



**The Journal of the National Extension  
Association of Family and Consumer  
Sciences**

Volume 13, 2018

# **Journal of National Extension Association of Family and Consumer Sciences**

## **President's Message**

It is my pleasure to present to you the 2018 Journal of NEAFCS. This peer-reviewed, researched based journal is one way for our members to inform others in our field and related fields about our scholarly work as Family and Consumer Sciences professionals. The Journal highlights Research, Best Practices, and Implications for Extension Family and Consumer Sciences. It is also a valuable tool to help you stay current with programming, research, and methodology that is specific to our learning and teaching environment.

As you read the 12th volume of the Journal of National Extension Association of Family and Consumer Sciences (JNEAFCS), I know you will discover informative and thought-provoking information in each article. Consider what you have to share with your colleagues about impacts that have resulted from your programming. Make it one of your professional goals to submit an article for a future Journal issue.

JNEAFCS, an online resource, can be forwarded as a link along with a personal note to your administrators, local and state policymakers, advisory groups, and peers. Help them connect our efforts to the strong impacts we have across the nation such as reducing health care costs through our nutrition and health education programs. Extension work makes a difference! Research proves that!

Thank you to Co-Editors Sarah Ransom of the University of Tennessee Extension and Dana Wright of West Virginia University Extension for their hard work and dedication to the journal. My appreciation goes out to the members of the subcommittee, peer reviewers, and to our Vice President of Members Resources, Edda Cotto-Rivera of the University of Georgia Extension, for a quality, peer-reviewed, professional publication that helps preserve our valuable research and resources for the future.

I challenge you to chart your course with NEAFCS by building capacity through people, programs and partnerships to share new approaches to extension education and the public value of the work we do with others.

Sincerely,

Lora Lee Frazier Howard, President 2017 - 2018

National Extension Association of Family and Consumer Sciences

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# Journal of National Extension Association of Family and Consumer Sciences

## From the Editors

Here is your 2018 edition of the *Journal of National Extension Association of Family and Consumer Sciences* (JNEAFCS). JNEAFCS is a refereed journal. We appreciate the opportunity we have had to edit the journal this year and have learned a lot throughout the process. We look forward to serving you in 2019.

Please consider submitting a manuscript for the 2019 edition of JNEAFCS to promote yourself or one of your programs. The submission deadline is April 15, 2019. Choose a program where you can demonstrate impact. Have your colleagues read your manuscript to get input before submitting it to ensure it is of high quality.

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## RESEARCH

### Using “Photovoice” to Identify Rural Community Food Issues

Lisa Franzen-Castle, Tara Shafrath, Lindsay Moore, Ann Schwader,  
Daniel T. Remley, and Suzanne Stluka

Rural communities experience unique barriers to food security. Developing food policy councils (FPCs) is a systematic approach to address food security. FPCs bring together a diverse network of community stakeholders to address local food system strengths and concerns. A six-state team developed new or provided support to existing FPCs in rural communities. Photovoice is a project component used to engage youths, helped identify community food issues, such as food access and affordability in studied communities. Furthermore, it was meant to engage FPCs in meaningful dialogue to identify solutions, such as community gardens and work with local food pantries. Because of the multistate nature of the project, unique measures were employed to provide consistent, successful training and implementation of Photovoice. This article reveals the best practices learned.

Matters of food security in rural populations have become an issue of national concern. Food security is access by all people at all times to enough food for an active, healthy lifestyle (USDA, 2017). Food insecure populations have lower dietary quality and higher rates of diet-

related chronic disease than food secure populations (Hanson & Connor, 2014; Gundersen, & Ziliak, 2015). Rural communities experience unique barriers to food security, including lack of access to and affordability of fruits and vegetables (Casey et al., 2008; Mulangu & Clark, 2012). Considering the barriers rural communities face, food security is an issue that should be addressed by the affected communities. Developing food policy councils (FPCs) is a systematic approach to addressing food security in rural communities. FPCs cultivate partnerships amongst a diverse network of community stakeholders to address local food system strengths and concerns (Clayton, Frattaroli, Palmer, & Pollack, 2015; Hamm & Bellows, 2003; Harper, Shattuck, Holt-Gimenez, Aldon, & Lambrick, 2009).

Voices for Food, comprised of representatives from six states and functioning under a 5-year integrated Extension and research project, is addressing food security issues by developing new or providing support to existing FPCs in selected diverse, rural communities. The primary aim is to forge partnerships between FPCs and local food pantries to implement socio-ecological changes that will result in increased access to healthful food, improved dietary behaviors, and, ultimately, positive health outcomes.

Photovoice is a process in which an underrepresented group of individuals from a community are tasked with representing issues in their community through photography (Budig, Diez, Conde, Sastre, Hernan & Franco, 2018). The photos are used as a basis for a dialogue about the content of the images that in turn drives community solutions. Photovoice is a flexible process and can be adapted to meet needs related to varied topics, communities, and groups (Heidelberger & Smith, 2015; Kovacic, Stigler, Smith, Kidd, & Vaughn, 2014; Misyak et al., 2015), such as the FPCs in the Voices for Food project.

## **Objective**

Photovoice was an element of the project for following reasons: it helps change agents and policy makers increase their understanding of applicable communities; it can be used to engage youth, an underrepresented group, in meaningful dialogue; and it can serve as a needs assessment for FPCs to use to identify local assets and needs in communities' food systems. The specific objectives for using Photovoice were to (a) engage youths in identifying and representing community food security assets and barriers, (b) provide a youth-led showcase of photographs to participating FPCs, and (c) engage FPC members in meaningful dialogue to identify community-driven solutions related to food security. The objective of this manuscript is to describe the best practices used for implementing Photovoice in rural FPCs through a multistate project.

## **Method**

This six-state project involved an overall Photovoice project coordinator (PPC), state-level project coordinators (PCs), and two adult youth leaders per state in different communities (12 communities in total). Participating communities were those previously recruited to take part in the larger project. Because of the multistate nature of the project, unique measures were employed to provide consistent, successful training and implementation. The Photovoice project occurred in four phases: (a) training material preparation, (b) youth leader recruitment, (c) youth leader training, and (d) implementation.

## **Procedures**

### **Training Material Preparation**

The project team used Box.com (Box), an online file-sharing and cloud-based document storage and content management service, as the main hub for communication among the PPC, PCs, and local adult youth leaders. Training materials were organized in Box by the PPC. Content areas were arranged according to the order in which adult youth leaders should access the folders for easy use and proper implementation (Table 1). All documents provided in Box folders were created specifically for the project and organized prior to adult youth leader recruitment. Each state's youth leaders were assigned separate Box folders so that they would be unaware of other participating communities.

### **Adult Youth Leader Recruitment**

As stated previously, youth leaders were recruited for the 12 participating communities, and varying numbers of youths from each community participated in the project. Adult youth leaders included schoolteachers, afterschool program leaders, homeschool teachers, 4-H staff, and church group leaders. State-level PCs were charged with recruiting youth leaders who had access to groups whose members could share their perspectives on the community food environment. There were no stipulations on age or number of youths who could participate, and no incentives were provided. The main focus was on ensuring that youths would be able to comprehend the project and take pictures that provided a comprehensive glimpse into community assets and barriers.

## **Adult Youth Leader Training**

The following content was provided for youth leaders: (a) introductory training on general Photovoice information, (b) instructions for accessing and using Box, and (c) recorded PowerPoint webinars. Youth leader training steps and associated actions are listed in Table 2.

## **Photovoice Implementation**

Throughout implementation, the PPC sent reminder emails to youth leaders regarding training, timelines, and data collection. The PPC and state-level PCs made themselves easily accessible for addressing youth leaders' questions or concerns. Complete implementation steps are presented in Table 3.

## **Discussion**

The process of youths' documenting their environments related to food access and food security was useful in sharing each community's story. It empowered youths to play a significant role in the effort to document food security. Youths reached as a result of the Photovoice project included those in school systems (traditional, alternative, and homeschool), 4-H clubs, and church groups. Photovoice was used in communities not just as an introductory activity with FPCs but also as youths' projects, such as school assignments, volunteer group activities, and social media posts. Some examples of food issues identified using Photo Voices in these communities include: 1) greater availability and affordability of convenience foods, such as chips, baked goods, soda and fast food; 2) school lunches were perceived as unhealthy; 3) fresh produce and meats were noted as too expensive for families in their communities; and 4) the availability of fresh produce and meats was not desirable. Future publications will focus on the specific results of this project.

The implementation of Photovoice in rural FPCs through a multistate project is a useful technique to record each community's strengths and concerns regarding community food systems. This Photovoice project was novel and unique in that it took place as a component of a multistate grant project instead of a stand-alone effort. As a result of the implementation of Photovoice for this project, there are two recommended best practices: 1) involvement of youth in multi-state community work, and 2) use of visuals in research work. There are barriers to implementing Photovoice, including the recruitment of youths to complete this work, and obtaining quality photos and captions that represent the subject well. Using FPC and Extension connections in the community was helpful in recruiting youth. Referring youth leaders and youth to the training power points that provided key information on capturing a subject well was helpful in obtaining detailed pictures and captions. A strength of this project was that the process of discussing the photos taken by area youths provided critical reflection and dialogue within FPCs as members began the visioning process for their councils' missions and goals. Furthermore, after viewing their community's photography showcase, FPC members participated in discussions that launched identifiable community solutions unique to their communities. Last, engaging youth in this project laid the groundwork for future participation and engagement in FPC activities.

### **Summary**

This article is based on research conducted and supported by Agriculture and Food Research Initiative Competitive Grant no. 2013-69004-20401 from the U.S. Department of Agriculture National Institute of Food and Agriculture.



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**Table 1. Box Folder Organization and Contents**

Step/folder name	Folder Contents
1. Preparatory Materials	<ul style="list-style-type: none"><li>• Photovoice Information Sheet that addressed the “Who?”, “What?” “When?” “Where?” and “Why?” of this project<ul style="list-style-type: none"><li>– State-level project coordinators (PCs) used the content of the <i>Photovoice Information Sheet</i> to recruit one adult youth leader in each of two communities, who subsequently used the document to describe the overall process to Photovoice participants (youth).</li></ul></li><li>• A step-by-step timeline in infographic format intended to help adult youth leaders visualize the project’s steps.</li><li>• A checklist for youth leaders that coincided with the timeline to help keep them on task and completing the tasks in order.</li></ul>
2. Information and Materials	<ul style="list-style-type: none"><li>• PowerPoint webinars that trained adult youth leaders and Photovoice participants (youth) on the food system, (FPCs), and adapted Photovoice methodology.</li><li>• Example photos that adult youth leaders could use to help communicate the type of photos and captions that should be included in the project.</li><li>• Two infographic handouts from <a href="http://www.nourishlife.org/teach/food-system-tools/">http://www.nourishlife.org/teach/food-system-tools/</a> that explained the food system.</li></ul>

- 
3. Upload Photos Here
- A SHOWeD Method worksheet (Strack, Magill, & McDonagh, 2004) intended to help participants write a comprehensive caption to accompany each photo.
  - A photo release form from the lead institution, which was required by each individual who took pictures for the project.
    - Signed release forms were sent to state-level PCs.
4. Showcase  
(community photo presentation to FPCs)
- An implied consent form
  - An invitation letter to be distributed to participating youths’ parents, inviting them to attend the showcase.
  - Photovoice Showcase Questions document, which listed eight open-ended questions (see below) to prompt conversation following the photo presentation at the FPC showcase meeting.
    - “What do you see as strengths of your community’s food access?”
    - “What do you see as weaknesses of your community’s food access?”
    - “How did participation in the Photovoice showcase and/or project change your awareness of your community’s food access?”
    - “How did participation in the Photovoice showcase and/or project make you feel about your community’s food
-

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access?”

- “How did participation in the Photovoice showcase and/or project change your motivation to be involved in your community’s food access initiatives?”
  - “If you could make one change that would improve your community’s food security, what would you do?”
  - “How did participation in the Photovoice showcase and/or project impact you?”
  - “What did you learn by participating in the Photovoice showcase and/or project?”
-

**Table 2. Adult Youth Leader Training Steps and Actions**

Step	Actions
1. State-level project coordinators (PCs) submitted youth leader contact information to the Photovoice project coordinator (PPC).	<ul style="list-style-type: none"><li>• The PPC contacted youth leaders to set up an introductory training date and time.</li><li>• Depending on youth leader preference, trainings took place through online videoconference or telephone.</li></ul>
2. The PPC conducted introductory training and next-steps discussion, which took 90 to 120 min to complete.	<ul style="list-style-type: none"><li>• The PPC described the Voices for Food project and Photovoice and explained how Photovoice fits into the larger project.</li><li>• The adult youth leader was given access to his or her Box folder and introduced to all materials posted there.</li><li>• The PPC and adult youth leader discussed strategies for tailoring Photovoice to fit the program, FPC, and community. The meeting ended with the opportunity for questions and answers.</li></ul>
3. Adult youth leaders familiarized themselves with Box materials in more detail and viewed recorded webinars.	<ul style="list-style-type: none"><li>• Prerecorded webinars used to train adult youth leaders and participating youths were as follows: Food System Introduction, Photovoice Introduction, Photovoice Photography, and Photovoice Showcase.</li><li>• Youth leaders were encouraged to view all webinars prior to informing youths on the project methods as each webinar included valuable information for properly implementing the project.</li></ul>

**Table 3. Photovoice Implementation Steps, Actions, and Details**

Step	Actions/details
1. Adult youth leaders trained youth participants.	<ul style="list-style-type: none"> <li>• Adult youth leaders described Photovoice methods and presented the recorded webinars to the target group of youths. Photo takers were reminded not to capture pictures having other people’s faces in them to ensure privacy of community members.</li> </ul>
2. Youths used cameras to take photos.	<ul style="list-style-type: none"> <li>• No stipulations were made on camera type used. Tablets, smartphones, digital cameras, and disposable cameras were all allowed, depending on the youth leader’s decision and available resources.</li> <li>• Youths took 10-15 photos of community environmental features that positively or negatively affected food access and food security.</li> </ul>
3. Participants or youth leaders uploaded photos and added descriptive captions.	<ul style="list-style-type: none"> <li>• The participating youths or the adult youth leader uploaded photos to the appropriate Box folder.</li> <li>• In photos with people’s faces shown, faces were blacked out or made unrecognizable for the showcase PowerPoint presentation.</li> <li>• Photo captions were typed into the comments section on Box.</li> </ul>

4. Project leadership prepared the Showcase presentation.
    - The Photovoice project coordinator (PPC) organized photos and captions into slides in a PowerPoint presentation titled “Community [insert community name] Showcase Presentation.”
    - Each picture/caption was on an individual slide in the presentation.
    - Questions from the Photovoice Showcase Questions document were specifically chosen to prompt a discussion among the showcase participants.
    - The PPC shared the showcase presentation draft with the state-level project coordinators (PC) to review.
  
  5. State-level PCs presented the Showcase.
    - The PC printed copies of the finalized PowerPoint slides to share with FPC members so that each showcase attendee could have a copy.
    - A showcase of the pictures was presented to the local FPC.
    - After the pictures were presented, the selected items from the Photovoice Showcase Questions document were addressed.
    - A dialogue among FPC members occurred, and the results of the dialogue helped shape next steps of the FPC initiatives.
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## **RESEARCH**

### **Faith Communities Alive: Evaluation of a Nutrition and Fitness Intervention Implemented in Faith Communities**

Julie Garden-Robinson

Faith communities can be instrumental in health outreach, but few evaluation studies have been conducted in Midwestern states. The goal of the North Dakota Extension-led Faith Communities Alive project was to provide collaborative training, tools and support for volunteer leaders in addressing healthful eating, physical activity and health. This article describes the process of launching an initiative in 25 faith communities and provides evaluation outcomes using common tools. Evaluation results showed that faith communities made strides in creating sustainable health-related programs. This project represents a programming opportunity for Family and Consumer Sciences educators in the community setting.

Chronic diseases, including heart disease, cancer, stroke, Alzheimer's disease, chronic obstructive pulmonary disease (COPD), and diabetes, account for 70% of all annual deaths in North Dakota (Department of Health, 2013). Of the six diseases, at least four are directly related to modifiable lifestyle behaviors such as poor dietary habits (especially low fruit and vegetable intake) and inadequate physical activity. The North Dakota Department of Health Chronic

Disease Status Report (2014) encourages community leaders to improve food access and quality through walking, community and home-based gardens, and formation of food councils.

Faith communities can be instrumental in health outreach, and state participation in religious activities is available for all states (Pew Research Center, 2014). According to the Pew Research Center (2014), 77% of North Dakotans considered themselves Christian, 3% were engaged in non-Christian faiths and 20% were unaffiliated. About 33% of North Dakotans attend services weekly and another 33% attend services once or twice a month to a few times per year. The North Carolina Extension Service has implemented a health outreach model, Faithful Families Eating Smart and Moving More (FFESMM), within faith communities (Hardison-Moody & Stallings, 2012; Hardison-Moody et al., 2011a; Hardison-Moody et al., 2011b). Reaching out to faith communities and other existing organizations in rural communities is a viable option for encouraging healthier lifestyles, including nutrition and fitness programming.

The Black Churches United for Better Health Project focused on making environmental changes within the church such as creating a community garden, teaching classes on modifying recipes, and serving more fruits and vegetables at church socials (Campbell et al., 1999). The 4-year intervention, based on the ecological model of change, successfully increased fruit and vegetable intake and involved 1,198 members and 24 intervention churches.

The Body and Soul intervention conducted by Resnicow et al. (2004) combined both the Eat for Life Trial and Black Churches United for Better Health (BCUBH). Both studies focused on increasing fruit and vegetable intake through programming in African-American churches, but they had differences in behavior change styles. The original Eat for Life trial involved 14 churches and significantly increased fruit and vegetable intake among the group who participated in motivational interviewing (Resnicow et al, 2001). The Body and Soul program reached 854

participants from 15 African American churches during a 6-month period. Participants were provided with the cookbook, and completed motivational interviewing and church-wide nutrition activities. The intervention groups had a significantly greater consumption of fruits and vegetable compared to the comparison group (Resnicow et al, 2004).

More recently, Pinsker et al. (2017) implemented the 12-week program with 310 participants from 20 African American churches in the Midwest, and participants significantly increased their fruit and vegetable intake. Wilcox et al., (2013) conducted the Faith, Activity, and Nutrition (FAN) program, a 15-month intervention that included self-reported physical activity and fruit and vegetable consumption. As a unique aspect, FAN offered training to church committee members, pastors and cooks to help increase physical activity and make dietary changes within the church. Training staff or members from the church may help with sustainability rather than bringing in people from the community to conduct interventions. Results showed a significant increase in moderate- to vigorous-intensity physical activity during leisure time (Wilcox et al., 2013). Another study, the Faith-based Approaches in the Treatment of Hypertension (FAITH) trial included a group-counseling therapeutic lifestyle intervention with motivational interviewing delivered by lay health advisors from each church (Lancaster et al., 2014).

Sustainability is an important element for program continuation and success. Many interventions use components to ensure programs will continue, such as pastoral support, trained church staff, and self-help materials (Resnicow et al., 2001; Resnicow et al., 2004; Wilcox et al., 2013). More faith-based community interventions have been conducted in Southern states, and most of the published studies were conducted in African-American churches (Campbell et al., 1999; Lancaster et al., 2014; Resnicow et al., 2004; Resnicow et al, 2001; Whitt-Glover, Hogan,

Lang, & Heil, 2008; Wilcox et al., 2007; Wilcox et al, 2013). Few evaluation studies have focused on faith-based community interventions in Northern states.

### **Objective**

The goal of the Faith Communities Alive project was to engage faith communities in health outreach through the provision of collaborative training, educational tools and support addressing healthful eating and physical activity to promote overall well-being. This article describes the process of creating a faith-based initiative and provides evaluation outcomes.

### **Method**

This intervention was guided by the Cooperative Extension's National Framework for Health and Wellness (Braun et al., 2014). Along with creating many new project-specific materials, the team adapted an approach used by the North Carolina Extension Service, Faithful Families Eating Smart and Moving More (FFESMM), which is a faith community-based program that addresses multiple levels of the socio-ecological (S-E) model (Dunn et al., 2011). The following process was undertaken to launch this program.

An overall advisory group ("engagement committee") was assembled. This group provided input and support for the initiative. Having a group of enthusiastic and committed individuals from a variety of backgrounds (educational entities, public health, healthcare, parish nurses, etc.) and ages was key to success. Through grant funding, the engagement committee was able to hire a community health coach for direct interaction and coaching of faith communities.

Faith communities were identified. Interest was gathered through personal contact, letters and other means. An invitation to a discussion was mailed to faith communities of all religious

denominations in two neighboring cities in bordering states, and the engagement committee held a meeting with representatives from the faith communities. At the conclusion of the meeting, the representatives were asked for an initial commitment to becoming part of the initiative, with follow-up by the health coach.

A leader or co-leaders within each faith community were identified and orientation and training in the approach being used was provided. After leadership was in place, the leaders were asked to assemble volunteers through a variety of methods, including announcements to the faith community and sign-up sheets.

Clergy and at least one church staff person were identified to lead the effort within each faith community.

Approval from the faith community leadership board (e.g. church council) for becoming involved in a health-promoting initiative was obtained.

