, the RNECE-West Steering Committee prioritized all of the topics in each domain of the *Best Practices* document as priority 1, 2 or 3. Development and filming of the priority 1 topics has begun.

Reviewers of the RNECE Continuation Proposals did not approve further funding for this project. The RNECE-West Leadership Team will work to determine the best method to close this project.

1) Baker S, Auld G, MacKinnon C, Ammerman A, Hanula G, Lohse B, Scott M, Serrano E, Tucker E, & Wardlaw M. (2014). Best Practices in Nutrition Education for Low-Income Audiences. National Institute of Food and Agriculture & Food and Nutrition Services, US Department of Agriculture. <http://snap.nal.usda.gov/snap/CSUBestPractices.pdf>.

**RNECE-West Sub-award: Sugar Sweetened Beverage Intake among EFNEP Participants - An Evaluation of the National EFNEP Database.** August 2015- September 2016.

Bret Luick, Professor, University of Alaska Fairbanks

Dr. Luick will conduct a secondary analysis of the EFNEP data set from 2014. The analysis will include estimations of the change in sugar sweetened beverage (SSB) intake and expenditures among program participants. The primary objective of this project is to evaluate the impact of EFNEP on SSB intake, to calculate the impact of the EFNEP intervention on diet quality as estimated by the Healthy Eating Index 2010 (HEI2010) and to estimate the expenditures being made on SSBs by EFNEP participants. Analysis of data will be limited to the Western Region EFNEP participants.

**RNECE-West Sub-award: Evaluation of a Novel, Low Cost, Low Burden, Scalable Technology for Evaluating EFNEP and SNAP-Ed Effectiveness. July 2015- August 2016.**

Carrie Durward, Heidi LeBlanc and Paula Scott, Utah State University

John Hurdle & Patricia Guenther, University of Utah

The purpose of this study is to assess changes in fruit, vegetable, whole grain, and dairy grocery purchases before and after participation in Utah EFNEP and SNAP-Ed. Researchers will assess the utility of a novel technology that detects changes in grocery purchases using customer loyalty cards, and that quantifies expenditures on these foods. The technology is automatic, requiring no effort by the participants, minimizing reporting bias. The analysis is quick, low cost, and promises to scale to any population.