The Regional Nutrition Education and Obesity Prevention Centers of Excellence Policy, Systems, and Environmental Change Center (RNECE-PSE) committed to equipping, training, and empowering local level coordinators and supervisors to integrate effective Policy, Systems and Environmental change (PSE) approaches into Supplemental Nutrition Assistance Program Education (SNAP-Ed) and Expanded Food and Nutrition Education Program (EFNEP). In cooperation with the National Coordinating and four Regional Nutrition Education and Obesity Prevention Centers of Excellence (RNECE), RNECE-PSE Change Center worked to provide timely and relevant real-world PSE guidance to accomplish two objectives:

1. Enhance the capacity of SNAP-Ed and EFNEP networks to effectively implement and evaluate PSE approaches and
2. Strengthen SNAP-Ed and EFNEP nutrition education interventions through incorporation of effective culturally-responsive PSE approaches centered on readiness to change best practices.

To achieve these objectives, RNECE-PSE Change Center was tasked with the following aims:

1. Complete a situational analysis of SNAP-Ed and EFNEP programs related to PSE adoption and implementation.
2. Adapt readiness to change resources to strengthen SNAP-Ed and EFNEP efforts to implement PSE strategies.
3. Create a framework and provide resources to increase intercultural competence in SNAP-Ed and EFNEP PSE implementation.
4. Develop, disseminate, and evaluate systematic competency-based PSE instruction, guidelines, and resources including readiness to change and intercultural competence development that are tailored to the needs of trainees.

The RNECE-PSE Change Center was one of five United States Department of Agriculture (USDA) National Institutes of Food and Agriculture (NIFA) and Food and Nutrition Services (FNS) funded centers to strengthen the science, technical assistance and training resources to increase the effectiveness of nutrition education and obesity prevention programs across the nation. Funding was provided by USDA 2015-67001-24289. The centers worked collaboratively during the funding period to implement research projects, identify nutrition education program best
practices, develop training resources, disseminate research results and implement educational training strategies to promote effective health and obesity prevention for disadvantage low-income families and children. In particular the RNECE-PSE Change Center worked with the other centers to evaluate gaps and develop resources related to nutrition educators and implementing agencies’ knowledge and practice of strategies focused on policy, systems and environmental approaches to support local healthy food and physical activity options.

**Target Audience:**
The target audiences reached/engaged by the RNECE-PSE Change Center include SNAP-Ed implementing agency administrators, EFNEP administrators, SNAP-Ed state agency administrators, regional (FNS) coordinators, colleagues in other RNECE Centers, Association of SNAP Nutrition Educators (ASNNA) membership, and nutrition educators.

**Results:**
**Aim 1. Complete a situational analysis.** RNECE-PSE Change Center completed the situational analysis including 1. A Delphi study of SNAP-Ed and EFNEP PSE training needs, 2. An environmental scan of free and accessible PSE web-based trainings and resources, 3. Two Developing a Curriculum (DACUM) workshops for both SNAP-Ed and EFNEP coordinators to analyze duties and tasks needed to effectively implement PSE approaches through these programs, and 4. Literature scan of intercultural competence and limited resource nutrition education. These resources can be accessed at [PSEchange.org](http://PSEchange.org).

A. A Delphi study of SNAP-Ed and EFNEP PSE training needs was conducted in 2016 through Qualtrics surveys. The Delphi technique is a structured method of inquiry that gathers input from experts on a specific issue in multiple rounds of inquiry. In this case, participants were recruited from SNAP-Ed and EFNEP coordinators/administrators through 150 members of ASNNA listserv. Three rounds of surveys were administered, each probing deeper into PSE implementation needs. Forty participants were in the first round and 23 of those completed second and third rounds. Top barriers included issues with PSE evaluation, lack of training related to PSE implementation, and problems with coordinating direct education efforts with PSE implementation. Top facilitators included evaluation expertise, PSE training and experience with PSE implementation. Top training and technical assistance needs were for PSE evaluation, how to implement PSEs successfully and how to train and supervise staff to implement PSEs. The need for PSE training was confirmed in the Delphi study. Specifically there was a need for basic PSE implementation guidance, facilitation of agency and partner collaboration based on readiness and PSE evaluation training.