The health-related programs, policies and environment of the faith community were assessed. Using a checklist from the FFESMM curriculum (Dunn et al., 2011), the volunteer leaders assessed programming and environmental supports related to food or fitness.

The interest of the faith community was determined using a survey (paper or online option), which was adapted from FFESMM and approved by the university's Institutional Review Board prior to implementation. The surveys gathered information about specific types of programming in nutrition (cooking classes, handouts, etc.) and fitness/health opportunities (fitness classes, blood pressure screening) of interest to the potential participants. See Table 1 for representative questions.

A plan with policy, environmental and educational goals was developed in conjunction with each participating faith community volunteer leadership group after compiling interest surveys and environmental scan results.

Regular communication was implemented. The volunteer faith community leadership groups met regularly face-to-face and communicated in the group's preferred manner.

The outcomes of the initiative were evaluated. An annual survey was implemented with the volunteer leaders to evaluate the efforts.

## **Results**

### **Assessment of faith community interest**

Table 1 shows the results of the preliminary assessment process of faith community leaders, volunteers and members (n = 702). The results were used to determine the approach to the development of materials and outreach objectives. Overall, respondents to the survey indicated the most interest in healthy meals (82.7%) and snacks (81.3%) being served, health information provided in newsletters and bulletin boards (76%), and classes being offered on nutrition and/or physical activity (61.3%). The lowest interest was in health activities being offered either after or before faith community services, at 23.3% and 13.4%, respectively.

### **Participation, activities and materials developed**

The project advisory team/engagement committee included representatives from county and state Extension, a regional parish nursing program, a regional medical system, one Land Grant university, one private college, county public health nutrition, clergy, and faith community volunteers. During the 3-year period, 25 faith communities, primarily Protestant and Catholic denominations with more than 25,000 total members, chose to become "Recognized Faith



Communities” by developing a team within their facility and creating an action plan. Faith-community affiliated women’s shelters and retirement centers also became involved. After orientation to the program, training and completion of the action plan, the faith community leaders became eligible to select items from a grant-funded “wish list” of items for their faith community, with the goal of promoting participation in the 3-year project (\$500 for year 1, \$250 for year 2 and \$100 for year 3). The wish list items included a variety of items, such as kitchen equipment (blenders, water pitchers), gardening tools and seeds, and exercise-related equipment (pedometers, stretch bands).

Based on the results of the preliminary assessment and discussions with faith community leaders, a faith community health coach was hired to have regular interaction with each of the faith communities through face-to-face visits, phone calls, and emails. In some cases, members of the committee implemented the project within their own faith communities. The Extension-led project engagement team and health coach, with review/input from the engagement team, accomplished the following:

- Developed a goal and action plan template to assist volunteer leaders.
- Created a theme-based monthly newsletter with upcoming community health classes (cooking, diabetes, weight management, fall prevention), provided subject matter background for leaders, and highlighted activities being conducted.
- Conducted face-to-face group training meetings to share ideas and network.
- Developed and maintained a website (<https://www.ag.ndsu.edu/faithcommunitiesalive>) with information about gardening, fitness, food preservation, food safety, and nutrition.

- Maintained a social media (Facebook) presence for interaction and communication.
- Created webinars, online modules, handouts, table tents, and bulletin inserts.
- Released an online volunteer development tool/module.
- Created a video about the program that shares the program with others.
- Responded to the faith communities leaders' questions and requests.
- Generated ideas for community outreach (food drives, gardens, etc.).

### **12-month assessment of faith community's progress toward goals**

Faith community volunteer leaders were asked to complete an annual assessment of their efforts toward achieving the goals set for their faith community, in collaboration with the health coach and/or project engagement team members. Table 2 shows the results of the assessment procedures using a common tool. Most commonly, faith communities promoted nutrition and physical activity on posters and newsletters (83%), provided water as a beverage (76%), maintained a room available for mothers to breastfeed (70%), and/or had an active health team (66%). Some faith communities were farther along in the process at the start of the effort; however, all showed progress toward their goals. The annual assessment, conducted by the health coach, was used to assist them in revising existing goals or creating new goals.

### **Discussion**

Many Americans follow a religious faith and attend a faith community, making them a promising location for physical activity and nutrition interventions (Association of Religious Data Archives, 2018; Gallup, 2012). Interventions that promote nutrition and/or physical activity within faith communities have shown positive results, including the present study. Many faith-

based interventions have been successful in improving diet and exercise (Campbell et al., 1999; Resnicow et al., 2004; Resnicow et al., 2001; and Whitt-Glover et al., 2008). Making efforts to promote sustainability is a key factor for program continuation and success. The present program created community partnerships, volunteer training tools, a website, social media promotions, monthly newsletters, and provided items (curriculum, kitchen tools, exercise equipment) to the faith communities to promote sustainability. Pastoral and church support, trained members of the church to continue interventions/programs, and self-help materials for participants can help sustain programs (Whitt-Glover et al., 2008; Wilcox et al., 2007 & Wilcox et al., 2010).

Faith-based interventions have fostered nutrition and/or physical activity changes to reduce risk of chronic diseases, including high blood pressure (Lancaster et al., 2014; Wilcox et al., 2010; Pinsker et al., 2017). Studies have shown church support increases positive outcomes of faith-based interventions (Baruth, Wilcox, & Condrasky, 2011; Campbell et al., 1999; Wilcox et al., 2010). Aaron, Levine, & Burstin (2003) found that church attendance was associated with positive health care practices. Not only can people be reached through churches, but also through affiliated faith-based living centers such as shelters and retirement living centers. Therefore, as shown in this study, reaching community members through church or faith-based centers has the potential to improve physical activity and nutrition practices through education, environmental changes and support.

This project developed new partnerships with 25 faith communities, implemented new and existing community-based educational tools and allowed another avenue promote community-based health programs, such as fall-prevention programs, cooking classes, diabetes prevention and weight loss programs, and other individual-focused and evaluated programs. Each of the faith community leaders had different levels of experience and background in health,

and each of the faith communities had different available resources, which were limiting factors in implementing the project and doing a common evaluation process. In addition, some faith communities employed a nurse and already had a health committee to oversee the effort, while others did not. Sustainability was enhanced by the educational resources and tools provided, and the project leaders continue to update the online resources, provide a monthly e-newsletter and will look for future funding sources. Partnering with faith communities provides an opportunity for Family and Consumer Sciences educators to deliver nutrition and fitness programming

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**Table 1: Results of pre-assessment survey of interest in health-related programming in faith communities**

<b>Question</b>	<b>Number of “Yes” responses</b>	<b>Percent (%) of total*</b>
<b>I am interested in having healthy meals served in our faith community.</b>	568	82.7
<b>I am interested in having healthy snacks available in our faith communities.</b>	571	81.3
<b>I would like to see health information in our bulletins, newsletters and/or on bulletin boards</b>	518	76.0
<b>I am interested in learning about healthy food choices.</b>	455	65.5
<b>I am interested in “tasting” events to sample healthy foods.</b>	450	64.7
<b>I would like to see more places to be physically active in our faith community.</b>	422	62.5
<b>I would like our faith community to offer regular classes on physical activity or healthy eating.</b>	420	61.3
<b>I am interested in learning more about the benefits of physical activity and how it can influence my health.</b>	383	56.1
<b>I would like to receive health information that I can read, listen to, or watch on my own.</b>	361	53.1
<b>I would like to participate in health activities such as physical activity breaks or healthy food tastings during regularly scheduled faith community events.</b>	330	48.5
<b>I would like our leaders to talk about healthy choices and physical activity in sermons, messages or other talks.</b>	230	33.8
<b>I would like to participate in health activities after services.</b>	159	23.3
<b>I would like to participate in health activities before services.</b>	91	13.4

\*The number of responses for each question varied, ranging from 680 to 702, because participants could skip survey questions.

**Table 2: Results of 12-month assessment of progress toward faith community goals conducted with faith community volunteer leaders (n=30)**

<b>Question</b>	<b>Number of “Yes” responses</b>	<b>Percent (%) of total</b>
<b>Our faith community ...</b>		
<b>has a kitchen to prepare meals.</b>	30	100
<b>has promoted physical activity (posters, newsletters, etc.).</b>	29	97
<b>has promoted healthy eating (posters, newsletters, etc.).</b>	25	83
<b>always provides water at meals.</b>	23	76
<b>has a private space for women to breastfeed or express breastmilk.</b>	21	70
<b>has provided exercise classes.</b>	21	70
<b>has an active health team or committee.</b>	20	66
<b>has had a relationship with another health, health promotion or human services agency to provide services to our members in past year.</b>	19	63
<b>has organized walking groups or clubs.</b>	17	57
<b>has promoted physical activity in a public speech or sermon</b>	15	50
<b>has offered nutrition and/or healthy cooking classes.</b>	15	50

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## **RESEARCH**

### **The WAVE Experience: Best Practices for Engaging High School Soccer Players in Life-skills Team-building Competitions**

Tonya M. Johnson, Dr. Siew Sun Wong and Dr. Melinda M. Manore

As adolescents age, autonomy in food and physical activity choices increase. Without positive reinforcement and training in making healthier choices, adolescents are at risk for overweight or obesity as they transition to adulthood. Hands-on team-building Family Consumer Science workshops were developed and delivered to engage high school soccer players in learning menu planning, grocery shopping, meal preparation, and gardening. Best practices for student engagement were identified, including building competition into youth activities, using activities as team-building opportunities, engaging coaches to recruit athletes, and working with partners and volunteers to increase capacity for skill-based program delivery.

Over 70% of United States (U.S.) adults are overweight or obese (National Center for Health Statistics, 2017) increasing their risks for chronic diseases, such as cardiovascular disease, cancer, type 2 diabetes, and osteoarthritis (U.S. Department of Health and Human Services; U.S. Department of Agriculture, 2015). Selecting healthy foods, monitoring energy intake, and engaging in physical activity are key factors to maintain a healthy weight (Santos,

Vieira, Silva, Sardinha, & Teixeira, 2017; Thomas, Bond, Phelan, Hill, & Wing, 2014). Diet and exercise habits formed in adolescence can continue into adulthood, thus, impacting long-term weight and health (Hu et al, 2016; Nelson, Story, Larson, Neumark-Sztainer, & Lytle, 2008).

As adolescents age, autonomy in food and physical activity choices increase (Bassett, Chapman, & Beagan, 2007; Hu et al, 2016). Without positive reinforcement and training in making healthier choices, adolescents are at risk for making poor decisions that may lead to overweight or obesity as they transition to adulthood (Hu et al, 2016). Life-skills training may be an important step in developing healthy habits, but may not be a priority for adolescents (Hersch, Perdue, Ambroz, & Boucher, 2014; Nelson et al, 2011). Thus, educators need to develop effective strategies to engage high school youth in learning Family Consumer Science (FCS) life-skills.

### **Objective**

Active youth engaged in high school team sports spend large blocks of time eating together in a variety of settings, including school, restaurants, on the road, and in the homes of team members (Smart & Bisogni, 2001). As a result, healthy living FCS skills are critical in supporting the athletes in establishing and maintaining healthy eating and active living lifestyles while in high school and as they transition into adulthood. Because of the competitive nature of sports, these youth are already fit and are motivated to adopt healthy eating behaviors that can improve their sport performance and prevent illness and injury (Meng, Wong, Manore, & Patton-Lopez, 2018; Meng et al, 2018). They are also accustomed to cooperative learning environments, and working as a team to learn and apply new knowledge and skills (Abu & Flower, 1997).

FCS skill-building team-building workshops provide extra bonding time for these active youth to strengthen their cooking and meal preparation skills to improve sports performance and stay healthy. The WAVE~Ripples for Change: Obesity Prevention in Active Youth research project used integrated cooperative learning (Lechtensteine & Ludwig, 2010) to develop and deliver three competitive team-building workshops to 269 high school soccer players (14-18 years of age) living in Oregon in October 2015 – October 2017.

## **Method**

### **Study participants**

High school soccer players (n =535; 14–18 years of age; 13 schools and 24 soccer teams) were recruited for a 2-year integrated (research, education and Extension) sport nutrition education and life-skills intervention. Details of the larger study can be found at the USDA web site and in several publications (Manore, Patton-Lopez, Meng, & Wong, 2017; Meng, Wong, Manore, & Patton-Lopez, 2018; Meng et al, 2018; Wong & Manore, 2016). Overall, the participants were 55% female, 41.3% in grades 11-12, predominately White (51%) and Latino (41%), and reported playing soccer an average of 7.5 years. As a group, 40.6% participated in National School Lunch Program (NSLP) and 59% reported no sport injuries during the last 12-months.

Here we focus on the face-to-face team-building workshop component of the WAVE study. Team-building workshops were offered as optional lessons to all participants in the intervention group. Recruitment strategies included an invitation from the soccer team coach, post-card mailed to home address, and text and email messages directly to the youth.

## **Team-building Workshops**

Three FCS team-building workshops were developed and delivered: 1) Grocery Store Scavenger Hunt (grocery shopping and meal planning); 2) Let's Cook (meal preparation); and 3) Harvesting and Gardening (gardening techniques). To effectively engage students in the lessons, a friendly competition with rewards was built into each educational session. The grocery shopping lesson included a scavenger hunt whereby teams planned and shopped for a healthy meal under \$10, using the nutrition fact label and unit prices as guides. The Let's Cook lesson incorporated a "cook-off" challenge whereby students selected vegetables and grains to prepare a pasta ratatouille dish that was judged by adult volunteers for flavor, nutritional value, and appearance. The gardening lesson included harvesting and a recipe development challenge. All team-building workshops were taught in English by an adult instructor who was assisted by trained volunteers and interns. The learning environments took place in the field, such as local grocery stores, school kitchens, and local farms. Table 1 highlights additional team-building workshop features.

## **Results**

Scavenger Hunt (n=138). All participants reported enjoying the workshop; 93% reported learning something new as a result of the lessons; 74% felt more confident to grocery shop for healthy meals on their own; 50% felt more confident in buying healthy food on their own; and 32% started reading the ingredient list when making food choices.

Let's Cook (n=120). When introduced to new raw/fresh vegetables during the workshop, 86% reported never or seldom trying a new vegetable but one third of the participants were willing afterward, especially in eating beets.

Harvesting and Gardening (n=110). Overall 74% of participants reported some gardening experience, and 70% reported being interested in learning how to grow vegetables. Because of these workshops, 10 youth volunteered to work at their local youth farm.

Team-building workshop participants were surveyed after each event (>1 year post workshop): Scavenger Hunt (2 years, 3 months); Let's Cook (1 year, 9 months); Harvesting and Gardening (1 year, 4 months). Results are presented in Figure 1. The three team-building workshops met the participant expectations ranging from 41% to 65%. One in five reported applying their knowledge and skills to their life, and shared the information with friends and families. One teen wrote, "The team-building exercises were fun and educational." Another wrote, "The cooking workshop allowed us to make healthy food that we could apply to our lives, as well as allowed us to further our team bonding."

## **Discussion**

Our experience developing and delivering these lessons suggest best practices for engaging high school athletes in FCS lessons. These best practices are listed below:

- 1) **Build in competition and bonding time.** After school or on weekends, high school soccer players and their coaches attended the team-building workshop. Games with friendly competition and rewards increased participation and youth engagement/enjoyment.
- 2) **Identify and work with community partners.** Community partners have expertise and resources to increase capacity for developing and delivering team-building workshop lessons. Grocery store managers ensured that class times worked for the store, thus, store employees expected a group of teens. High school staff ensured that space was available for the Let's Cook lessons. The local youth farm and faith-based community gardens helped deliver the Harvesting



and Gardening lesson during harvest time. These partnerships helped optimize cost-effectiveness, and inspired and connected more than 10 youth to volunteer at the local farms after the workshops ended.

3) **Venue adaptations for lesson delivery.** Successful lesson delivery depended on the ability to adapt to a variety of community-based settings. For example, each school's facilities and room availability varied, so we adapted our Let's Cook team-building workshop lesson in several ways: an outdoor kitchen (with folding tables and butane burners), in the Career and College Ready Room, in the cafeteria, in the Home Economics room, and in a regular classroom.

4) **Recruit adult volunteers to assist with the lessons.** When implementing hands-on lessons there are multiple moving parts. Thus, it was essential to ensure that two to three adult volunteers were trained to assist with each lesson. Adult volunteers (e.g., local parents, nutrition educators, and college students) were trained to greet the participants at check-ins, assist in preparing the lesson, setting up stations, and cleaning up at the end of each lesson.

5) **Recruit through champions!** The most effective recruitment and engagement strategy was having the coach invite the students to the workshops. Having the coach choose the date and time for the workshops also increased participation. Other recruitment strategies included sending event reminder postcards, texts, and emails to each participant. After the team-building workshop concluded, event photos were posted on the WAVE Project closed Facebook page.

The team-building workshop lesson plans will be packaged and available for dissemination through the WAVE website. Engagement strategies learned in this study will be applied to future workshops and research studies targeting high school youth.

Strengths and Limitations

The team-building workshops have several strengths. First, we engaged active youth and their coaches over a two-year period, which allowed the opportunity to develop a relationship with the team and maintain participation in the study. Second, we reached a diverse group of youth soccer players, including Latino (37%), low income (35%) and male youth (45%). Third, participants reported a high degree of enjoyment from the workshops, which could strengthen the incorporation of the life-skills' learned into daily behaviors (Meng, Wong, Manore, & Patton-Lopez, 2018).

The team-building workshops also have limitations. First, attendance rate declined nearly 51% over the two-year intervention due to participants graduating, no longer playing soccer, and/or withdrawing from the study. Attendance at the team-building workshops was lower than other WAVE activities, which highlights the need to anticipate attendance barriers, such as transportation to the event, and develop creative solutions to keep students engaged throughout the year, both out of soccer season and out of school. Second, participation in the program was influenced by the soccer coach. Students were more likely to sign up for the WAVE project when the coach was engaged in and excited about the program; thus, maintaining coach involvement is critical to athlete participation.

### **Summary**

The best practices learned here can be applied when engaging high school youth in FCS lessons to support healthy eating and physical activity across the lifespan. Our findings suggest that offering team-building, competitive, and hands-on activities are effective engagement strategies. Youth engaged with a sport are also easier to recruit when lessons take place during the sport season, and when a respected adult (e.g., soccer coach) actively encourages

participation. Offering incentives and transportation also increases participation. Health educators could consider these strategies to engage adolescents in FCS training, especially those adolescents engaged in group or team-based activities such as clubs and organizations. In these situations, the club leaders become the contact person to help recruit the adolescents in the clubs or organizations.

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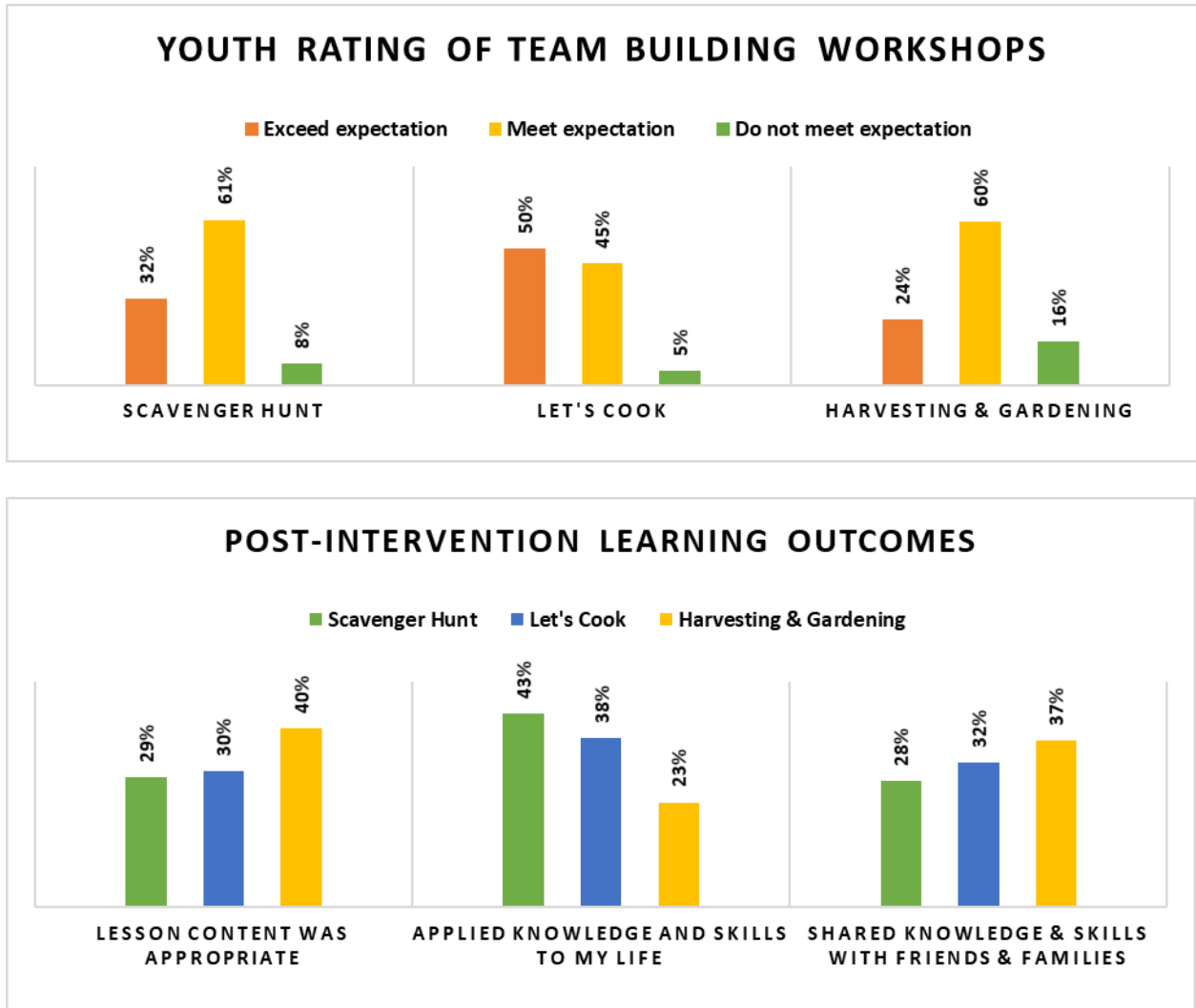
**Table 1.** WAVE Project Family and Consumer Sciences High School (HS) Team-building Workshop Description

<b>Team-building Workshop</b>	<b>1: Scavenger Hunt</b>	<b>2: Let’s Cook</b>	<b>3. Harvesting &amp; Gardening</b>
Learning objectives	<ul style="list-style-type: none"> <li>• Plan a lunch menu for two HS athletes or other youth group/club.</li> <li>• Grocery shop within a \$10 budget to select the most nutritious ingredients.</li> <li>• Understand how to compare prices by using the unit price.</li> <li>• Read the nutrition fact label to make better food choices.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand the health benefits of vegetable consumption.</li> <li>• Increase exposure to unfamiliar vegetables.</li> <li>• Learn basic kitchen safety and cooking techniques.</li> <li>• Work in teams to prepare a pasta ratatouille recipe.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe physical characteristics of three different plant families.</li> <li>• Identify and harvest ripe produce.</li> <li>• Describe the culinary characteristics of three crops from different plant families.</li> <li>• With a team, create a recipe using the ‘produce of the day’ from a farm.</li> </ul>
Duration	60-90 minutes	60 minutes	60 minutes
Lesson materials	<ul style="list-style-type: none"> <li>• Lesson plan - adapted with permission from Cooking Matters At The</li> </ul>	<ul style="list-style-type: none"> <li>• Lesson plan.</li> <li>• A plate with six vegetable options for</li> </ul>	<ul style="list-style-type: none"> <li>• Lesson plan developed by Youth Farm manager.</li> </ul>

	<p>Store.</p> <ul style="list-style-type: none"> <li>• Scavenger hunt map with tips.</li> <li>• Scoring sheet.</li> <li>• A written survey (2 questions).</li> </ul>	<p>each participant.</p> <ul style="list-style-type: none"> <li>• Signage for kitchen safety and knife cutting techniques.</li> <li>• Judge’s scoring sheet.</li> <li>• WAVE team role badges.</li> <li>• A written survey (10 questions).</li> </ul>	<ul style="list-style-type: none"> <li>• Ingredient list for food tasting.</li> <li>• Knowledge assessment tool (dots and large post-it notes).</li> <li>• Farm fresh produce to take home for free.</li> </ul>
Reward	\$10 grocery store gift card for each youth or \$15 grocery store gift card for each winner.	\$5 Jamba juice gift card for each youth.	Optional ‘produce of the week’ for each youth to take home.



**Figure 1.** WAVE Project Family Consumer Science Team-building Workshop Program Delivery Rating and Active Youth Post-intervention Learning Outcomes.



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## **RESEARCH**

### **BODEGAS SALUDABLES: Lessons Learned from a Healthy Corner Store Educational Initiative**

Mariel Mendez and Sara Elnakib

Objectives: To document implementation challenges and successes of the Healthy Corner Store Initiative in Passaic, New Jersey. Methods: Six small bodega stores were recruited via geographical-based sampling. Pre and post attitude surveys among owners, store conversions and inventory changes were recorded. Results: Among the six recruited bodegas, all had introduced at least three new healthful fruits and/or vegetables, and five had made store conversions to display healthy options. Conclusions: The Initiative in Passaic resulted in significant changes in owner attitudes, store conversions and inventory changes. This data will help inform future interventions and research.

Limited availability of nutritionally adequate and fresh foods in low-income communities has contributed to high levels of obesity and chronic disease among already vulnerable communities (Drewnoski, 2009; Booth, Pinkston, & Poston, 2005). In many low-income communities, small convenience stores or mom and pop shops known as “bodegas” are the main source of food and often have limited healthful options (Powell, Slater, Mirtcheva, Bao, & Chaloupka, 2007). A study by Morland, Roux & Wing (2006) found that the “availability of

small convenience stores was associated with an increase prevalence in overweight among residents, while the availability of supermarkets was associated with a decrease in prevalence.”

To combat the obesity epidemic, governmental and nongovernmental agencies have incorporated different approaches to improve food environments. Currently, the federal government has invested and tasked organizations such as SNAP-Ed to implement initiatives that produce systematic and environmental change to improve the availability and affordability of healthy products in low-income communities (USDA, 2017).

Passaic, New Jersey is a small city with a population of 70,635 and only one large chain supermarket Shop Rite supermarket (U.S. Census Bureau, 2017). Given the limited availability of grocery stores and a lack of transportation, most people in Passaic rely on bodegas to buy every day necessities, as well as staple foods, meats, fresh fruits and vegetables for their daily meals. Bodegas also play a key role in child health due to the proximity to schools. For many children, breakfast and after-school snacks are a daily purchase from the bodegas. Items purchased by children are high-calorie, low-nutritive, sugar-dense options including cookies, chips, sodas, and candies (Borradaile et al., 2009). By altering the set-up of these stores and thus their offerings, as well as educating the bodega owners/managers about the economic impact healthy food choices can have for their business, bodegas not only provide an excellent opportunity for healthier food access, but can also be seen as an effective venue for preventing obesity and combating the high prevalence of chronic disease among children and adults in Passaic.

## **Objective**

The purpose of this study was to increase the availability and visibility of fresh fruits, vegetables and overall healthy foods in six Corner Stores (Bodegas) in Passaic, New Jersey. The intervention was informed by the work done by Food Trust, an organization focused on “ensuring that everyone has access to affordable, nutritious food and information to make healthy decisions,” as well as by a literature review. (Food Trust, 2018; Gittleson, Rowan & Gadhoke, 2012). The study used both qualitative and quantitative measures and incorporated a multifaceted approach with employee training, store conversions, and community engagement. (Dannefer, Williams, Baronberg, & Silver, 2012; Samuels et al., 2010; Baquero, Linnan, Laraia & Ayala, 2014). One objective was to assess the impact of the Food Trusts’ Sell Healthy Curriculum Guide in training store owners on different topics. The attitudes and self-efficacy of bodega owners to provide healthier products, identification of barriers via pre and post interviews, and an inventory evaluation were assessed. (Gittleson et al., 2010; Ortega et al., 2016).

## **Method**

### **Sample**

In this project bodegas were defined as having fewer than 10 employees and less than 1,000 square feet. To improve family and child health, inclusion criteria included being within three blocks of an elementary or middle school. Twenty bodegas met the inclusion criteria and were recruited for participation. Six stores met the inclusion criteria and agreed to participate in the study for a period of one year (October 2016-October 2017).

### **Data Collection**

Each bodega was given a randomly selected identification number that was unable to be linked with participants' names, address, and phone number. A de-identifying code was used to record all survey and inventory information.

### **Initiative Design**

Data was collected and entered into an access database via a password-secure iPad. At the beginning, each store owner participated in a one-on-one, semi-structured interview about knowledge and attitudes; healthy product offerings; self-efficacy on selling healthy products; inventory choices; outcome expectations and sustainability. A second team member simultaneously recorded an initial store inventory of product offerings. Every two weeks, Mariel met with every storeowner for a 30-minute mini lesson using the Sell Healthy Guide: a six-week curriculum. At eight weeks, all store owner identified three barriers and three goals to implement, as well as equipment that could improve their healthful offerings. The study also used an inventory evaluation to track the changes in product offerings before, during and after the six 30 minute sessions. All trainings and interviews were conducted in Spanish.

### **Surveys**

Survey data was collected on general information about the bodega and its respective customers; relationship with customers and community; whether the bodega accepts WIC/SNAP; product offering (what types of food are stocked and how much); perceived barriers to offering healthy products, outcome expectations, self-efficacy and sustainability. The full survey is available upon request. The inventory evaluation assessed the amount of fruits, vegetables, low-fat milk, low-sugar juices, baked chips, and other healthy products.

## **Activities**

Fruit/Vegetable Punch Cards: To track sample of individual purchasing patterns and to incentivize increased consumption of vegetable and fruits among community members, ten fruit and vegetable punch cards were granted per store. Anytime a customer bought three or more fruits or vegetables their punch card was stamped with the date of purchase. After five purchases, the customer exchanged their punch card for a free fruit cup or smoothie in the store reimbursed by our program to the owner (APPENDIX I).

Equipment: During recruitment the store owners were informed that at the completion of the six training sessions they would receive necessary equipment to implement changes to their stores with the goal of increasing product offerings. Throughout the trainings, the storeowners were assisted in making store conversions until the new equipment was received. Each store received a sandwich board to advertise, a smoothie blender, display baskets for fruits and vegetables, and an array of marketing materials including posters, pricing markers and stickers. Four stores received new refrigerators and one store received refrigerator compartments to replace cardboard boxes.

## **Community Engagement**

Grand Openings: After the six-week sessions and equipment conversions, a community day was organized with local city officials, non-profit organizations, community members and the local school officials. The six stores had an official grand opening ceremony where they had the opportunity to cut a red ribbon alongside the school superintendent and mayor, place a member decal on their door and introduce community members to their commitment to improve the health of Passaic (Appendix II).

Classroom Lessons & Corner Store Tours: To expand community engagement, classroom workshops about the Healthy Corner Store Initiative and tours to the corner stores were lead in schools within a three-block radius. During the tour, the students had the opportunity to engage in a scavenger hunt focused on healthy food items and ask owner questions.

### **Internal Validity Insurances**

There was little threat of response bias in this study. It is possible that some bodega owners/managers may answered question in a manner that would be favorable to the researcher about sustainability of healthy product offering; however, their wish to help solve the problem and help us see how we can help them will likely, favorably moderate their comments. To facilitate deeper understanding, we used methods triangulation with the owners' survey, customer purchase survey and inventory evaluation.

### **Data Analysis**

Quantitative responses were entered into a Qualtrics database. The data was analyzed using Statistical Package for the Social Sciences (SPSS). Administrative support staff have transcribed qualitative comments, and applied standard procedures for the identification of emerging themes, concepts, and quotes.



## Results

Table 1: Inventory Changes			
<b>Minimum stocking standards for food and beverage item category</b> <i>(basic level)</i>	<b>Inventory of products observed in store prior to education</b> <i>(Mean ± standard deviation)</i>	<b>Number of Stores Stocking Healthy Options</b> <i>(Before Education)</i>	<b>Number of Stores Stocking Healthy Options</b> <i>(3 months after Education)</i>
<b>Fruits and vegetables</b>			
Varieties of fruit (4 varieties/6 varieties)	4.3 (0.3)	3	6
Varieties of vegetable (6 varieties/8 varieties)	4.2(0.4)	2	6
Dark green or red/orange (1 variety/2 varieties)	4.3 (0.3)	3	6
<b>Dairy</b>			
Low-fat milk	1.5 (0.5)	1	4
Low-sugar yogurt	1.5 (0.5)	1	6
Low-fat cheese	3.4 (0.5)	5	6
<b>Beverages</b>			
Bottled Water	3.0 (0.6)	3	6
100% fruit/vegetable juice	1.5 (0.5)	2	6
<b>Whole-grain</b>			
Whole grains cereal	1.5 (0.5)	2	6
Whole grains other than cereal	3.0 (0.6)	3	6

## Discussion

Study results indicate positive improvements in the six stores that participated in the Initiative. The multipronged approach including owner training, store conversion, and health

communication marketing and community engagement demonstrated a positive impact on increasing healthy food offerings and on purchasing patterns by community members, as well as increasing self efficacy of storeowners to provide more healthy options. Engaging city officials and school board officials led to further policy changes for the City of Passaic. A city food ordinance has been proposed requiring all business (criteria decided upon by the city) to carry certain healthy products. Feedback from storeowners and process evaluation helped inform the food ordinance policy. Although the efforts were multisectorial affordability of healthy products is a limitation many storeowners face. Future efforts should focus on incentivized partnerships between producers, manufacturers and distributors in order to create sustainable offerings in many of these communities (Gittelsohn, Rowan, & Gadhoke, 2012).

This initiative implementation has various limitations including not recording sales data and not having a comparison group. Major strengths included having our program manager speak Spanish and come from a similar cultural background to the owners, as well as having support from city officials, local nonprofits, and the school district.

This study extends the knowledge about Corner Store Initiative successes and challenges. Future interventions and studies are necessary to replicate these findings and to further investigate low-cost, sustainable, multipronged techniques that can be applied in these communities.

## **Funding**

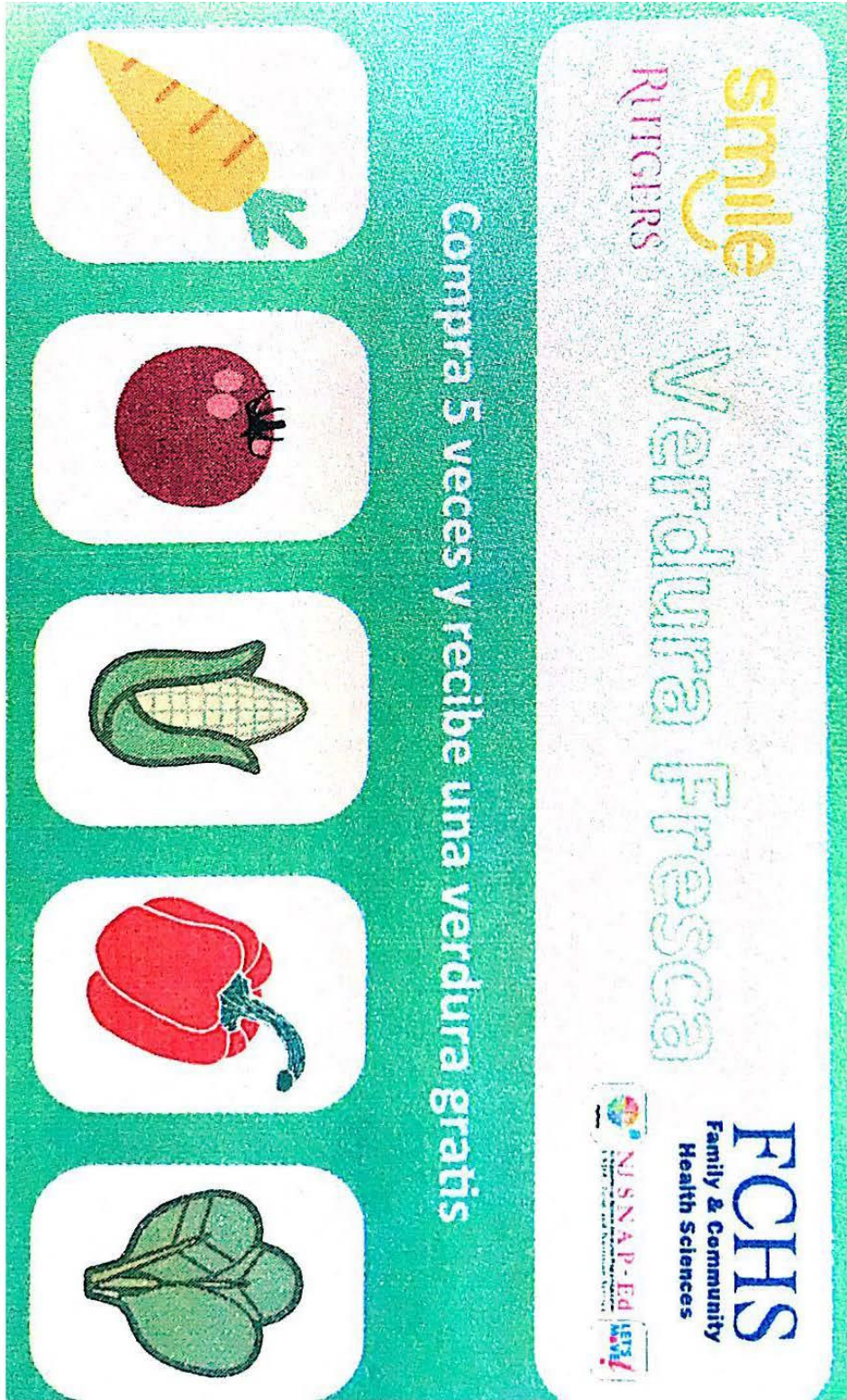
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Appendix I: Punch Cards





## Appendix II: Corner Store Initiative Report 2016

To read full report, please contact Sara at [elnakib@njaes.rutgers.edu](mailto:elnakib@njaes.rutgers.edu).

# Healthy Corner Store Initiative

PASSAIC,  
NEW JERSEY

2016



NJ SNAP-Ed  
NJ Supplemental Nutrition Assistance Program Education  
USDA, Food and Nutrition Service



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## **RESEARCH**

### **Connecting Culinary Arts Students with Food Consumer Interests of Today**

Kathleen A. Savoie and Ellen Turcotte

In recent years, consumer interest in local food has significantly increased. The Local Food Procurement project focused on increasing Career Technical Education (CTE) Culinary Arts students' current and future career impact on utilizing local foods by increasing their understanding of food consumer interests and beliefs. To highlight the power and driving force of consumer demand, CTE students surveyed consumers (n=133) to learn about buyer interests, values, and beliefs related to food choice at restaurants. The value of locally grown and produced foods available in restaurants outranked food's cost.

We all eat and for the first time ever, more meals (50.1%) are eaten away from home than at home (U.S. Department of Agriculture Economic Research Service, 2017). Consumer demand for local food has increased steadily, as more people choose to spend their food dollars at farmers' markets, farm stands, restaurants and grocery stores that source agricultural products nearby (Harvard Food Law and Policy Clinic, 2013). Maine's growing distinction as a "foodie" destination has created a growing interest in Maine for travelers. Maine's reputation for award-winning restaurants, beverages and quality food positions Maine well for connecting more consumers to supporting the local food economy (Biemann et al, 2015). Given these



simultaneously occurring social shifts, local food procurement by restaurants and institutions holds significant potential to impact the economic sustainability of local agriculture and local food systems (Low et al., 2015).

The demand for jobs in the culinary arts and hospitality industry is high in Maine given Maine's "Vacationland" destination heritage. Restaurants are a driving force in Maine's economy. According to the National Restaurant Association (2017), Maine is home to a culinary arts and food service labor force totaling more than 62,700 in 2017, representing 10% of employment with projected sales of \$2.3 billion in 2017. The National Restaurant Association (2017) also estimates an anticipated growth rate of 8.1% by 2027. Maine's nineteen Career and Technical Education (CTE) Culinary Arts programs serve as a conduit for this industry by producing a skilled and prepared workforce to meet Maine's steadily increasing demand of labor.

The typical CTE Culinary Arts program of study focuses on providing hands-on training through activities in food preparation techniques, kitchen safety, equipment use, catering, food garnishing, business operations and leadership development with limited exposure to consumer interest and the power of consumer demand. Social media has placed even more power in the hands of consumers as they have more opportunity to broadcast their comments and opinions through posts on multiple platforms.

### **Objective**

The objective of the Local Food Procurement (LFP) project was to increase Culinary Arts students' current and future impact on utilizing local foods within the culinary arts and hospitality industry by increasing their understanding of the power and driving force of food consumer interests. Ultimately, the LFP project aimed to create a skilled and educated

workforce that will increase the usage of Maine grown, processed and produced foods in student-led CTE restaurants and in CTE students' future culinary careers.

### **Method**

The LFP project collaboration project between Maine Region 10 CTE Culinary Arts Program and University of Maine Cooperative Extension Food and Nutrition Program, utilized the Experiential Learning Theory framework to develop an immersive experience for 30 Culinary Arts students.

### **Participants**

Eligible participants of the LFP project were high school students enrolled in the Culinary Arts Program at Maine Region 10 CTE where they complete over 450 hours of food, nutrition and agriculture education in a school year. Maine Region 10 CTE encompasses students from eight towns and is an open educational option to a student base of 2,160. The Culinary Arts program typically enrolls 30 11th and 12th grade students, and prepares them for careers in Maine's restaurant and hospitality field in support of Maine's tourism industry.

### **Experiential Learning**

To increase their knowledge base of local food systems, students participated in lessons on nutrition, seasonality, geographical food preference and sustainability. These weekly, one-hour lessons were led by University of Maine Cooperative Extension Food and Nutrition faculty who utilized field-tested curricula adapted for Culinary Arts students. Students were engaged through readings, videos, and group discussions to understand how these topics apply to personal food choice within the scope of their role as future culinary professionals.

Field trips to local aquaculture and agriculture farms gave students hands-on experience in the production, harvesting, storage and sales of vegetables, wild game, seafood, and grain crops. Students experienced both organic and conventional production systems. All of the producers were small-scale, diversified farms that sold food products at multiple outlets fostering the farm to fork concept including year-round farmers' markets, restaurant, and wholesale venues. While on these field trips, students were participated in the daily on-farm activities, jobs, and duties to gain first-hand experience in local food production and procurement practices.