B. An environmental scan of web-based trainings in 2016 revealed an abundance of trainings (63) related to PSE approaches. The trainings were submitted for a Quality Matters (QM) review, an e-learning industry criteria for best practice and benchmarking quality in instructional design, innovation and accessibility. Based on the QM criteria the list dwindled to 13 relevant trainings after the review. Additionally, trainings were scattered and disjointed and more than half of PSE training links were disabled or removed six months post environmental scan.
C. A skills and task analysis of PSE strategy implementation was identified as a critical gap for successful implementation in the Delphi study. Building upon previous analysis for direct nutrition education competencies\(^3\), RNECE-PSE Change Center evaluators implemented a DACUM process. Two DACUM\(^4\) panels were held to analyze duties and tasks needed to effectively implement PSE approaches in SNAP-Ed and EFNEP programs. Panel members were coordinators of the respective programs with diverse geographic, urban/rural and cultural experiences. The DACUM panels for SNAP-Ed (2016) and EFNEP (2017) were held separately to assess the particular PSE needs for each program. The SNAP-Ed DACUM panel identified tasks and duties that provided a framework for development of the collaborative web-based training led by Cornell University\(^2\). The EFNEP DACUM panel identified tasks and duties that were used to inform the framework of PSE resources and technical assistance developed by the EFNEP PSE national workgroup via NIFA. The importance of building and maintaining partnerships was identified as a crucial duty for both programs.

D. An intercultural competence and nutrition education literature scan was completed. There emerged an obvious gap in literature related to intercultural competence and EFNEP or SNAP-Ed programs and PSE approaches.

E. Results were disseminated via:


b. Stephenson, L, Franck, K. & Salie, J. (2016). Webinar with FNS Regional SNAP-Ed coordinators to share Delphi study results and integrated map plans. Feedback was received to ensure that implementing agencies understand that direct education and PSE strategies need to be planned and implemented from an integrated approach.


Aim 2. Adapt readiness to change resources to strengthen SNAP-Ed and EFNEP efforts to implement PSE strategies.

Readiness was a key theme of stakeholders and environmental scans throughout the situational analysis. Particularly the scan revealed the lack of resources to support collaboration and coalition-building necessary to the implementation of PSE approaches for nutrition educators. RNECE-PSE Change Center Co-PI, Dr. Rachel Novotny’s previous work with the USDA NIFA funded Children’s Healthy Living (CHL) project provided foundational direction for development of relevant resources to meet this identified gap. Multiple resources were developed and disseminated to EFNEP and SNAP-Ed Coordinators in conjunction with National Collaborative on Childhood Obesity Research (NCCOR) and SNAP-Ed Evaluation Framework work group:

A. A needs and readiness flow chart was developed in collaboration with the developers of the SNAP-Ed Evaluation Framework and Interpretive Guide. The SNAP-Ed Evaluation framework is an evaluation tool implemented nationwide to provide 51 priority outcome indicators of nutrition behavior and systems change. The flow chart is a tool for priority short term SNAP-Ed indicator five (ST5) and serves as a first step for implementing agencies beginning to incorporate PSE changes.

B. RNECE-PSE Change Center worked with SNAP-Ed coordinators from Florida, Guam, Indiana, Oklahoma and South Carolina (n=16) to adapt and validate a Collaboration Readiness survey via cognitive testing. Eight assessments were conducted based upon stakeholder use and input. This tool gauges a partner’s readiness to collaborate and can be used with SNAP-Ed coordinators, educators and community partners to carry out PSE change activities with diverse groups. The assessment tools include five areas of readiness, helps determine where groups are in working together to implement PSE approaches, and provides links to resources and trainings to help groups collaborate.

C. A video module explaining the tools and importance of assessing collaboration readiness in preparation for community-based PSE approaches was developed.

D. RNECE-PSE Change Center collaborated with NCCOR and SNAP-Ed Evaluation Framework workgroup as readiness consultants.

E. Information was disseminated via:

   a. The Collaboration Readiness tools are featured in the SNAP-Ed Interpretive Guide (p. 86) to navigate SNAP-Ed coordinators through Evaluation Framework indicator ST5.

   b. Novotny, R. & Butel, J. (2016). SNAP-Ed local coordinators (n=16) in six pilot states were trained to use the Collaboration Readiness Tool via web-based training and technical assistance calls.

Aim 3. Create a framework and provide resources to increase intercultural competence in SNAP-Ed and EFNEP PSE implementation.