In a typical school year, students in the Culinary Arts program plan, prepare and serve a four-course public meal to approximately 40 people, one day per week for seven months at their student-led café. This experience provides hands-on experiential activity in the areas of local food procurement, budgeting, menu planning, food storage, marketing, seasonality and geographical preference.

### **Consumer Food Preference Survey**

To connect CTE students to the importance of consumer demand, the students designed and conducted a Consumer Food Preference Survey to learn more about their interests, values, and beliefs related to restaurant food choice. The survey sample included a convenience sample of all consumers who ate at the Region 10 Café during the months of March and April. Of the 218 consumers who dined at the Region 10 Café during that timeframe, 133 consumers completed the survey resulting in a 61% response rate. The anonymous and optional paper survey was presented to consumers at the end of their meal by CTE Culinary Arts students, and required less than 3 minutes of their time to complete. The typical consumers at Region 10 Café are adults ages 55+ with an equal representation of genders.

The survey instrument included two broad areas to measure consumer responses related to importance of food attributes when choosing food at restaurants and their agreement with belief statements about local foods. Consumers assessed the importance of five food attributes related to food choice at restaurants using a five-point Likert Scale: (1 = not at all important, 5 = extremely important). The food attributes assessed were (a) taste, (b) familiarity, (c) cost, (d) use of local food, and (e) nutritious/healthy. Consumers were also asked to indicate which of six belief statements about local foods that they believed to be true. The belief statements included the following: (a) safer, (b) tastier, (c) healthier, (d) fresher, (e) stimulate the local economy, and (f) better for the environment.

## **Results**

Responses from the 133 Consumer Food Preference Surveys were entered into the online survey tool SurveyMonkey and analyzed. The survey results revealed that food taste was the most important attribute when choosing food at a restaurant with an overwhelming response rate of 90% (n = 120); followed by over 62% (n= 83) of consumers rating food is nutritious and healthy as extremely important. Almost half of the consumers, 49.6% (n = 66), selected locally grown and produced food as an extremely important food attribute. The importance of locally grown and produced foods at restaurants was selected as even more important than food cost at restaurants. Whether or not consumers are familiar with a food was selected as least important to influence food choice of consumers (Figure 1).

Consumers believe a lot to be true about local foods. All six of the statements surveyed had at least 72% of the consumers indicating that they believed the statement to be true. The most common statements consumers believed to be true include: (a) 98% believe local foods

stimulate local economy, (b) 95% believe local foods are fresher, and (c) 85% believe local foods are better for the environment (Figure 2).

Students utilized the information gained from the Consumer Food Preference Surveys, as well as in-class lessons and field trip experiences, to improve upon existing practices of their café to meet consumer interests and demands with a focus on local food procurement. Once students realized the value of local foods to consumers they designed tabletop displays informing café consumers of the locally procured foods used on their menu. Overall, the LFP project increased the usage of local foods on their Region 10 Café menu by \$2,000, representing a 25% increase of local foods purchased.

### **Discussion**

Within the growing body of research on local foods, the lack of a standard definition of the terms “local” and “local foods” creates difficulties, confusion and complexities. In spite of consumers’ inability to definitively verify these terms, they have been found to be important in influencing purchasing intentions (Schroeder, Tonsor, Pennings, & Mintert, 2007).

Consumer demand for local foods are impacting the supply and availability of foods served at restaurants. Despite the limited size of the LFP Consumer Food Preference Survey, the findings are consistent with several other studies related to consumer interest in local foods. A trend in shifting patterns of consumer interest towards local foods is apparent. For example, the National Restaurant Association’s Restaurant Industry Forecast (2016) identified that 68% of consumers are more likely to visit a restaurant serving locally sourced items than one that does not. The Maine Food Strategy Consumer Survey Report (2014) found that 80% of respondents

chose to purchase local or Maine food when given the choice of buying Maine-grown/raised/caught food or food from “somewhere else.”

### **Summary**

Academia has shifted away from the “home economics” component of secondary education and school administrators and faculty have struggled to prioritize culinary arts and hospitality education, regardless of its economic and workforce importance to the state of Maine. Current CTE Culinary Arts programs focus on general food preparation and production within a global food system (California Department of Food and Agriculture, 2014). In order to meet the workforce and consumer demands of today, the educational focus of these programs needs to shift to focus on food procurement, preparation, and production within the local food system while recognizing the importance of understanding consumer interest and demand. Customer needs are critical to the ultimate success or failure of any business. According to Hall (2013), the goal of any business is to make money, but that objective is easier to reach when we listen to customers and understand their needs.

Educating tomorrow’s culinary arts professionals on local food systems is a vital and critical component to sustain the momentum towards an economically viable local food system. Knowing the consumers’ interest and beliefs allows for an opportunity to fulfill demand. This project provided students with valuable lessons in understanding the economics of supply and demand through real-life experiences connecting consumer demands and interest with restaurant food procurement.

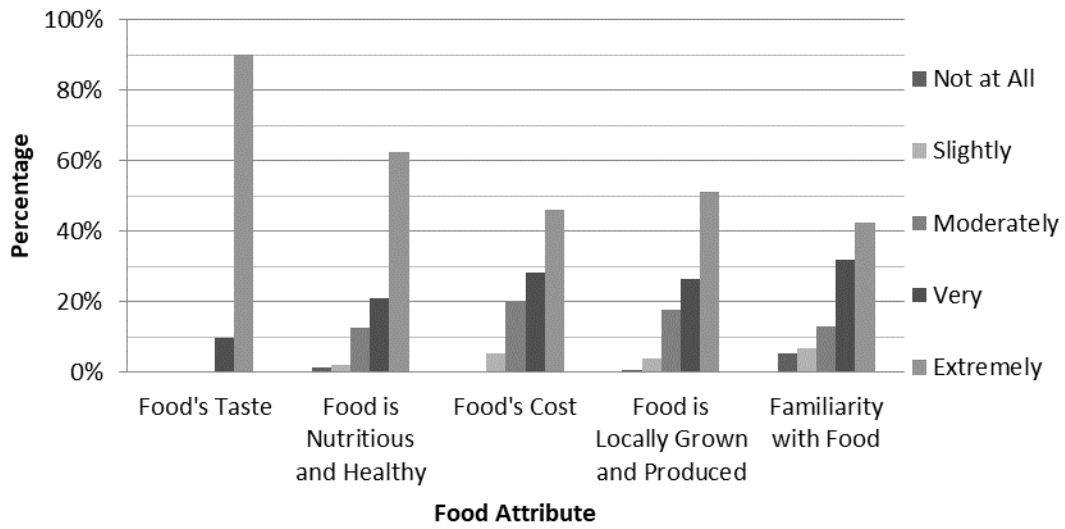
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**Figure 1.**  
**Importance of Food Attributes when Choosing Food (n = 133)**



**Figure 2.**  
**Statement about Local Food Believed to be True (n= 133)**



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## **RESEARCH**

### **Cottage Food Law Program Expands Outreach Through Online Delivery**

Beth Waitrovich, Gwyn Shelle, Cheryl Eschbach and Jeannie Nichols

In response to a new cottage food law, Michigan State University Extension expanded food safety education throughout Michigan by developing an online course for entrepreneurs. The purpose of this manuscript is threefold: (1) share lessons learned in developing and improving online programs, (2) provide a way to teach food safety practices with innovative online technology, and (3) encourage Extension staff to develop online programs. Online learning provides opportunities for increasing Extension education outreach, as well as, offers flexible and convenient learning opportunities that are responsive to emerging issues.

In 2010, Michigan passed Public Act 113, which is known as the Cottage Food Law. This law relieved Michigan residents who operate a cottage food business from acquiring a food license and complying with inspection requirements of the Michigan Food Law. The purpose of the law was to stimulate the economy and create opportunities for food entrepreneurs to create Michigan-based products for local sale. Michigan cottage food businesses must still comply with some provisions in Michigan's Food Law and must observe local ordinances and state or

federal laws. Cottage foods are products prepared in Michigan homes that can be kept at room temperature, as these foods have been determined to be a low risk for causing foodborne illness.

Michigan Cottage Food Law (Public Act 113) does not require any food safety training to produce and sell cottage foods in Michigan. Research has shown food establishments with a certified food safety manager have fewer foodborne illness outbreaks (CDC, 2011). According to the U. S. Food and Drug Administration (FDA,2015), there are approximately 48 million cases of foodborne illness each year, 128,000 hospitalizations and 3,000 deaths as a result of these foodborne illnesses. With the goal of reducing foodborne illness incidences, in late 2010, Michigan State University (MSU) Extension educators with food safety expertise applied for and received a \$22,000 food safety grant from the Michigan Department of Agriculture and Rural Development (MDARD). The grant allowed the food safety Extension educators to develop an online and face-to-face statewide program for entrepreneurial Michigan residents interested in starting a home based business using safe food practices.

The online course was a solution for the need to expand program reach to more Michigan residents. Online learning has been established as one way to reach more people across distances and reduce barriers to course access (Oulette, Lesmeister, Lobley, & Gross, 2014; Shuester, et al., 2013; Stafne, McCraw, & Mulder, 2006). As suggested in the New Media Consortium Technology Outlook for Cooperative Extension, online learning is an effective tool for supporting self-directed education within Cooperative Extension and gives target audiences access to relevant content on-demand (New Media Consortium, 2016).

## **Objective**

The purpose of this manuscript is threefold: 1) share lessons learned in developing and improving online programs, 2) provide a way to teach food safety practices with innovative online technology, and 3) encourage Extension staff to develop online programs. For those who previously were hesitant or unable to build or rent licensed industrial kitchen space for food production, the Michigan Cottage Food Law (2010, 2012) provided a method to produce, sell, and test market products.

The objectives of the Cottage Food Law program were to: 1) provide necessary food safety information to ensure the production of safe cottage food products, 2) develop a food safety online course for the cottage food industry, focusing on the prevention of foodborne illness, and 3) provide food safety certificates of completion for participants to display with their products.

## **Method**

### **Establishing the Online Course**

The process of expanding the Cottage Food Law workshop to an online format is outlined below. The three main topics for the online course included: 1) preparing and selling safe foods under the Michigan Cottage Food Law, 2) production, packaging and labeling, and 3) storing and transporting cottage foods. Resources were from the United States Department of Agriculture and ServSafe® Manager curriculum. MSU Extension food safety educators and staff from MDARD examined program content through a peer review process for accuracy and usability.

Course experts followed a continuous improvement process for developing the online course. The first version was initiated in May 2011. Within the first six months, there were 519

viewings of this video recording. The number of participants taking the course online exceeded those taking the program in person, which was an early indicator of the need and interest in the online delivery. Since the launch, the online course is updated annually to reflect changes and clarifications of the Cottage Food Law, as well as to incorporate improved online pedagogical approaches. This continuous improvement process is an integral part of a program development model in order to improve the learner experience (Franz, Garst, & Gagnon, 2015). An Extension program development model includes intentional phases of planning, designing, implementing, and evaluating that help Extension professionals enhance program relevance, increase program efficiency and effectiveness, and ultimately show value to stakeholders (Franz, et al., 2015).

The initial version of the course was a narrated PowerPoint presentation recorded by production staff, not food safety experts, and was hosted online. The last slide in the video instructed participants to write down a link to a website where they could complete a program evaluation which was required for the certificate of completion. Upon notification of completion, a food safety team member sent a certificate through the mail that established a local contact for the participant.

The certificate was intended to be a marketing tool for the vendor, showing their knowledge about preparing safe cottage food, as well as a tool for promoting MSU Extension food safety programs to other market vendors to create program awareness. Secondly, the certificate was a motivational tool used to encourage retention and completion by course participants. The process of manually producing the certificates and mailing them to participants in a timely fashion proved to be a challenge based on the number of requests.

In 2012, as part of the continuous improvement process, opening music and questions were added throughout the video recording. The questions were presented on a slide and the

speaker verbally gave the answer. In 2013, in an effort to make the course more appealing and relevant, food safety team content experts presented the information in a revised video using updated informational slides and showing the presenters speaking during specific points within the video (Figure 1). By showing the presenters in the video, instructional presence was integrated into the course and allowed the presenters to connect with the participants (Stavredes, 2011). According to a study based on 6.9 million video watching sessions within four online courses, videos that include an instructor's talking head at certain points within the slides are perceived as more engaging than slides with only audio (Gou, Kim, & Rubin, 2014).

In 2014, the online course transitioned to a learning management platform for improved management of participants, increased analytics, the ability to collect payment, and to create a more formal learning experience. Seven modules were developed: an introduction, course instructions, a process for virtual program sign-in, video lecture, evaluation, printable certificate of completion, and contact information (Table 1).

In 2015, course materials were again updated to increase participant interaction. At seven points within the video, participants were prompted with one or more multiple choice or true/ false questions (Figure 2). When the user submitted an answer, they could view whether they answered correctly, or view the correct response. The video was also closed-captioned in order to meet accessibility requirements. In addition to the modifications of the video, a production log was added in 2015 as a downloadable form for tracking product data such as date and amount prepared, packaging method, and amount of product sold.

### **Marketing and Program Sustainability**

Internal marketing included informational emails, which provided details about the online course and asked Extension staff to promote the program. In addition, marketing webinars were



conducted with MSU Extension staff and nationwide through eXtension. External marketing materials, including a postcard and poster, were branded with the university identity to give a unified look and feel to the face-to-face workshop and online course (Abrams, Meyers, Irani, & Baker, 2010). News articles about the online course were shared with local papers, posted on the MSU Extension website, and provided to Extension county offices. There is also a direct link to the registration page for the Cottage Food Law online course on the MDARD website and the MSU Extension website. The current course fee for the online program is \$10.00. Revenue generated from the online course allows Cottage Food Law programs to be sustainable and has become a widely known and established core program within MSU Extension.

## **Results**

Between February 2014 and March 2017, 559 participants enrolled in the online course, and 94% completed the program evaluation survey (n=528) to obtain a certificate. Table 2 shows the demographics of the online audience, including age, race, ethnicity, gender and educational level. The racial and ethnic characteristics of participants were representative of the state population.

The program evaluation contained nine questions in a survey format. Four questions measured whether participants gained new knowledge from the online course. Participants self-reported what amount of new information they learned because of the course (no new knowledge, some new knowledge, a moderate amount, and a great deal). If participants reported learning either “some”, “a moderate amount”, or “a great deal”, they were combined into one group to create a percentage of participants who improved their knowledge. Four questions assessed intentions to perform proper behaviors or skills more frequently to improve food safety

practices. Participants self-reported which food safety practices they “planned to do” because of the course and those that “plan to do more often”. Participants could also select if they performed these food safety practices before taking the online course or if they would not do a certain food safety practice. Those who “planned to do” or “do more often” were combined into one group for a percentage of participants that will engage in food safety practices more often because of the online course. The last question on the survey was an open-ended textbox for participants to leave comments.

After attending the Cottage Food Law online course:

- ninety percent (90%) learned new information on cleaning and sanitizing;
- seventy-two percent (72%) learned new handwashing techniques;
- fifty-seven percent (57%) learned new information about cross contamination;
- and
- forty-eight percent (48%) learned new information about personal hygiene.

Participants reported the following outcomes as a result of attending the online course:

- sixty-one percent (61%) plan to check the refrigerator temperature to ensure that it is 41 degrees Fahrenheit or below more often;
- fifty-one (51%) will sanitize surfaces before preparing food more often;
- thirty percent (30%) plan to wash hands for 20 seconds; and
- twenty-five percent (25%) will store food in airtight containers off the floor more often.

The most valuable content of the online course emerged in the comments. This included information on cottage food law basics such as legal restrictions (i.e., what can be sold), packaging requirements (e.g., labeling, food allergens), and cleaning and sanitizing procedures

(i.e., correct ratios, testing strips, production logs). The video on how to prepare samples of product for the farmer's market was especially valued. The online course was helpful to participants of varying experience. Some participants noted their prior food handling experience (e.g., kitchen manager, chef, deli or bakery worker). Participants with this experience found handwashing, storing food, and temperature lessons less helpful. However, they also commented that the lessons were common sense for basic food safety and helpful reminders and refreshers to reinforce what they already knew.

The following quotes from participants exemplify the comments. "Great crash course. Now I can get started, feeling confident that I am following the law and keeping customers safe."; "I'm hoping to use my certificate to assure my customers that I practice safe food handling."; "It was much easier to have a video to watch and listen instead of reading through online sources for the same information. It made it easier to learn and retain."

This project yielded several implications for Extension professionals developing similar online programs. The continuous improvement process incorporated several sources of information including user feedback from evaluations, changes in the Food Law, and findings from published studies. It is recommended to have a consistent improvement process in place such as an annual schedule to ensure course quality and accuracy of content.

Specific improvements that may be applicable to other online programs include: 1) create shorter segments for videos to improve the learning experience, 2) incorporate interaction such as question prompts within videos, 3) include talking head video of Extension instructors within the content slides in order to connect with the audience, and 4) represent diverse audiences in images within the online program content.

From the inception of this program, a certificate of completion was offered to participants based on course requirements such as accessing course materials and completing the end of course evaluation. From a program management perspective, the certificate is an incentive for increasing retention to complete the program. The program revenue has also contributed to the sustainability of the MSU Extension Cottage Food Law Program over time.

### **Summary**

Through an appropriate use of technology, the MSU Extension Cottage Food Law program expanded food safety education offered throughout the state. The time and effort it took to learn the technology tools to develop the program was a shift from traditional programming, but was not as difficult as anticipated. The assistance of an instructional technology specialist made the course more interactive and interesting for participants. Online programs, as with all programs, must include a continuous improvement process to stay current and remain relevant. MSU Extension food safety experts review and update the Michigan Cottage Food Law online program annually to assure quality of the program, integrate new technology, and incorporate changes in FDA Food Code and the Cottage Food Law. Extension has a vast number of face-to-face programs that could be adapted to an online delivery format. Online programs provide opportunities for increasing Extension education outreach, as well as, offer flexible and convenient learning opportunities that are responsive to emerging issues.

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**Table 1. Online Course Module Descriptions**

<b>Module</b>	<b>Description</b>
Introduction	Details regarding course overview and certificate of completion requirements.
Course Instructions	Explanation of how to complete course requirements and estimated time commitment for course completion.
Sign-In	Optional demographic questions.
Video Lecture	Video lecture including interactive quiz questions.
Evaluation	Series of impact questions relating to course topics.
Certificate of Completion	Certificate of completion including name and date.
Contact Information	Instructor email and information on related workshops.

**Table 2. Demographics of Cottage Food Law Participants**

Demographic	% (n) or mean $\pm$ SD
Age (years)	43 $\pm$ 12.75
Race (% non-Hispanic White)	84% (432)
Race (Black / African American)	11% (56)
Race (Asian)	3% (13)
Race (American Indian)	2% (10)
Ethnicity (Hispanic, all races)	2% (11)
Women	88% (469)
Education:	
high school graduate	9% (48)
some college	30% (158)
college graduate	61% (322)



**Figure 1. Online Course Slides Improved with Addition of Presenter Video**

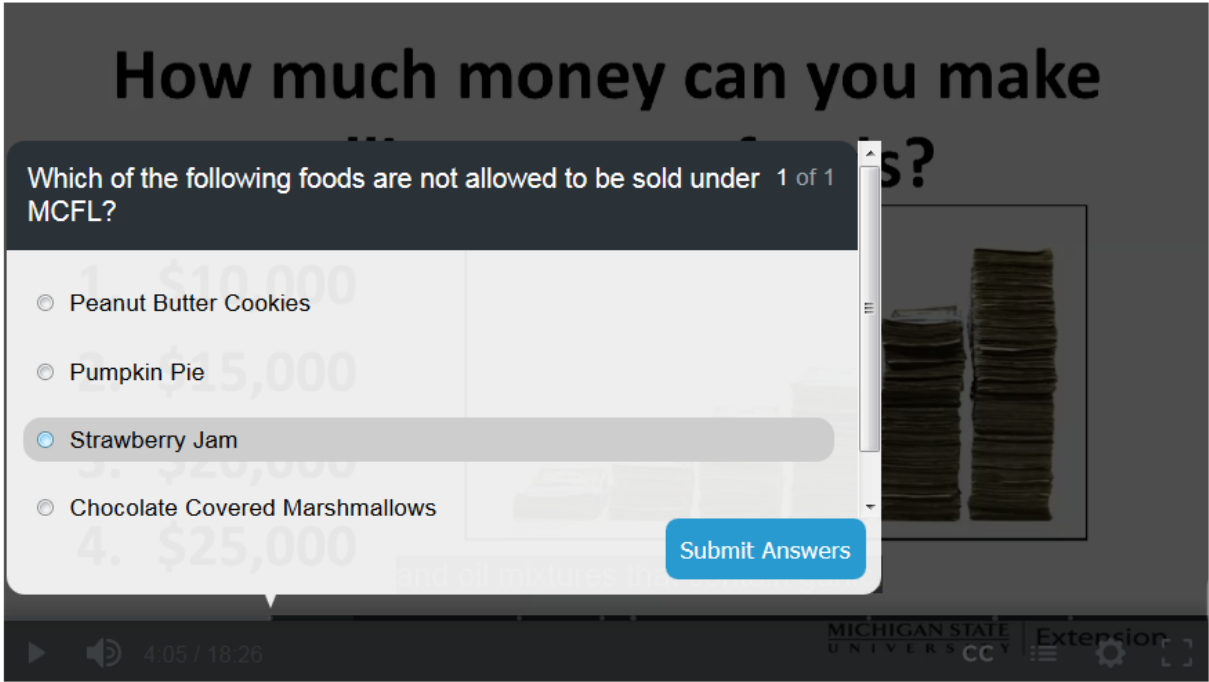


**Figure 2. Example of Interactive Question within Video Recording**

## Video Lecture: Cottage Food Law

Watch this 18 minute video to learn about cottage food law. Click on the CC icon in the video player for closed captions.

**Please note:** Throughout the video there are knowledge check point questions that you must complete. These questions are not graded as they are meant to make sure you have understood the primary objectives of the video and allow you to replay a previous section of the video if needed.



How much money can you make

Which of the following foods are not allowed to be sold under MCFL? 1 of 1

- Peanut Butter Cookies
- Pumpkin Pie
- Strawberry Jam
- Chocolate Covered Marshmallows

Submit Answers

MICHIGAN STATE UNIVERSITY CC BY Extension

4:05 / 18:26

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## RESEARCH

### Facilitating Dialogue to Improve Community Health

Erin Yelland

Declining health outcomes in our country necessitate action, and Cooperative Extension is an ideal partner to improve individual, family, and community health. In order to identify and commit to critical foci, however, we must first understand the current scope of needs, existing resources, and needed partnerships. To facilitate this understanding, Cooperative Extension in a Midwestern state hosted a series of Critical Conversations for Healthy Communities. The purpose of these conversations was to convene key stakeholders, facilitate collaborative dialogue, and create momentum for change. Findings from the conversations affirmed that community needs are diverse, large-scale, and will require multi-faceted, community-level initiatives to initiate progress.

We have found ourselves living in a time when we can no longer expect that American children will live a life longer than their parents (CDC, 2017). Despite spending more than any other country on health care, our nation has some of the worst documented health outcomes of any developed nation in the world (Organization for Economic Co-Operation and Development, 2018). Data consistently shows that our country is experiencing extreme deficits in individual,

family, and community health, and in order to reverse the trends, we must all work together to identify and implement effective strategies to improve our nation's health. Cooperative Extension's grassroots presence in all 50 states provides us a unique opportunity to begin and continue to influence local-level change across the country. To move forward, however, change must first begin by building a foundational understanding of the unique challenges communities face, what resources are available, who the key stakeholders and the goals of the community as identified by both residents and key stakeholders. After gaining this understanding, Cooperative Extension at the local level can begin to commit to crucial foci that align with Extension's scope and capabilities, choose effective policies and programs, act on what is important, and evaluate our actions (County Health Rankings, 2018).

Cooperative Extension systems across the country recognize the disparate need for health improvements, and in fact, many identify health-related issues as one of their statewide foci (e.g., K-State Research and Extension, 2016). Although a plethora of health-related data exist that can help to paint the picture of the unique needs in a community (e.g., County Health Rankings, 2018), there remains a crucial need to engage members of the community and local key stakeholders in conversations that promote critical thinking and problem solving strategies. In the context of health, understanding residents' perceived needs, resources, and goals can guide Cooperative Extension and other community service providers in helping to understand and fill identified gaps and develop strategies to improve the health of the community.

In talking about health though, we must take a holistic approach. Research has consistently shown that only 25% of health outcomes are due to genes and the health behaviors that we practice across our lifespan; 75% of health outcomes, rather, are due to the social and environmental determinants of health, such as poverty, inequities among races and ethnicities,

access to quality health care and education, and physical environments (CDC, 2014). This fact singlehandedly shows that our strategies to improve community health must include a combination of individual, family, and community-level interventions. Within Cooperative Extension, this need has been recognized and helped to precipitate the National Framework for Health and Wellness (Braun, et al., 2014). This framework purports that Extension's ultimate goal is to increase the number of Americans who are healthy at every stage of life and depicts the need for the development and maintenance of healthy and safe communities and access to healthy and safe choices for all Americans. Such goals will require engagement in direct education, policy, systems, and environmental change initiatives (PSE), and a variety of partnerships at the national, state, and local levels to further our reach and efficacy.

In order to further prepare Extension in a Midwestern state to foster the development of a culture of health, Extension administrators and state- and regional-specialists identified the need to facilitate Critical Conversations for Healthy Communities. Thus, the intent of this paper is to explore our purpose and objectives, methods for hosting the conversations, discuss our initial findings, and provide recommendations for next steps.

### **Objective**

Building relationships within communities is critical to improving policies, systems, and environments for individuals, families, and communities to thrive within. Therefore, the overarching goal of facilitating these conversations was to convene key stakeholders and initiate dialogue about and foster action towards creating healthier communities. Specifically, we aimed to: (a) explore the breadth of health issues in a Midwestern state; (b) gain a shared understanding of the current existing resources in the community that help to address these needs; (c) consider

what educational programs and community-based initiatives need to be piloted or implemented in the community in order to improve overall health outcomes; (d) identify the key stakeholders in the community, as well as laypersons, that should be included in further collaboration and dialogue and well as implementation of select initiatives; and (e) encourage further collaboration and dialogue among key community stakeholders and laypersons about improving overall community health. Additionally, we also wanted to model across the state the value of such critical conversations so that local Extension professionals would be equipped to replicate the effort in their local communities.

## **Method**

### **Recruitment and Logistics**

To achieve the objectives, a community-based participatory research (CBPR) approach was utilized and involved key community stakeholders in critical conversations with the goal of understanding a variety of unique perspectives and assessments of the community (Community Tool Box, 2018). Utilizing CBPR in this context was valuable because issues needed to be identified and analyzed, but strategies to address them in meaningful ways also needed to be discussed. This approach was implemented in seven strategic locations across the state. In order to ensure accessibility for attendees, the locations identified included our University's main and satellite campuses and each of our University's Extension regional offices. Four months prior to the conversations, Extension professionals across the state were invited to attend. We encouraged Extension professionals to identify key stakeholders in their community and extended a personal invitation to those individuals to join as their guest; suggested key stakeholders included board members, public health officials, school board members, and the like. A sample recruitment



email was drafted for the Extension professionals to use with their community partners and registration reminders were sent out to the Extension professionals. These recruitment measures resulted in an attendance of 275 Extension professionals and community partners at the Critical Conversations for Healthy Communities series. Participants included Extension administrators, specialists, and agents as well as community partners including public health leaders, health-focused coalition members, private foundation administrators, Extension board members, and others.

At each conversation, attendees were organized into groups by geographical location (i.e., neighboring counties were often grouped together) with groups ranging between five and 10 people. Each group was provided with butcher-block paper, markers, an agenda, and lunch. The role of state and regional Extension specialists and administrators was to serve as the hosts and facilitators; each location had up to three identified facilitators. These individuals were primarily responsible for facility setup and teardown, facilitating introductions, introducing dialogue questions, facilitating report-backs, providing a conversation summary, and evaluating the day. Our state's Assistant Director for Family and Consumer Sciences provided a foundation for understanding the current health climate in the state, why these conversations were important to have, implications for the future, and next steps. Because having a single individual deliver this message consistently across all conversation sites was important, we utilized video conferencing technology to live-stream our Assistant Director into each location. In doing so, we were able to host numerous conversations across the state at the same time. This proved to be an innovative and effective model for facilitating multiple conversations with a consistent message and providing participants the opportunity to hear discussion synopses and takeaways from groups in varying parts of the state.

## **Facilitation Method**

The World Café method was utilized to facilitate the Critical Conversations series. Flexible and simple to execute, the World Café draws on individual's inherent knowledge, experiences, and opinions to generate productive dialogue (Brown, 2005; The World Café Community Foundation, 2015). In this modified world café, individuals were assigned into groups based on their geographical proximity and the same four questions were asked to each group. Unlike in the traditional World Café method, groups and café hosts remained stagnant and did not rotate. This ensured that the conversation remained relevant and applicable to the geographical representation of each group. The following questions were asked: (a) What are the biggest health concerns in our community today? How do we know this?; (b) What resources does our community currently have to address these needs?; (c) What resources, programs, and policy, systems, and environmental change (PSE) initiatives do we need to help address the biggest health concerns in our community?; and (d) Who else do we need to bring to the table to discuss the resources, programs, and PSE initiatives we need to address the biggest health concerns in our community? Participants were given 20 minutes to answer the first two questions and 30 minutes to answer the subsequent questions. During each discussion period, facilitators rotated around the room to answer questions and aided in facilitating the conversation, if needed. Following the second and fourth discussion questions, participants were invited to share a synopsis of their conversation locally, and then one group was chosen to summarize the discussions for those attendees on the video conference across the state.

## **Evaluation**

Upon completion of the facilitated discussion, participants were asked to identify and share their success story for the day. Then, each group was requested to collaboratively identify a

30-day goal and write it on a notecard. In order to evaluate the readiness of communities to facilitate health-related change, groups were directed to place their notecard into a bag labeled with the stage of collective impact (Collaboration for Impact, 2018) that most aligned with where they perceived their community to stand. Because we anticipated groups would fall within the earlier stages of collective impact, the categories of evaluation included “we are ready to: (a) generate ideas and dialogue; (b) initiate action; or (c) organize for impact”.

## **Results**

The initial findings from our conversation series affirmed that each county within the state has unique critical needs that need to be addressed through a variety of purposeful and impactful initiatives. Each participating group identified large-scale issues, such as mental health, food insecurity, transportation, housing, and access to health care. The conversations also revealed that these areas often have limited resources and services with which to address those needs, particularly within rural and frontier areas. Even within our state’s more urbanized areas, these issues continued to arise, and it was noted that while some services exist to address these needs, the service providers oftentimes do not have the capacity and resources to fully address the community’s needs.

Among county-level groups there emerged little variance in readiness; the largest proportion of participating counties (91%) felt prepared to generate ideas and dialogue. Only 9% of participating counties felt that they were prepared to initiate action within their communities and zero participants felt they were currently capable of organizing for impact. These findings further support that many of our communities are only beginning to develop momentum for change, which suggests that there is potential for Cooperative Extension to get involved in

community-based initiatives at an early stage and make a profound impact. Understanding where Extension professionals and their community partners perceive themselves to be in terms of readiness for change will help to guide regional and state Extension specialists and administrators in preparing our system to implement targeted community health improvement initiatives.

### **Next Steps**

In order to help propel future changes, Extension specialists in the state have prepared an informational toolkit for local Extension professionals that will guide them through the processes used to host and facilitate the Critical Conversations for Healthy Communities series. By replicating these conversations in their own local communities, local Extension professionals will have a means to further understand the needs and resources of their local communities and work with their community members to identify action steps that will contribute to improved individual, family, and community health. Additionally, follow-up surveys examining completed activities, collaborations, community coalitions, and health-related engagement will reveal the longer-term impact of these conversations; results will be forthcoming.

### **Summary**

A perfect storm has developed for Extension; health disparities are increasingly widening and health outcomes are worsening across our country, and substantial need has been identified for community entities and stakeholders to work together to help reverse these trends. Though there will never be a one-size-fits-all approach to improving community health, in order to understand where a community stands and where the potential paths are for improvement, we must solicit input from the community, including both laypersons and key stakeholders. Utilizing

an effective strategy of convening members and facilitating dialogue is crucial and can produce beneficial outcomes. In order for Extension to truly do for health what it did for agriculture in the previous century (Henning, Buchholz, Steele, & Ramaswamy, 2014), we must first have a complete understanding of community needs in order to determine and implement the most critical initiatives and improve our nation's health.

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## **IMPLICATIONS FOR EXTENSION**

### **Family Rules, Family Relationships, and the Home: Reconceptualizing Policy, Systems, and Environmental Change in the Family Context**

James Bates and Erin Yelland

The premise of policy, systems, and environmental (PSE) change purports that sustained impact on the health behaviors of a community relies upon the implementation of community-level health-improvement initiatives. We argue that the family, however, remains an essential context for influencing sustained behavior change. Proposed is a framework for applying policy, systems, and environmental change concepts to the context of the family. The reconceptualized framework concepts include family rules, family relationships, and the home. The role of values held by family members is described. By targeting these aspects of family life in educational initiatives, family and consumer science Extension professionals help families make sustained behavior changes for healthier living.

Cooperative Extension across the United States has been dedicated to providing non-formal education through translational science and engagement for over 100 years. In the family and consumer sciences arena, Extension professionals have dedicated their work to improving the lives of individuals, families, and communities in the areas of nutrition and food safety, healthy living, human development, relationships, family resource management, and beyond.



Historically, the model of engaging citizens to provide research- and evidence-based information has been through direct-education approaches primarily focusing on individual knowledge, attitude, and behavior change. This premise was founded upon the belief that if individuals understood the importance of making healthy choices and how to embrace a healthy lifestyle, they would adopt those behaviors and experience improved health outcomes. Evidence suggests that initiatives targeted to the broader environmental contexts in which individuals live can create and sustain meaningful behavior change (Honeycutt et al., 2015).

In recent decades, focus on the various ecological contexts in which individuals live has led to innovative thinking about the impact that policies, systems, and environments (PSE) have on population health outcomes. The formalized concepts of PSE primarily have their roots in population or public health practice and is widely supported by the Centers for Disease Control and Prevention (CDC, 2017), the Robert Wood Johnson Foundation (Robert Wood Johnson Foundation, 2018), and SNAP-Ed, within the United States Department of Agriculture.

Undoubtedly, utilizing a PSE approach to initiate and evaluate community change has expanded family and consumer science professional's thinking about potential impacts on health and wellness. Acknowledging the increased support within Cooperative Extension to utilize PSE approaches (e.g., RWJF-CES partnership), efforts have been made to educate Extension professionals about PSE and how it fits into already existing initiatives (e.g., Yelland, 2018).

While PSE initiatives have the potential to create positive changes within communities and in family life, we must not disregard the fact that the family, itself, remains the most fundamental and ever essential context for influencing behavior change in large part because of the daily influences on choices and decisions made about relationships, health, lifestyle, and human growth and development. Therefore, in this article we argue that society and community

cannot be the only ecologies of focus but that continued focus on the ecology of the family has merit and impact. Indeed, we cannot overlook the impact that Extension family and consumer science professionals have as they work directly with families and present a framework for conceptualizing and identifying behavior change in the family context.

### **Framework for Conceptualizing and Identifying Behavior Change in the Family Context**

Bronfenbrenner's conceptualizations (1979; Bronfenbrenner & Ceci, 1994) of bioecological models of development are generally considered the modern foundational theories that describe the proximal and distal social-ecological forces influencing human development and behavior. Health promotion and public health professionals take as their theoretical branching-off point McLeroy, Bibeau, Steckler, and Glanz's (1988) ecological framework that emphasizes health, nutrition, and community-level interventions. Subsequent models have continued to focus on the broadest levels of that model, namely, the (1) social structure, policy, and systems, (2) community, and (3) institutional/organizational spheres of influence (e.g., Kegler et al., 2015). The purpose of these models is to provide researchers and practitioners a framework to guide them in conducting and evaluating community-level nutrition and health education initiatives (Gregson et al., 2001), which has led to a consistent emphasis in the field on PSE concepts. We question whether these broad concepts can be applied to the context of the family; specifically, do the concepts of policies, systems, and environmental change exist in families? We then propose a vernacular for identifying and evaluating such concepts within family and consumer science education programs and initiatives (see Figure 1 for a visual representation of the complex interface of framework concepts).

## **Policy and Family Rules**

Policies refer to the rules, regulations, laws, and legal and institutional limitations implemented by local, state, and federal jurisdictions, organizations, and public and private entities to govern and regulate behavior (see also Gregson et al., 2001). Families are governed by family rules, which are explicit or implicit, spoken or unspoken, and both consistently and inconsistently enforced (cf Ford, 1983). Family rules are an inseparable part of the family system because they govern interactions, the qualities of relationships, as well as the social-cognitive beliefs and goals of each family member. For instance, a family may implement a rule that its members must apologize to each other after an argument. Family rules may also exist to govern the maintenance and use of family possessions, the purchasing of foods for consumption within the home or at restaurants, or permissible financial expenditures. On one hand, family rules and boundaries may be created to facilitate safety, orderliness, and to foster health, growth, and development. On the other hand, as with any policy or rule, regardless of the entity that creates and implements the rule, family rules may be motivated by malicious control and have negative consequences. A family with too many or too few rules may experience unintended and unrealized consequences.

There exists a modest body of scholarship that investigates the relations among family rules and family members' behaviors and psychological functioning. In fact, one early study argued that community health and nutrition interventions should focus on parental involvement and family rules to address adolescent consumption of unhealthy foods because of the direct impact parents have on their child's habits (De Bourdeaudhuij, 1997). More recent studies indicate that overweight parents who have overweight children report having fewer rules and greater difficulty with rule enforcement than healthy weight parents with children who have a

healthy weight (e.g., Hearst, Sevcik, Fulkerson, Pasch, Harnack, & Lytle, 2012). These findings suggest that appropriate rules may influence choices made about food consumption for parents and children. Implicit family rules also appear impactful on adolescent psychological functioning. For example, Feinauer, Larson, and Harper (2010) found that perceptions of rules about family expressiveness, kindness, and appropriate monitoring were associated with decreased negative adolescent psychological symptoms such as depression, anxiety, and hostility. Taken together, these studies suggest that family rules about a wide variety of topics may be salient to family and consumer scientists working to address behavior change in the family context.

### **Systems and Family Relationships**

Systems at the societal and community levels refer to the linkages and relationships among and across individuals, entities, and/or organizations. At the family level, a key tenet of family systems theory is that the whole of the family is greater than the sum of its parts (Cox & Paley, 1997), suggesting that the family system is more complex than individual family members. The complex family system also includes the interaction patterns among family members, the qualities of their relationships, and each person's personality and unique social-cognitions. Family systems theory further acknowledges the structures and boundaries of influence, power, organization, and disequilibrium that exist within the family system as well as the importance of the environment and social context in which families live (Whitchurch & Constantine, 1993).

In the context of family life education, family systems theorists would posit that substantial effort needs to be placed on building strong, healthy relationships, giving families the skills to engage in productive and civil dialogue, teaching empathic understanding towards one

another, and fostering unity and respect. By creating and sustaining positive and productive family relationships, the individuals within that family system thrive within that and other systems.

The literature has supported the value of positive characteristics within family systems and its interactions in a variety of contexts. Recent literature supports that family acceptance and support serves as a protective factor for lesbian, gay, bisexual, and transgender (LGBT) adolescents and young adults; specifically, those who experienced family acceptance in adolescence experienced a heightened physical and mental health status as a young adult compared to those who were rejected by their family system (Ryan, Russell, Huebner, Diaz, & Sanchez, 2010). However, the literature also supports the reverse; negative family systems and environments are more likely to produce damaging outcomes for children. Repetti, Taylor, and Seeman's (2002) findings highlight support for the risky families model, which purports that a family's social context, in conjunction with genetic factors, both directly and indirectly affects mental and physical health outcomes across the lifespan.

### **Environment and Home**

Environment refers to the physical spaces in which people live, work, learn, recreate, and so forth (Frieden, 2010; Kegler et al., 2015). When examined in a familial context, however, the family's most proximal environment is the home. The physical structure of the home combined with its contents, furnishings, outdoor space, connectivity, and other structures provide contextual opportunities for family members to interact with each other and with the features of their environment. Ideal dwellings provide safety, security, privacy, and a common location for familial interaction. A focus on the home, rather than the neighborhood, assumes that the family has reasonable direct control over this entity, even if only renting the space. Indeed, family

members make choices about how to use their home space to benefit the family and accomplish its goals regardless of the size, quality, or geographic location of the home. Although the home is situated within a broader community and societal environment, it cannot be overlooked as an environment within itself.

Research on the features of the home environment and associations with family life and child development is another fruitful area of research. Researchers studying the development of early literacy skills point to the need for adequate space and lighting within the home and suggest it prudent that reading materials are available for and easily accessible by children (Dolezal-Sams, Nordquist, & Twardosz, 2009). Others report that the nutritional quality of food present in the home can have substantial impacts on increased obesity rates and health care costs (e.g., Nackers & Appelhans, 2013; Tarasuk, Cheng, de Oliveira, Dachner, Gundersen, & Kurdyak, 2015). As such, innovative approaches are underway to change behaviors by restructuring the home environment. Two examples include integrating education about the home environment into pediatric well-child visits (Smith, Schetzina, Polaha, Baker, & Wood, 2016) and home-based family therapy integrating aspects of the home environment to increase healing and unity (Reiter, 2000).

## **Values**

It is often implicit in the messaging that broad-scale public health interventions are interested in helping the public live healthy, productive lives and in reducing health care costs (Frieden, 2010). Absent from discussions about community-level PSE change, however, is the explicit acknowledgement of the philosophical values that guide and motivate public health interventions and those that interventionists attempt to teach their intended audiences. While health, productivity, and reduced costs are worthy goals, messaging to audiences that

communicate culturally-accepted and unifying values such as respect, hard work, and love of family are likely to create a deeper conversion to behavior change.