Effective nutrition education and obesity prevention approaches consider the cultural context of the audience being served. Learning to effectively interact with people from other cultures is influenced by our perspective of cultural commonalities and differences. In 2003, Dr. Mitchell Hammer adapted Bennett’s Model of Intercultural Sensitivity to illustrate the development of an Intercultural Mindset Continuum. This continuum describes knowledge, attitude and skill sets or orientations toward cultural difference and commonalities from monocultural mindsets, where your own culture is the center of your reality, to intercultural mindsets, where you understand and accept the cultural differences that exists in our everyday lives. A focused nutrition education approach to cultural understanding requires skill, time and attention to plan, implement and evaluate the situations unique to the local communities. Enhancing to the impact of nutrition education and obesity prevention efforts in a rapidly growing diverse society requires training to support intercultural development of coordinators and educators. The RNECE PSE Change Center focused efforts on an initial framework to support the development of SNAP-Ed and EFNEP staff. As a result of the initial intercultural competence
A literature scan, a multi-prong approach was implemented to begin to assess needs and potential best practices to develop intercultural competence of SNAP-Ed and EFNEP educators.

A. 112 Extension agents and state specialists participated in a pilot training in Tennessee introducing the Intercultural Mindset Continuum and strategies to increase intercultural competence. Agents participated in the Intercultural Development Inventory to assess their intercultural development orientation along the continuum. Aggregate results were shared during the presentation to engage discussion for potential next steps in training. Overall the group members perceived themselves to be significantly more culturally oriented than the group results indicated. These results pointed to the fact that they saw themselves further along the continuum of intercultural mindsets than they actually were.

B. 134 Society of Nutrition Education Behavior (SNEB) pre-conference attendees participated in an Intercultural Development Inventory (IDI) to begin to assess the intercultural development of nutrition educators for limited resource audiences and initiate a national conversation. SNEB was chosen as a venue because a wide group of EFNEP and SNAP-Ed coordinators, faculty and educators attend this nutrition conference to learn best practices. Aggregate IDI results were shared with the attendees in the context of an intercultural competence development continuum. Experiential learning activities introduced the IDI as an evaluation tool to gauge development toward an intercultural mindset.

C. 20 SNEB pre-conference attendees with SNAP-Ed and/or EFNEP experience were recruited to participate in a follow-up web-based cohort training series. Participants participated in pre and post individual IDI feedback sessions. They were led through a series of 4 web-based meetings designed to coach them in developing a personal intercultural development plan, provide learning activities and discussion sessions to support their progression. Results indicated a positive change in intercultural mindsets. Participants stated that the sessions provided an effective place to engage in conversations to strategize best practices to engage their nutrition education staff and clientele more effectively through an intercultural lens and develop their personal intercultural mindset.

D. A short learning module was designed and produced to provide initial context and explain the Intercultural Development Continuum as a starting point for assessing cultural mindset and planning experiences for EFNEP and SNAP-Ed staff. This was shared on the psechange.org website.

E. Intercultural development resources placeholder was designed into the PSEChange.org website to further provide strategies to progress towards a more intercultural mindset to build upon the work of this grant. A workgroup of national intercultural experts have committed to continue after the grant ends to identify and link appropriate resources to build the inventory of relevant materials to aid implementing agencies capacity to select culturally appropriate interventions and/or adapt interventions to be culturally responsive. These will be led by RNECE PSE Change Center Co-Principal Investigators Stephenson, Parker, and Fabregas.

F. Information was disseminated via:

Aim 4. Develop, disseminate, and evaluate systematic competency-based PSE instruction, guidelines, and resources including readiness to change and intercultural competence development that are tailored to the needs of trainees.

Based on the initial situational analysis of identified gaps, facilitators and opportunities, RNECE-PSE Change Center focused on two areas of technical assistance and training.

A. Evaluation of PSE Approaches:
   a. RNECE-PSE Change Center collaborated with NCCOR and the national SNAP-Ed Evaluation Framework workgroup to provide technical assistance related to evaluation of collaboration readiness. The RNECE-PSE Change Center sponsored the Food and Nutrition Extension Education preconference workshop at the Society for Nutrition Education and Behavior annual meeting in Washington, DC in 2017. This preconference was entitled “Next Steps in PSE: Effective Evaluation Methods in Policies, Systems, and Environmental (PSE) Interventions”. One hundred thirty-four nutrition education professionals participated in the preconference. Presentations included assessing partner readiness led by Rachel Novotny and Jean Butel who shared the new Collaboration Readiness survey; assessing intercultural competence led by Lupita Fabregas with participants having the option of completing the Intercultural Development Inventory; and an interactive session where participants shared ideas and strategies for developing evaluation plans for PSE interventions.