Family rules, family relationships, and the choices made about the home environment are each informed and motivated by the values held by individual members of the family. Family values are often the answer to the question “Why does our family do the things we do?” For the sake of simplicity, in general, family values originate with parents and, to one degree or another, are taught to children. Children eventually introduce their own values to the family system, which are either adopted or rejected by the family and its members. One value consistently found in families and taught in family life education programs is that of being respectful to each family member. This value would appropriately undergird the family rule of apologizing to each other after an argument.

Often, however, family values are not explicitly stated and although children and adults are aware of the rules, they may not know the foundational reasons why the rules exist. This results in confusion for children and parents. For educators, helping families have greater explicit awareness of their own values is a key focus of parent education programs (e.g., Strengthening Families Program; weGrill©). By being aware of their own foundational values, parents can more effectively teach them to their children and, when understood, children are more likely to comply with the rules of the family.

### **Implications**

In sum, we posit that communities are not the only socioecological context in which change in policies, systems, and environments should take place in order to attain valuable impacts on health, relational, lifestyle, and wellness outcomes. The context of the family must

remain a focal point of Extension generally and family and consumer science educational programs and initiatives specifically. Although community-level PSE initiatives are likely impactful at changing the broader contexts in which we live, the well-documented evidence that focusing on family rules, family relationships, and the home environment to achieve sustained and meaningful impact on individual behavior must be re-recognized. Further, we posit that the incorporation of values into the reconceptualized framework of behavior change in the family context serves to acknowledge the psychological and philosophical dimensions of human relationships and beliefs. In making values an explicit entity in family life education, we further expand opportunities to investigate the motivations behind individual behaviors. While the four framework concepts are interrelated, each can be conceptualized and operationalized exclusive of the others. Future research should outline suggestions for evaluation techniques and test the efficacy of educational programs and initiatives that help families make changes to family rules, family relationships, and the home environment for positive health and wellness in the family context.



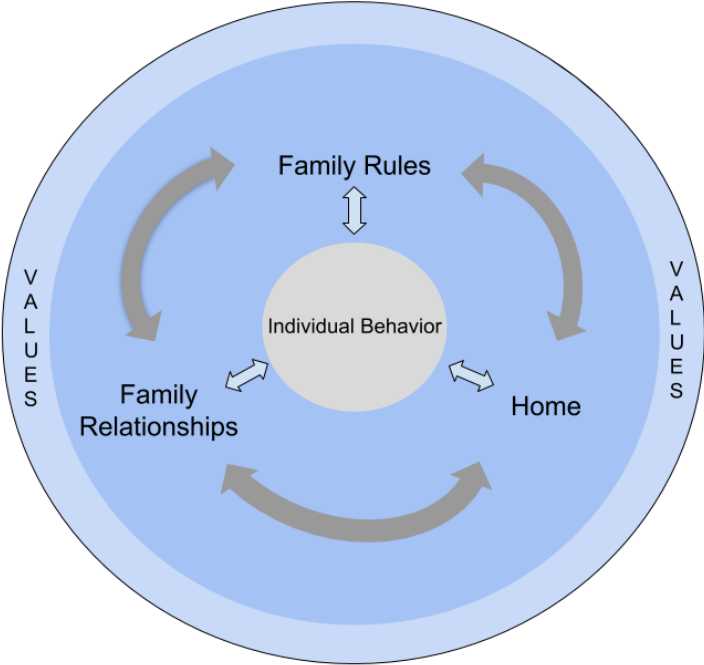
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**Figure 1. Framework for Conceptualizing Behavior Change in the Family Context**



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## **BEST PRACTICES**

### **Providing Relationship Education through Experiential Date Nights: Comparing Urban vs. Rural Outcomes**

Naomi Brower and Elizabeth Davis and David Schramm

Offering experience-focused date nights has increased attendance in relationship education for couples in both urban and rural communities. Date nights consisted of relationship education based on activities that appealed to both men and women. Outcomes from 24 date nights (N = 367) offered in two western communities (one urban, one rural), indicate date night activities significantly improved knowledge of relationship skills. Evaluations demonstrated both men and women found the activities to be valuable. This article provides descriptive information for other Extension professionals wishing to design and evaluate experiential relationship education in both urban and rural settings.

There is compelling evidence that healthy marriages have beneficial social and economic impacts for both parents and children, including physical and physiological health (Ola & Mathur, 2016). Conversely, the experience of marital disruption often has a negative impact on health; divorced individuals, on average, compared to their married counterparts, experience higher levels of psychological distress, substance abuse, and depression, as well as lower levels of overall health (Hughes & Waite, 2011). Additionally, marital conflict and divorce are

associated with negative child outcomes including lower academic success (Frisco, Muller & Frank, 2007).

Based on this data, over the last decade many marriage and relationship education (RE) programs have been developed to support couples as they build and maintain healthy relationships. While these programs vary in structure and content, seminal meta-analyses suggest that RE enhances participants' communication skills, relationship quality, and marital strength (Blanchard, Hawkins, Baldwin & Fawcett, 2009; Hawkins, Blanchard, Baldwin & Fawcett, 2008).

Although research suggests that couples benefit from RE classes and scheduling time together for play, most RE programs utilize a traditional delivery, emphasizing face-to-face, lecture style classes that consist of multiple sessions (Duncan, Steed, & Needham, 2009). In modern society adult learning requires shifting the emphasis from teaching (traditional lecture) to facilitating a learning experience (Dernova, 2015).

Ooms (2007) suggests that having different forms and structure of RE, such as interactive approaches to teach relationship skills, may meet the needs of couples who might not attend traditional programs in a classroom. Research also suggests integrating a RE component into other programming may lead to interest in more extensive traditional relationship programming (Bradford, Higginbotham, & Skogrand, 2014; Hawkins, et al., 2004).

Findings from research suggest that mental, physical, and social play have a positive impact on overall health, well-being, and increase creativity that could lead to better problem solving (Bateson & Martin, 2013; Patterson, 2011). Using play as a method of instruction makes intuitive sense when trying to reach participants. Date nights were created to encourage men and women to participate through play and fun-filled interaction. Wilcox and Dew (2012) found that

date nights are associated with higher relationship quality and relationship happiness in both married and cohabitating couples. Date nights were purposefully planned to provide hands-on experiential activities where couples could learn and apply principles of happy relationships in a fun setting.

Historically, RE has generally attracted more women than men. One study suggests that while women seem to be more interested in attending all kinds of human services programs, that providing a male-friendly environment for relationship education activities might help to encourage men to attend such activities (Carlson, et al., 2012). Therefore, when planning date nights, efforts were made to provide activities that would be traditionally appealing to both men and women.

### **Objective**

Previous research has demonstrated that date nights are an effective approach to RE (Brower, Darrington & Bradford, 2011; Brower, Skogrand & Bradford, 2016). This article will further this body of research by exploring the effectiveness of this method in both urban and rural settings. Furthermore, a primary goal of this paper is to provide a program model by detailing methods and findings from relationship date nights in both an urban and a rural community, thereby facilitating the replication of this program by Extension agents in similar settings.

### **Method**

The objective of the marriage date nights in this study was to provide quality relationship education in an appealing, inexpensive, hands-on manner. Additionally, the experiential learning



atmosphere encouraged couples who may not generally attend RE to participate. These events also provided opportunities to introduce them to marriage education in a nonthreatening way. Participants were recruited or self-selected to participate through advertisements via social media, email, and paper flyers distributed in the respective urban and rural communities.

## **Participants**

Beginning summer 2016, 24 date nights were held in two counties with 367 individuals in attendance, including 273 total participants from an urban county (15 events) and 94 participants from a rural county (9 events). Participants were mostly couples (49% men, 51% women) and most were married (98%); with length of marriage ranging from 5 months to 45 years (78% were in their first marriage). There were also a few dating and engaged couples. About 40% of couples indicated they had no previous relationship education. Most participants were Caucasian (96%). The mean age was 36 years, with a median of three children, and mean income of \$53,500.

## **Procedures**

While activities varied at each event, each date night consisted of a hands-on activity where couples could discover, experience, and/or apply relationship education principles. During each activity, a 15-minute presentation by an Extension professional included facilitated participant discussion regarding the relationship concept(s) connected with the hands-on activity.

Activities offered and the accompanying relationship concepts included:

- Grilling class: couples learned basic grilling techniques and nutrition tips while re-discovering the value of being intentional in their relationship.
- Adventure Ropes Course: couples participated in rope challenges focusing on trust, reliance, teamwork, and communication.

- Games Night: couples participated in couple and group games intended to increase communication, problem solving, and/or financial harmony.
- Pumpkin Carving: couples planned and carved their pumpkin while learning the importance of words and how to use words to heal and not “cut” their partner.
- Rock Climbing: couples practiced basic rock climbing skills as a team at a local rock climbing gym. This activity focused on trust, reliance, and communication.

In both the rural and the urban counties, facilitators encouraged the discussion and application of the relationship concepts. Depending on the type of event, couples were provided with relationship enhancement tools such as research-based books relating to the evening’s topic, activities, and homework assignments to encourage further discussion and application of relationship principles. Food was an effective incentive for participation and refreshments ranged from light snacks, such as cheese and crackers or granola bars, to a full meal, depending on the activity. Couples completed an evaluation at the end of each event.

The schedule for date nights varied, particularly in the rural county where high school athletics significantly affected attendance. Date nights were scheduled to maximize participation and the schedule varied dependent on the community calendar. Date nights were held Tuesday through Saturday evenings. In the urban setting, Friday evenings usually worked best. Date nights were held monthly between 6:00 and 8:30 p.m. except for months with busy holidays (July, November, and December). The events were funded by small grants and minimal participant fees (\$10-\$15 per couple). In addition, local businesses often partnered to offer free or reduced fees for their facilities. These discounts encouraged attendance while also providing current and potential future business to the company. For example, a local rock climbing company provided a reduced entrance and shoe rental fee for participants of the date night, and a

local cooking supply store collaborated to provide a reduced-cost cooking class within their store as well as a discount on merchandise for all participants the night of the event.

### **Evaluation**

To examine whether individuals exhibited increases in relationship knowledge and whether there were differences between urban and rural participants, a mixed between-within subjects analysis of variance was conducted. We controlled for sex, race, and marital status across all analyses. Results indicated there was a significant main effect for time ( $p < .05$ ; partial eta squared coefficients ranged from .015 to .37) across four of the six evaluation items (see below), with both rural and urban participants reporting increases in knowledge and understanding after the date night. The other two items (How to effectively communicate with my spouse/partner; Ways to deepen a loving relationship, including intimacy) had marginally significant main effects ( $p < .10$ ).

Results from the retrospective pre-post tests related to participants' knowledge of healthy relationships are presented by county in Table 1. There was a significant interaction effect between county and time across five of the six evaluation items ( $p < .05$ ; partial eta squared coefficients ranged from .018 to .05), with rural participants reporting greater improvements in knowledge of healthy relationships from before to after the date nights. The interaction effect between county and time for the remaining item (The importance of spending time together) was marginally significant ( $p = .06$ ).

Results from the open-ended questions that assessed learning and planned changes added support to the quantitative results. Participants reported learning a variety of things related to themselves and their partners. One participant mentioned he learned "how fun my wife is in

group settings. Love her personality!” while another said she learned “ways to have fun doing simple things together.” One participant summed it up by saying “it is good to branch out and try new things as a couple.” Referring to a gardening activity, one participant said she learned “how we can nourish our relationship like the plants we enjoy. It takes constant care.” When asked about changes participants planned on making as a result of the date night experience, one participant explained it as follows, “I plan on doing a 30 days commitment/challenge to tell my spouse what I like and appreciate about him.” Another participant wrote, “I definitely plan to keep this flip book and come back next year and the next. We need to be more deliberate in finding time to spend together and I will plan more time for couple interaction without kids.” In sum, participants across both counties not only exhibited statistically significant increases in knowledge and behaviors across the survey, they also expressed what they learned in writing, including plans to improve their relationships through additional date nights and making each other a priority.

### **Discussion and Summary**

Similar to other research findings (Brower, Darrington, & Bradford, 2011; Brower, Skogrand, & Bradford, 2016) the results of this study indicate date nights may be an effective way to improve knowledge and understanding of relationship principles and concepts. Regardless of race, marital status or gender, on average, participants report improvements in relationship knowledge and understanding. Our results also suggest that, for our sample, rural participants experienced significantly greater increases in knowledge and understanding across nearly all of the items compared to urban participants, although the effect sizes are notably modest.

A preliminary scan of other established RE programs in both areas found that the urban area had more accessibility to RE programs through churches, schools and other community organizations. Based on this information, we speculate that result differences between urban and rural areas may be impacted by the difference in accessibility to RE. Rural areas often have limited access to RE, so exposure to relationship enhancement activities may yield greater impact for participants with less previous RE exposure than those who have attended several RE events. Conversely, urban audiences often have more opportunities for RE and therefore may experience a more modest increase in knowledge and understanding due to attending similar events in the past. Additional research should be conducted to determine whether this finding is spurious or whether there is a trend for participants from rural areas reporting greater increases in understanding and knowledge, compared to participants from urban areas.

According to Wilcox and Dew (2012), date nights have a variety of positive results for couples such as increasing communication, bringing novelty to the relationship, providing new ways to get to know each other, and fostering commitment. While this study focused on the knowledge and skills gained by participants, the qualitative data provides evidence that participants enjoyed learning new things together, learning new things about each other, and they were committed to investing more time communicating, dating, and improving for the good of the relationship.

We speculate based on the findings of Brower, Skogrand and Bradford (2016) that, that for many couples date nights may be the only form of RE they receive, and we would, therefore, encourage the activity-based approach as a part of a well-rounded approach to RE. Additionally, based on the research of Bradford, Higginbotham & Skogrand (2014) and Hawkins, et al. (2004)

we also speculate that date nights may lead to an interest in more extensive traditional relationship programming.

This preliminary study addressed gains in knowledge and skills for urban and rural couples as an alternative way to deliver RE compared to traditional class delivery. Future research should examine the impact of couples attending multiple date night events and assess whether date nights contribute to long-term behavior change. While activities were carefully selected for the date nights based on general patterns of feedback from previous participants, it might also be of interest to conduct focus groups with participants to guide the planning of future date nights.

Another notable limitation of the current study is the White, middle class sample. Future studies and implementation of date nights should examine whether these findings hold across diverse racial, ethnic and socioeconomic lines.

Practitioners in both rural and urban areas desiring to create similar RE events may benefit from the following lessons learned:

### **Time Frame**

Consider the needs of the community, including potential community scheduling conflicts, especially athletic or holiday events. For those with children, the timeframe of the date night might also be an important consideration.

### **Cost and Community Sustainability**

Many date nights can be held with minimal amount of cost to participants, even if funds are not available to help subsidize the events; however, it is important to consider the economics of the community when determining how much to charge for events. For example, some rural communities may depend on tourism and, therefore, may have fluctuating finances over the

course of a year. If grant funding is available to help subsidize events, asking participants to pay a minimal amount may also increase their commitment to attend. Collaborating with community businesses or organizations can also help to promote program sustainability and build community relationships.

### **Choice of Activity**

Consider the interests of the community and potential partnerships with local businesses or venues that may provide opportunities or discounts for couples to experience activities that may otherwise be unavailable for the average couple to experience. For example, a games night or ropes course is often much more enjoyable and feasible with a group. Companies or organizations are often willing to provide a discounted rate for a group in addition to a free meeting space to complete RE and evaluations. Additionally, collecting feedback from male and female participants separately will also provide helpful feedback about activities all participants would find enjoyable.

### **Capitalize on Connection**

Past participants are often the best marketing tool. Promote upcoming Extension activities at each activity and collect participant contact information for future marketing needs and long-term evaluation.

In conclusion, findings suggest that date nights should be considered as an effective form of RE for both rural and urban audiences. For more information about potential date night ideas and a step-by-step planning guide of creating date nights, download the free Marriage Survival curriculum at [www.marriagesurvival.org](http://www.marriagesurvival.org) (Washburn, Christensen, & Brower, 2013).

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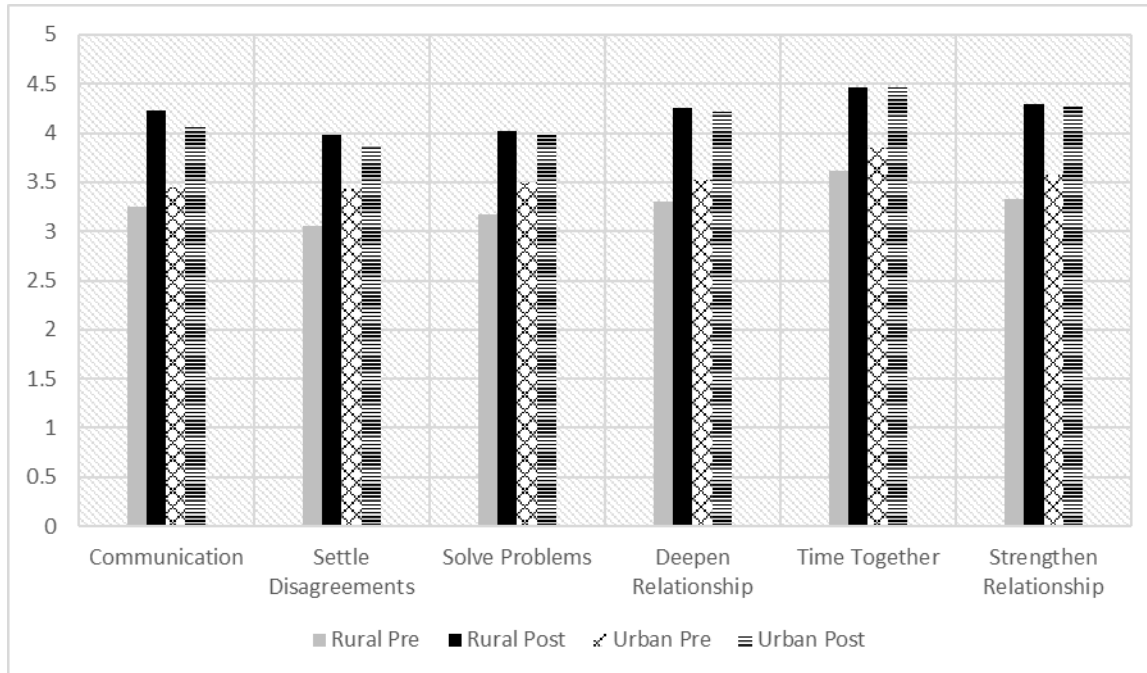
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**Table 1: Participants' Knowledge of Healthy Relationships Before and After Date Nights**



“My knowledge or understanding of...”

- Q1. †How to effectively communicate with my spouse/partner
- Q2. \*How to settle disagreements well
- Q3. \*How to solve problems and reach compromise
- Q4. †Ways to deepen a loving relationship (including intimacy)
- Q5. \*The importance of spending time together
- Q6. \*Ways to strengthen/protect my relationship

(main effects: \* indicates  $p < .05$ ; † indicates  $p < .10$ )

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## **BEST PRACTICES**

### **Teachers' Stages of Concern during a Literacy Coaching Intervention**

Teresa Byington

This study examined the types of concerns adults have when participating in programs that focus on implementing new practices effectively due to concerns. The objective of the study was to determine specific concerns teachers had during a literacy coaching intervention using the Concerns-Based Adoption Model Stages of Concern framework. Teachers completed pre- and post-Stages of Concern online questionnaires and participated in post-intervention interviews. Three main areas of concern identified by the teachers at the beginning of the intervention were time, clarity and potential programming conflicts. Results of the Stages of Concern questionnaire indicated that teacher's management concerns decreased by the end of the intervention. In contrast, teacher's refocusing concerns had increased, indicating that teachers were considering additional ways to enhance the literacy instructional practices acquired during the intervention.

Extension professionals are frequently engaged in teaching classes to improve the quality of life of individuals and families in their communities. Participants attending classes are taught new ideas and strategies that they may or may not transfer into personal practices. One reason practices are not adopted is because of participant's concerns.

The implementation of new program practices by participants may not be achieved due to a variety of factors such as participant's willing to change. It can be helpful for providers of professional development to understand the factors or concerns that can promote or hinder participants' implementation of new practices.

### **Concerns-Based Adoption Model**

A theoretical framework that can identify and address participant's concerns during the implementation of new practices is the Concerns-Based Adoption Model (Hall & Hord, 2006). The Concerns-Based Adoption Model is a useful framework that can help to describe participant's concerns and behaviors during the implementation of a new intervention or program. The model is based on the premise that participants' concerns need to be addressed before they can effectively adopt new practices (Bogue, Marrs & Little, 2017).

The Concerns-Based Adoption Model can be used to identify additional supports that may be needed to improve participant's implementation of new practices. A number of studies have been conducted related to the Concerns-Based Adoption Model. These studies focused on participant's level of concern as they were involved in making changes related to the implementation of new programs (AL-Rawajfih, Fong & Idros, 2010; Bogue, Marrs & Little, 2017; & Saunders, 2012). The results from Concerns-Based Adoption Model studies have been useful in identifying the types of participant concerns that need to be addressed when new program were adopted. For this study, an Extension Early Childhood Specialist was interested in learning about the concerns of early childhood teachers involved in a literacy coaching intervention.

## **Stages of Concern**

Stages of Concern is a component of the Concerns-Based Adoption Model. The Stages of Concern identifies seven stages that individuals go through during the implementation of new programs or practices. The first is Stage 0 (Unconcerned). During this stage, a participant is either unaware of the practices or unconcerned about the practices. Next is Stage 1 (Information). At this stage, the participant has expressed interest in the practices or a desire to learn more about the program.

At Stage 2 (Personal) the participant is focused on how the practices will affect them personally. During Stage 3 (Management), the participant is concerned about how and what to implement, as well as managing available resources. During Stage 4 (Consequence), participants want to know how the practices will impact others such as students. At Stage 5 (Collaboration), participants are interested in collaborating with others and sharing information on the implementation of practices. Finally, at Stage 6 (Refocusing) participants are focused on the benefits of implementing the practices and how to improve and refine the practices (George, Hall, & Stiegelbauer, 2006).

## **Literacy Coaching**

Literacy coaching is a professional development strategy focused on the implementation of literacy instructional practices. Literacy coaches partner with classroom teachers to improve and enhance their teaching practices related to student literacy outcomes. Literacy coaching has shown to improve early childhood teacher's literacy instructional practices (Neuman & Wright; 2010; Sailors & Price, 2015). Limited information has been collected on teacher's concerns during a literacy coaching intervention. Lynch and Ferguson (2010) identified barriers or issues related to literacy coaching such as the non-involvement of the administration, resistant teachers,

and having limited resources (Lynch & Ferguson, 2010). However, specific concerns related to having a literacy coach were not identified. Therefore, exploring the impact of teacher's concerns during a literacy coaching intervention addresses a gap in the literature.

### **Purpose**

The purpose of the study was to determine the types of concerns teachers had during a literacy coaching intervention and if teacher's concerns changed during the intervention based on the Concern-Based Adoption Model Stages of Concern framework. This study also sought to determine whether teacher's concerns during a literacy coaching intervention impacted teacher's ability to implement specific literacy instructional practices.

### **Method**

#### **Research Design**

The design of the research study was a pre-post intervention group mixed methods design with both quantitative and qualitative measures. The university's Institutional Review Board (IRB) approved the study.

#### **Setting and Participants**

The setting for the study was two community child care centers and two Head Start centers. Two preschool classrooms from each center were included in the study for a total of eight preschool classrooms. The literacy coaching intervention took place at each site. All of the child care and Head Start centers taught children from limited resource families.

This study was conducted in an urban location in a [REGION] state. Lead teachers from targeted child care centers serving low income children were invited to participate in the study



by the lead researcher. An information sheet and consent form (approved by the universities Institutional Review Board) was given to each potential study participant.

Eight lead preschool teachers from four sites agreed to participate and signed an informed consent form. The teachers' agreed to receive literacy coaching once a week (~4 hours/week) during a six-week time period. The teachers agreed to complete an online Stages of Concern questionnaire pre- and post-intervention and participate in a post-interview.

The lead teachers were diverse with varying levels of education and experience. Four of the teachers had bachelor degrees, three had completed some college classes, and one was a high school graduate. Length of teaching experience ranged from less than one year to over 16 years. The teachers were ethnically diverse and included teachers that were African American (1), Asian (1), Latino (2), and Caucasian (4).

## **Measures**

### **Stages of Concern Questionnaire**

The Stages of Concern questionnaire is designed to measure individual's concerns about a new program or practices (Hall, George, & Rutherford, 1986). Previous research has indicated that the instrument is reliable and valid (Hall et al., 1986; Hall & Hord, 2006). The Cronbach alpha coefficients of internal consistency ranged from .64 to .83 with six of the seven coefficients above .70 (Hall et al., 1986). The test-retest (Pearson-r) coefficients ranged from .65 to .86 (Hall & Hord, 2006). The Stages of Concern questionnaire identifies teachers' primary and secondary stages of concern. The questionnaire can also identify overall trends from a group of participants.

The Stages of Concern questionnaire (George, Hall, and Stiegelbauer, 2006; online version from Southwest Educational Development Laboratory, 2013) is composed of 35 questions that used the Likert scale of 0 (irrelevant) 1, 2 (not true of me now) 3, 4, 5 (somewhat true of me now) and 6, 7 (very true of me now). Questions addressed the users concern, attitudes, or reactions to implementing new practices (e.g., implementation of targeted literacy instructional practices). Questions included: “I am concerned about how the practices (implementation of targeted literacy instructional practices) affects students” or “I am concerned about my inability to manage all that the practices (implementation of targeted literacy instructional practices) requires.”

The questionnaire provided a profile of each respondent's level of concern at each stage (Unconcerned, Information, Personal, Management, Consequence, Collaboration, and Refocusing). The questionnaire was available in an online version and took the participants approximately 10 minutes to complete. The researcher received a license agreement to use the Stages of Concern Questionnaire from Southwest Educational Development Laboratory (SEDL) for this research study. Teachers logged-in to the website and completed the questionnaire at their convenience. The questionnaire was completed at the beginning and end of the study.

### **Interviews**

At the end of the study, the eight teachers and the literacy coach participated in a 20 to 40-minute interview. As part of the interview, participants were asked if they had any concerns about having a literacy coach (in connection with changing literacy instructional practices) and if yes, what were their concerns.

## **Intervention**

The eight lead teachers received literacy coaching for 20 to 22 hours during a six-week period. The weekly coaching included the coach observing the teacher in their classroom to determine their level of implementation of five targeted literacy instructional practices. These five practices include: 1) phonological awareness, 2) reading/dialogic reading, 3) writing, 4) vocabulary, and 5) oral language/extended conversation. During coaching, the coach would model literacy instructional practices and support the teacher in implementing the practices. Following the observation, the coach met with the teacher to discuss the observation, share resource information, and create action plans.

The action plans were developed by the teacher and coach and outlined the specific practices the teacher would implement in their classrooms each day during the upcoming week. For example, if the teacher's action plan focused on writing, the teacher would plan specific writing activities to implement with the preschoolers and determine materials needed for implementation. Each week, the coach collaborated with teacher to create and implement action plans related to the five targeted literacy focus areas.

## **Data Analysis**

Data from the Stages of Concern online questionnaire underwent a dependent (paired samples) t-test to determine any statistically significant changes on the teachers' Stages of Concern (pre to post) using the raw scores from each participant. The responses from the qualitative interviews were reviewed to identify any common themes among the participants.

## **Results**

The results of this study determined whether teacher's Stages of Concern changed during a literacy coaching intervention. Specific concerns were identified during post study interviews.

### **Stages of Concern**

Seven out of the eight teachers completed both the pre and post Stages of Concern online questionnaire. It was determined that there were statistically significant differences at two of the Stages of Concern. Stage 3 (Management) decreased in overall concern ( $t = 2.59, p < .041$ ) and Stage 6 (Refocusing) showed a marked increase in concern ( $t = -3.33, p < .016$ ). A decrease in Stage 3 (Management) reflected less concern about the process, tasks, and management of the intervention. An increase in Stage 6 (Refocusing) implied the teachers were considering the benefits of the intervention or thinking about additional ways of implementing literacy practices.

The Stage of Concern with the highest percentage at post assessment was Stage 2 (Personal) indicating the teachers had concern about how the intervention was affecting them personally. The Stages of Concern Comparison Chart provides an overall summary of the relative intensity of the seven teacher's pre and post Stages of Concern (See Figure 1).

### **Interviews**

Some additional insights into the participants' concerns were shared during the interviews. Five of the eight teachers indicated they had some initial concerns about participating in a literacy coaching intervention. These concerns included not understanding the purpose of coaching as it was a new experience.

The three main areas of concern identified by the teachers were time, clarity, and programming. Time was a factor for three teachers. Two teachers mentioned being concerned about whether they would have enough time "to do one more thing." Two teachers wanted

greater clarity about the purpose of the intervention and what would be expected during the intervention. One teacher was concerned about the focus of the coaching and “whether the coaching would clash with current program practices.”

The literacy coach was asked to share her perceptions on the level of teacher’s concerns during the study. She indicated that she perceived the teacher’s level of concerns were high at the beginning of the study. Several teachers were worried about being able to be successful in making changes to their literacy practices and how coaching would impact them personally. The coach stated that teacher’s concerns decreased as the project progressed; although, outside forces such as an upcoming federal review and personal issues continued to impact teacher’s concerns throughout the intervention.

All of the teachers with concerns stated that their concerns had dissolved after a couple of weeks of coaching. One teacher shared that at first she wasn’t sure how she would manage coaching along with everything else; however, because coaching helped her implement new literacy strategies in her classrooms she found the experience positive and beneficial. Some of the literacy strategies that teacher’s started implementing included: engaging the children in phonological awareness activities related to initial sounds, rhyming words and syllables. Teachers stated they were intentionally using more complex vocabulary with children and modeling writing more often.

Some of the improvements that were seen by the literacy coach included: children were involved in a variety of writing activities, children were using new and challenging words in meaningful ways, and book readings that were more interactive. The literacy coach also noted that teachers engaged in extended conversations with children more often.

## Discussion

The researcher examined whether the teacher's stages of concern changed during the literacy coaching intervention. The teacher's concerns changed at two stages. The level of concern at Stage 3 (Management) decreased and at Stage 6 (Refocusing) increased. Several factors related to coaching may have contributed to these changes. One factor was the one-on-one weekly support teachers received from the coach. Another factor was receiving literacy resources. The resources enabled the teachers to manage the task of implementing targeted literacy practices. Additionally, as the teachers gained expertise on literacy strategies and confidence in their abilities to implement effective literacy instructional practices they started refocusing on ways to improve their practices.

As shown in Figure 1, at post intervention the majority of the teachers' highest concerns were at the Stage 2 (Personal). In a study by AL-Rawajfih, Fong & Idros (2010), the majority of teachers involved in the implementation of an E-learning (electronic learning) professional development program were also at the Personal stage. Another study focused on school psychologists implementing RTI (Response to Intervention) model identified their primary concerns as Stage 0 (Awareness), Stage 1 (Informational) and Stage 2 (Personal) (Bogue et al., 2017). This information indicates the importance of addressing teacher's personal concerns throughout a new program or intervention.

Results from a study by Saunders (2012) indicated that it can take several years of participation in a training professional development initiative before teachers are ready to collaborate (Stage 5). Therefore, it may be important to implement interventions over multiple years and periodically address teacher's concerns to ensure forward movement.

In this study, the combined teacher's Stages of Concern changed at all of the stages (See Figure 1) although the differences were only significant at Stages 3 (decrease) and Stage 6 (increase). Stage 0 (Unconcerned), Stage 1 (Information), and Stage 4 (Consequences) decreased, although not significantly, which may indicate a trend toward teachers having less overall concern or lower need for information about the intervention.

Stage 2 (Personal) and Stage 5 (Collaboration) had slight increases in concern levels. The Head Start sites were preparing for an upcoming federal review at the end of the study which may have impacted some of the teacher's personal concern levels. Additionally, the interest in collaboration may have begun to increase due to involvement in the coaching partnership. The changes in the research study groups' placement along the stages of concern continuum provided some useful insights into teacher's concerns during a literacy coaching intervention.

Teacher's concerns are real and it appeared they had a moderate effect on the implementation of effective literacy instructional practices within this intervention. When teacher's concerns were acknowledged and addressed, the teachers' were able to implement literacy instructional practices at higher levels. The findings from this study are helpful because they identified the types of concerns teachers had when participating in a coaching intervention.

The information from this study has been useful in guiding some changes to the coaching program. First, teachers involved in coaching initiatives now attend an orientation prior to coaching to address initial concerns. Second, teachers complete a Teacher-Coach Partnership agreement that clearly outlines what is expected of teachers participating in the coaching initiative. Third, coaches spend more time at the beginning of the coaching partnership building trust, addressing concerns, and establishing strong relationships with teachers.

It can be beneficial for anyone implementing a new educational program to gain an understanding of the Stages of Concern in order to address participants' concerns. Extension professionals could use the Concern-Based Adoption Model as a framework for identifying and addressing participant's concerns. As seen in this study, participants can have personal concerns that affect their ability to implement new practices. The Stages of Concern questionnaire could be used to identify the types of concerns individuals or groups of participants are experiencing. This information can be used to make revisions to program components.

Participants attending Extension programs may need assistance in managing processes and tasks. They may need more information on the program or specific practices. Extension Professionals can help to alleviate participant's concerns by helping them understand the positive impact of implementing the new practices. Concerns can also be addressed as participants collaborate with others and identify additional ways to improve their practices.

### **Conclusion**

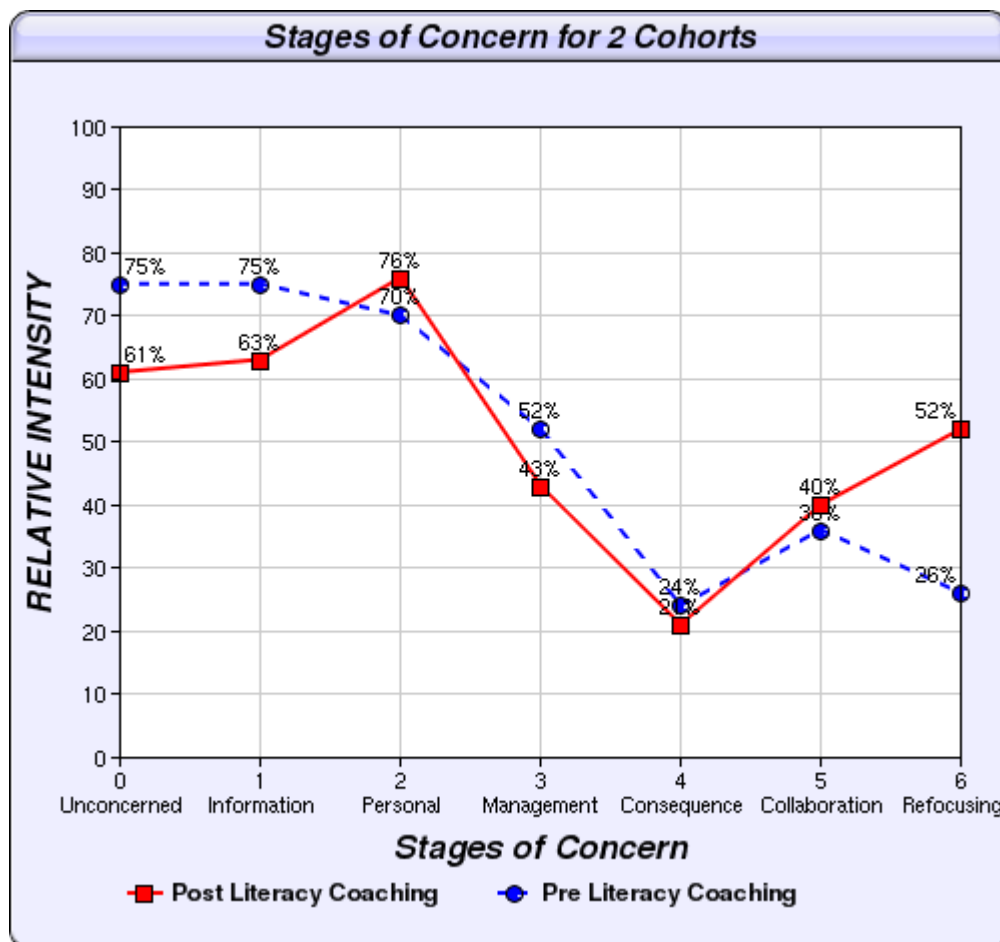
The Concern-Based Adoption Model Stages of Concern provides a framework for understanding participant's concerns when new practices or programs are being adopted. Identifying and addressing participants' concerns appears to be an effective strategy for ensuring higher levels of implementation of new practices. Utilizing the Stages of Concerns questionnaire may be beneficial in helping Extension professionals determine appropriate support strategies for participants of Extension programming.



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**Figure 1. Stages of Concern Comparison Chart (n=7). This figure compares the teachers' Stages of Concern pre literacy coaching and post literacy coaching**



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## **BEST PRACTICES**

### **Health Motivators: A Study of an Integrated, Peer-led Health Initiative with Older Women**

Gwen Crum, Elaine Bowen, Zona Hutson, Cheryl Kaczor, Lauren Prinzo, David Roberts,  
Becky Smith and Mary Eleanor Burkhart Polk

Health knowledge does not always translate into healthy behaviors. To improve the health of older adults, the Health Motivator Program was created to equip peer leaders with an appealing curriculum and social support strategies. Over an eight-year period, monthly educational activities engaged leaders and community group members in learning about and practicing targeted health habits. This study explored the Health Motivator Program's perceived strengths, weaknesses, and benefits among Health Motivators, group participants, and Extension Agents. Consistent with the literature, results suggest that integrating monthly peer-led education into existing group activities may improve health practices at the personal and organizational levels.

Physical activity and eating a nutrient-rich diet are the cornerstones of a healthy lifestyle. Research shows three lifestyle behaviors which greatly impact mortality: smoking, diet, and physical activity (Ford, Bergmann, Boeing, Li, & Capewell, 2012). Although most adults know the importance of exercise and healthy eating, too few individuals follow the recommendations (Merrill, Friedrichs, & Larsen, 2002; Johnson, Sharkey, & Dean, 2010). Certain subsets of the

general population, including women, those living in rural areas, and older adults, do not practice a healthy lifestyle (Cleland, Ball, King, & Crawford, 2012; Johnson, Sharkey, & Dean, 2010; Kruger, Carlson, & Buchner, 2007; Merrill, Friedrichs, & Larsen, 2002).

Health educators and practitioners are challenged to find effective ways to improve and sustain healthy lifestyle behaviors. Research by Buman et al. (2011) and Broderick, McCullagh, White, Savage, and Timmon (2015) demonstrate that peer volunteers can effectively deliver health messages. Additionally, social support helps individuals commit to lifestyle changes, specifically support from family and friends increases participation in regular physical activity among older adults (Bowen et al., 2010; Middleton, Anton, & Perri, 2013; Broderick, et al., 2015; Miller & Iris, 2002). Research suggests using lay leaders to deliver health messages is a cost-effective delivery method and provides beneficial social support for participants (Bowen et al., 2010). Lay leaders trained to deliver community-based health programs may experience increased self-confidence, increased self-esteem, and interest in personal development (Hainsworth & Barlow, 2003). The lay or peer leader model is strongly recommended because it has generally been shown to be effective in improving physical fitness among adults. Proven strategies include developing new social networks or working with existing networks to support activities such as walking groups and challenges (The Community Guide, 2016).

The Health Motivator program was created in 2008 by the West Virginia University Extension Service, because of the poor health outcomes in West Virginia (WV Statistics Center, 2017) and the research supporting peer-led health education (The Community Guide, 2014). The WV Community Educational Outreach Service (CEOS) requested the program and provided input on its name, the Health Motivator role, curriculum format, and health topics. This community-based service and education organization has a longstanding partnership with

Extension in this state. The purpose of the Health Motivator program is to promote healthy lifestyles to club members by providing monthly educational materials on specific health-related topics (e.g., walking, brain health, healthy celebrations) from the club's trained Health Motivator. All volunteer Health Motivators use a core curriculum to deliver information accurately and consistently. The program is designed to meet the needs of each club and provide a supportive environment that encourages members to share the information with family and friends (Bowen et al., 2010). This initiative follows the recommendation of the Community Preventive Services Task Force in that it builds, strengthens, and maintains networks and supportive relationships for group members to try new and maintain existing health habits (The Community Guide, 2014).

### **Objective/Purpose**

The objective of the Health Motivator Program is to engage older adults in monthly educational activities led by a designated peer Health Motivator and increase the knowledge and motivation to practice healthy lifestyle habits.

### **Method**

The Health Motivator Effectiveness Study explored these research questions: 1) How is the Health Motivator Program being used? 2) What do Extension Agents, Health Motivators, and their group members perceive as the strengths, weaknesses, and benefits of the program? 3) What are the similarities and differences in responses among the three participant groups?

### **Survey Development**

The first step was the development of three surveys to collect data from stakeholders involved in the program: 1) a phone survey of Health Motivators; 2) a paper survey of CEOs

members; and 3) an online survey of WV Extension Agents. The WVU Institutional Review Board approved the study protocol as exempt from human subject research.

### **Data Collection**

County-based Extension Agents were asked to send a list of their local Health Motivators to the state office. From the list of 176 Health Motivators received, 89 were randomly selected. This sample was mailed a postcard to inform them about the study and ask for their active participation. The 38-question phone survey of CEOS Health Motivators was conducted by a trained Graduate Research Assistant. All identifying information was removed to ensure anonymity. An anonymous paper survey with 30 questions was also distributed to CEOS club members who attended select county and regional meetings in 2016. Additionally, a 38-question Qualtrics survey was sent to Extension Agents who had health-related program responsibilities.

Finally, a qualitative dimension was added to the study. Health Motivators and CEOS members were asked to “tell us your story.” Members participating in a state CEOS conference were given the opportunity to respond in writing to the question, “Have Health Motivator activities made a difference for you and your club?”

### **Data Analysis**

Data output from each of the three surveys was reviewed by the team to answer the research questions and to identify how the program was being used, perceived strengths and weaknesses, and ideas for improvement. Results of the common questions asked across all three surveys were compared to assess the similarities and differences among the stakeholder groups. Data were analyzed using the Statistical Product and Service Solutions Software (SPSS) version 19.0. A Chi-Square analysis identified possible relationships among selected variables. Qualitative data from the written stories were aggregated and reviewed.