B. PSE Implementation
   a. The interactive webpage has been built to support EFNEP and SNAP-Ed PSE approaches accessed at http://psechange.org/. The site includes:
      i. The SNAP-Ed Integrative map was designed and developed to provide SNAP-Ed implementing agencies with a self-guided experience through settings within the Eat, Live, Learn, and Play domains of the Evaluation Framework. Setting based trainings are based upon the DACUM duties and tasks results. The integrative map features 28 video modules to describe PSE implementation across multiple community settings, developing collaboration readiness, building an intercultural mindset and understanding food systems. These video modules are designed to provide potential scope for PSE approaches, specific to the selected setting, in an engaging manner for the adult learner. Trainings focus on farmers markets, school gardens, community gardens, corner stores and faith-based organizations. The settings include tips for getting started, partnership building and evaluation.
Additional videos focus on a systems approach to introduce the concept of the overall Food System to nutrition educators.

ii. Results of the EFNEP DACUM process were shared with the EFNEP PSE national workgroup to finalize and build an EFNEP website as it relates to PSE. The website was soft launched in the fall of 2018 to provide a springboard for the workgroup’s efforts to support EFNEP programming from a socioecological approach to teach the dietary guidelines. The soft launch will be followed by further development of key resources beyond the grant period. Resources will be available on psechange.org.

b. RNECE-PSE Change Center staff collaborated with the National PSE Training Workgroup to develop and implement a PSE 101 certificate program which was launched in 2018 via eCornell. We provided leadership for the module three focused on building multi-sector, multi-level partnerships. Additionally, the RNECE-PSE eLearning professional provided coordination and organizational support for the multi-session certification program.

C. Information was disseminated via:


https://youtu.be/C_C-Idl5Vky


Video 1 https://youtu.be/OPOZRc49tck
Video 2 https://youtu.be/IQBNMIEEh4k
Video 3 https://youtu.be/kV9_G8KaFUQ
Video 4 https://youtu.be/lZx_GRXbKhl
Video 5 https://youtu.be/OZ0qPrfKoQ

f. Headrick, L., Wusylko, C., Shelnutt, K., (2017) Farm to Fork Food System: Eight video series and Instructional resources

Video 1: The Food System https://youtu.be/P9So-ENN2Go
Video 2: Growing https://youtu.be/x-zdrT1bFHo
Video 3: Processing [https://youtu.be/f7sE6PAk5LI](https://youtu.be/f7sE6PAk5LI)
Video 4: Distribution [https://youtu.be/IXmREiR5LE0](https://youtu.be/IXmREiR5LE0)
Video 5: Accessing [https://youtu.be/6aOCYPGywZc](https://youtu.be/6aOCYPGywZc)
Video 6: Consuming [https://youtu.be/MPJBiqdthsA](https://youtu.be/MPJBiqdthsA)
Video 7: Recycling [https://youtu.be/1QsE6nbapRQ](https://youtu.be/1QsE6nbapRQ)
Video 8: Next Steps [https://youtu.be/xiLe2jiCJcU](https://youtu.be/xiLe2jiCJcU)
   - Video 1 [https://youtu.be/oI0kG0tGQTY](https://youtu.be/oI0kG0tGQTY)
   - Video 2 [https://youtu.be/Z1CMf1uJDSs](https://youtu.be/Z1CMf1uJDSs)
   - Video 3 [https://youtu.be/I17L0KrfktE](https://youtu.be/I17L0KrfktE)
   - Video 1 [https://youtu.be/rdgn6oNN7o8](https://youtu.be/rdgn6oNN7o8)
   - Video 2: [https://youtu.be/FmY_oBOyFdA](https://youtu.be/FmY_oBOyFdA)
   - Video 3: [https://youtu.be/M8AM-iomZQ](https://youtu.be/M8AM-iomZQ)
   - Video 1: [https://youtu.be/SqvscCCIYR4](https://youtu.be/SqvscCCIYR4)
   - Video 3: [https://youtu.be/ahnW5P0pLgk](https://youtu.be/ahnW5P0pLgk)
   - Video 4: [https://youtu.be/em6ycaEUJSQ](https://youtu.be/em6ycaEUJSQ)
   - Video 1: [https://youtu.be/wlaXe6mJrMo](https://youtu.be/wlaXe6mJrMo)
   - Video 2: [https://youtu.be/2sEwHRXrMyM](https://youtu.be/2sEwHRXrMyM)
   - Video 3: [https://youtu.be/LeY71r3uoml](https://youtu.be/LeY71r3uoml)
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