## **Results**

The research team collected surveys from 46 Health Motivators (52% of all identified Health Motivators) and 46 Extension Agents (92% of all Extension Agents with program responsibilities). Also, 265 CEOS members participated in the study, representing most of the 44 counties with existing CEOS clubs. Following are highlights of the survey results.

### **How is the Program Being Used?**

Clubs typically used ten of the monthly activities each year. Monthly activities last an average of ten minutes, or approximately 100 total minutes a year of health education for each local club. Health Motivators share talking points on monthly topics and lead the group in a physical activity to reinforce the health concept. Members are encouraged to take a monthly challenge to continue practicing the target health behavior. They are given a calendar to track their progress on physical activity, other health habits, and try healthy recipes. Most Health Motivators (64.3%) reported that they received training on their role and how to use the curriculum materials.

### **Health Motivator Phone Survey (n=46)**

CEOS club members serving as Health Motivators were first asked if their experience affected their personal health. More than 76% of respondents self-reported that the program helped them personally. Among those who felt they directly benefited from the program, nearly all (97%) said their role affected their everyday health knowledge and habits. Furthermore, 47% reported other changes in their personal health as a result of their experience in this leadership role, such as increased physical activity, healthier food and beverage choices, greater overall health awareness, and motivation to make changes. Second, they were asked about health behavior changes among individual club members, and 38% of Health Motivators agreed that



club members had made positive health changes. Table 1 shows individual member changes reported by Health Motivators, as well as the Extension Agents and club members. Third, when asked if the program led to any changes in the CEOS organization, more than half (61%) of the Health Motivators reported changes. Table 2 depicts organizational changes reported by Health Motivators and Extension Agents. The phone survey identified a wealth of ideas for future program improvements. They suggested more healthy recipes, monthly health challenges, and incorporating humor (jokes). These ideas revealed ways to enhance the curriculum, training, and program implementation, as well as insight into what Health Motivators and their club members valued.

### **Club Member Survey (n=265)**

Many questions on the member survey mirrored those on the Health Motivator phone survey. Members reported that they gained new knowledge from Health Motivator activities (97%), and 37% felt they gained "a lot" or "a good amount" of knowledge. For those citing health improvements, Table 3 summarizes the specific improvements. To document the extent to which the Health Motivator information reached others outside of their CEOS club, members were asked if they shared the information. Nearly half of the members surveyed (48%) reported sharing information with family, friends, and community members. Furthermore, as a result of their Health Motivator involvement, 32% said they participated in other Extension programs, and 38% encouraged others to participate in Extension programs. When asked about favorite parts of the Health Motivators program, the major response themes were exercising together, fun group interaction, and trying new foods.

### **Extension Agent Survey (n=46)**

Extension Agents participated in the online survey, giving additional insight on how the program is used, as well as their perceptions of program strengths and weaknesses. Most Agents (81%) said they used the program and those who did not cited reasons such as a lack of awareness about the program and lack of interested CEOS clubs. Agents who used the program generally reported feedback consistent with that of the Health Motivators and club members. They corroborated the program benefits described by the Health Motivators, albeit to a lesser degree. Nearly half of the Agents (46%) reported that the program resulted in positive outcomes among members, according to what members had told them and/or their observations. Table 2 depicts Agent perceptions regarding health-related changes with the CEOS clubs.

### **Further Analysis Among Stakeholder Groups**

Results of the common questions for all three surveys were compared to see differences and similarities between and among the stakeholder groups. Several statistically significant findings ( $p < 0.05$ ) were revealed, such as those reporting a higher frequency of Health Motivator activities (time in club meetings and use of curriculum) were more likely to respond favorably about program effectiveness, member changes, and readiness to practice healthy habits.

### **“Tell Us Your Story” Anecdotes**

When asked, “Have Health Motivator activities made a difference for you and your club?” twenty-four Health Motivators and club members representing sixteen counties shared their personal experiences in writing. Here are selected quotes from the written stories:

“Health motivators encouraged me to get off the couch and find an exercise that I enjoyed doing and would continue to enjoy... I probably wouldn't have started this exercise program if I hadn't been involved with the Health Motivator program in my CEOS Club.”

“This program is one of the best ever. It makes my group happy...best program since sliced bread!”

“Our club has brought can goods that we would use to exercise our arms and then donate them to the local food bank.”

"We exercise, and as a result, I have lost a few pounds. It feels amazing!"

## **Summary**

### **Study Limitations**

There are several limitations of this study. Results from the small convenience sample of Health Motivators, CEOS club members, and Extension Agents may not generalize beyond the populations represented. Our state’s population is older and less ethnically diverse than the national average and most other states. Second, CEOS club membership is relatively homogeneous, predominantly female, white, and over age 50. Therefore, study results may be germane only to programs with similar demographics. Another potential limitation may be an inherent bias toward positive health attitudes among those who volunteered to participate in the study. Lastly, research has shown that self-reported health habits are not always accurate.

### **Lessons Learned**

The Health Motivator Effectiveness Study explored stakeholder perceptions, and the results proved to be valuable in understanding program implementation and impact. Views were reasonably consistent among the agents, members, and Health Motivators surveyed, yet some perceptions varied. The more program involvement, the more positively the program was perceived. Study participants validated the program, showing that it educates Health Motivators and club members about small changes, which have tangible health impacts. Participants’

perceptions were more positive regarding the program's impact on their health, compared to the perceptions among Health Motivators and Extension Agents. This indicated a future need for sharing success stories and providing more training. Health Motivators consistently use the materials, suggesting that the curriculum is relevant and appropriate to the audience. A "ripple effect" occurs when Health Motivators are trained, then share information with members who spread the messages to their families and communities (48% reported this). This study also yielded concrete examples of effective approaches to peer-led health education found in the literature, such as active meetings, healthier refreshments, and involvement in health-related activities. The program continues to improve and expand since its inception, and study results help maximize its potential for greater impact and outreach.

### **Implications for Extension Health Education Programming**

Study results reinforce several concepts identified in the literature as effective in community health programming, so other states may want to consider replicating Health Motivators. These research-based qualities include: 1) peer-led, train-the-trainer support to strengthen social networks for health behavior change; 2) curriculum on contemporary health topics; and 3) brief, flexible, and easily accomplished activities that motivate participants to practice target health habits. Simple health education messages disseminated through trained volunteers may help address persistent chronic diseases, such as heart disease and diabetes. Extension's vast relationships with workplaces, churches, civic organizations and local governments provide an ideal opportunity.

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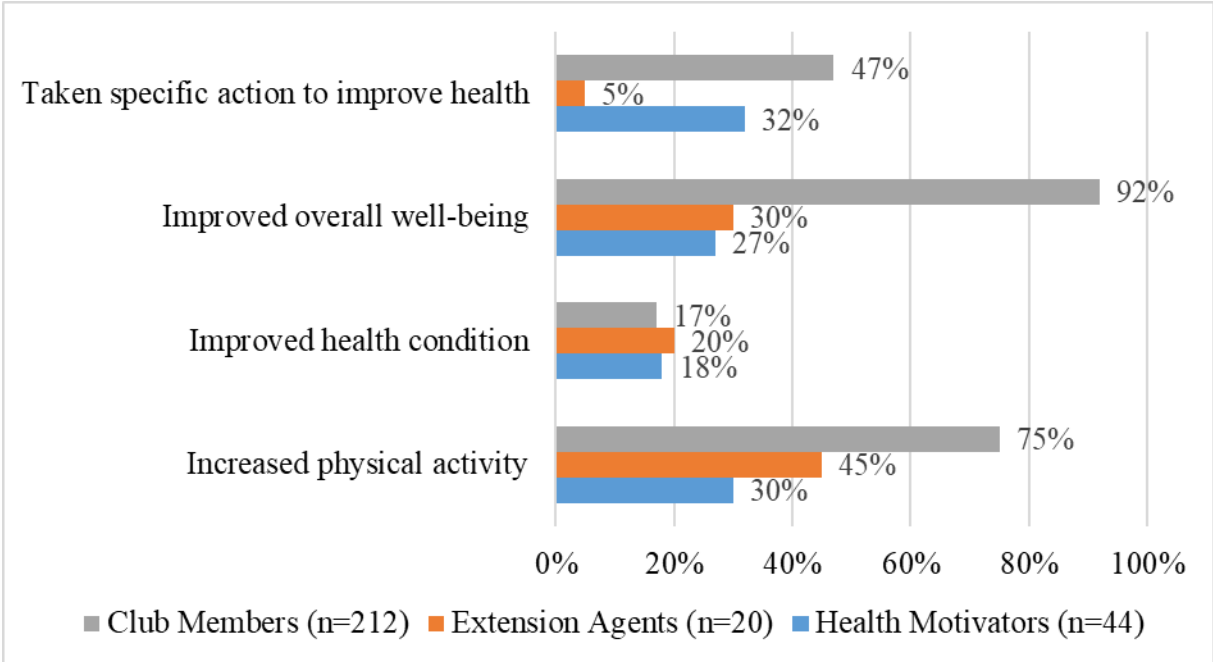
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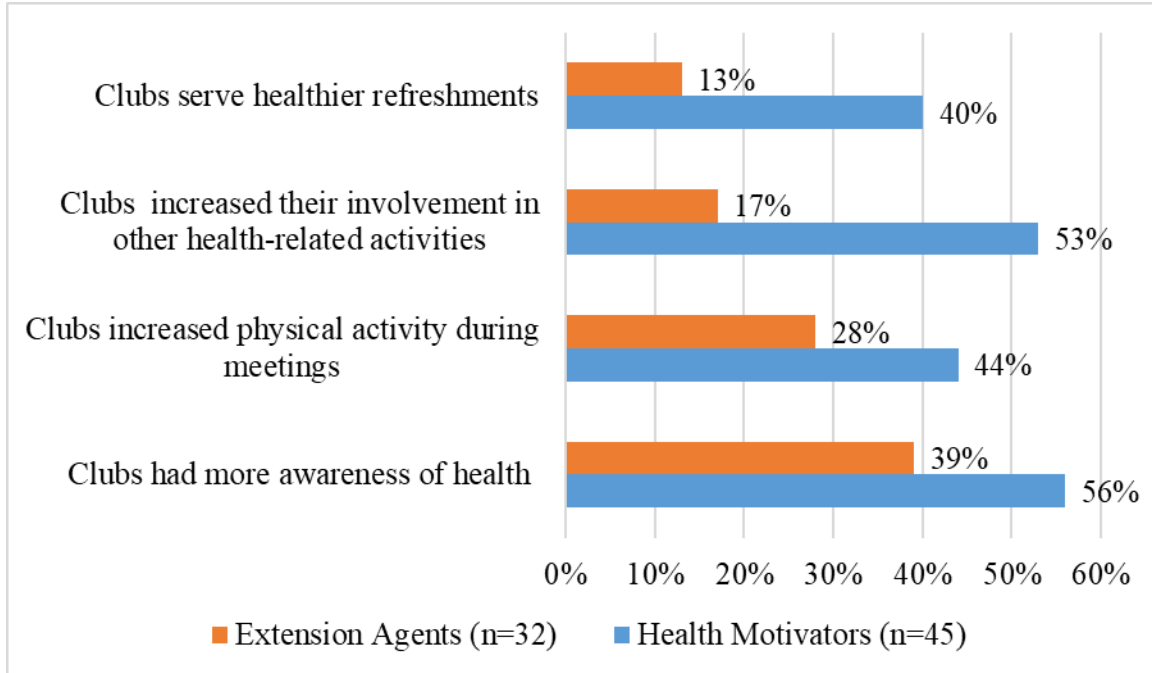
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**Table 1: Changes for Individual Club Members (2008-2016)**

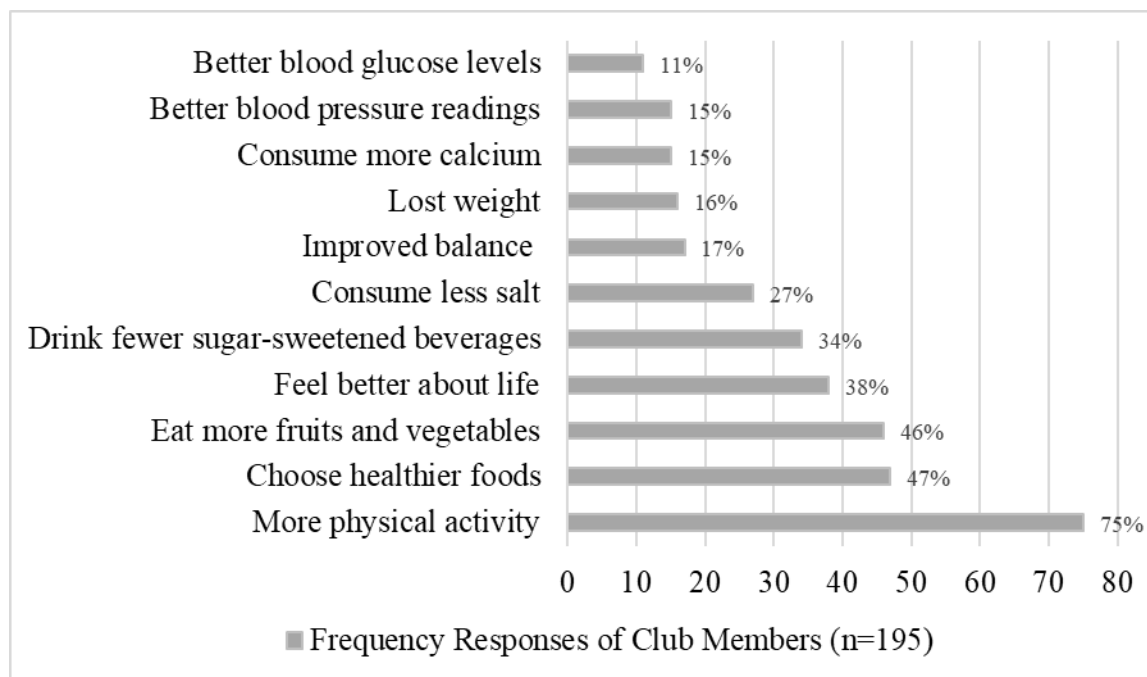


**Table 2: Changes for the Organization (2008-2016)**





**Table 3: Specific Personal Health Improvements Cited by Club Members (2008-2016)**



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## **BEST PRACTICES**

### **Impact of Tuskegee Money \$mart on Bridging the Financial Knowledge Gap of Collegiate Youths**

Lila Karki, Ntam Baharanyi and Uma Karki

African-American students have lower financial literacy than their peer groups. The objective of the study was to assess needs for financial literacy and education of collegiate youths and establish a Tuskegee Money \$mart program, develop curricula, and educate them to strengthen their financial knowledge and capability. The study findings reported highly positive changes in students' knowledge, skills, saving and spending habits, money management actions, and handling of credit cards. Sixty percent of the total students were even willing to work with family members, friends, and colleagues to help them achieve financial goals through better money management.

Financial literacy and education is a broad topic. Many researchers over the years have developed their own definitions or meanings for financial literacy. However, financial literacy, financial knowledge, and financial education are used interchangeably. According to Garman & Forgue (2014); Thaden & Rookey (2005) financial literacy is the knowledge of facts, concepts, principles, and technological tools that are fundamental to being smart about money and making sound financial decisions. Financial literacy improves the ability to handle day-to-day financial

matters and helps people avoid consequences of poor financial decisions that could take years to overcome. Fox, Bartholomae, & Lee (2005) defined financial literacy as one's understanding and knowledge of financial concepts. In the study by UNCFSP (2012, p. 2-3), defined financial education as one of the five factors of financial capability, including: Being able to cover monthly expenses with income, Tracking spending, Planning ahead and saving for the future, Selecting and managing financial products and services, and Gaining and exercising financial knowledge.

Financial literacy and education (FLE) now have become more important than ever, as collegiate youths have been taking increasingly higher financial responsibilities and striving for financial independence at earlier ages. The financial decisions students make in college have a great influence on their academic performance and financial situation after college. In 2003, Lyons found that one in three students reported that his/her financial situation was likely or somewhat likely to affect the ability to complete a college degree. Chen & Volpe (1998) mentioned that African-American (AA) students are the least financially literate among all ethnic groups. According to UNCFSP (2012, p. 18), it might be more effective to focus on students' financial capacity, defined as their ability to effectively manage financial resources and the five core competencies (Earning, Spending, Saving and interest, Borrowing, and Protecting against risk) identified by the U.S. Department of Treasury's national strategy for financial literacy. With these goals in mind, Tuskegee University Cooperative Extension (TUCE) began its Skegee Money \$mart (SM\$) initiative.

## **Objective**

The major objectives of the study were to assess the training needs of collegiate youths regarding financial literacy and educate them according to their preference to strengthen their financial capability.

## **Literature Review**

Borden, Lee, Serido, & Collins (2008) reported a positive association between financial knowledge and responsible money management behavior. In 2012, UNCFSP illustrated that 31% of historically black colleges and universities (HBCUs) students do not follow a financial plan, 45.4% spend more than their income, and 55.6% always, usually or sometimes buy things even when they cannot afford to. Several studies Gutter, Garrison, & Copur (2010); Lyons, Scherpf, & Roberts (2006) college marks the beginning of financial independence from parents and greater financial responsibilities for making sound financial decisions for most young adults. Norvilitis et al. (2006) stated that today's youth are making financial mistakes by spending too much and saving too little. Similarly, Mandell & Klein (2009) reported that due to lack of financial education, youth, young adults, and adults alike make poor financial decisions. In 2008, Mundy believed that "financial education can help provide students with the building blocks which they will need to make sound financial decisions throughout their lives" (p. 59). Many college students lack the knowledge needed to manage their money. Unfortunately, they are also generating enormous amounts of debt, particularly with credit cards and student loans while attending school (Borden, Lee, Serido & Collins, 2008). In 2008, The President's Advisory Council on Financial Literacy was formed. Representatives from business, the clergy, and the non-profit sector including Jump\$tart and several of its partners collaborated to work on improving financial literacy among Americans. The Council set out to "better educate people

from all walks of life about matters pertaining to their finances and their future” (President Bush, 2008, p. 1). Effective financial education is not just about teaching students about financial products or performing financial calculations. It also involves “teaching essential skills and concepts they will need to make major financial choices” (Bernanke, 2012, p. 1).

### **Method**

Tuskegee University Cooperative Extension (TUCE) launched a financial literacy and education (FLE) program – Skegee Money \$mart (SM\$). The SM\$ is a need-based, demand-driven FLE program introduced to educate its primary clientele [collegiate youths, school students (high, middle, and elementary), and limited resources families including senior citizens and veterans] with a major objective to strengthen their financial knowledge, skills, and overall financial capability. Considering the needs for financial literacy and education recommended by UNCFSP (2012, p. 18); The President’s Advisory Council on Financial Literacy (2008) the SM\$ was launched in the summer of 2015. However, this study was designed particularly for the collegiate youths. Firstly, a mini-survey on FLE needs and preferences of college students was conducted. Secondly, a structured curricula was developed as per the results of the survey, and thirdly pedagogy was implemented as per the flexible time of the college students. Besides the needs and preference reported by the college students, the SM\$ reflected the five core competencies illustrated by UNCFSP (2012, p. 2-3 and 18). The SM\$ applied the following tools to achieve its intended objectives: (i) Survey: An in-house survey was carried out using a structured questionnaire to assess students’ needs and preferences, and the level of knowledge on financial literacy. ii) Educational materials were developed and resource personnel were identified. iii) Participatory workshops: Emphasis was in a participatory workshop to make the



teaching and learning more interactive and productive. iv) Online tools: Various online tools such as myRA.gov 'money calculators' were used for hands-on exercise in order for the students to understand and calculate instantly how money grows over time. v) Quick fact sheet: A mini-project was introduced to strengthen students' research and review habits on exploring and presenting financial management information in a quick fact sheet. vi) Poster contest: An SM\$ poster contest was organized to encourage collegiate youths in 'saving money for college education,' attaching modest cash prizes. vii) Coin bank: A coin bank was introduced to encourage students to develop saving habits for rainy days. Students' saving habits were monitored through a structured recording format. viii) Counseling and coaching: Students greatly utilized one-to-one and group counseling and coaching services. The majority of the students (69%) used this opportunity during the sessions, and 35% still continue networking with financial educators. ix) SM\$ Booths: SM\$ booths were set up at various events on campus such as the AgriFair and Carnival, Extension Day, and National AgriDay to make aware and inform all students about the SM\$ program. x) Impact assessment: Baseline survey, Pre- and post-tests, and a case study were carried out to assess the impact of the program. xi) Data analysis: A descriptive analysis was carried out using a Statistical Package for the Social Sciences (SPSS-version 23).

## **Results and Discussion**

An in-person mini-survey was conducted with 57 collegiate youths (53% female and 47% male) at the beginning of the program. The primary target of the SM\$ was the freshmen. The students consisted of 46% freshmen followed by 14% sophomore, 11% junior, 19% senior, and 10% graduate students. The students in the program were selected randomly. The highest

percentage of freshmen participation was in line with the intended objective of the SM\$ program and consistent with the findings by Murphy (2005), who opined that freshman year is a particularly hazardous time financially of the four-year college span. A similar finding was reported by UNCFSP (2012), freshman year is a financially hazardous time because it is the first time many freshmen experience great amounts of freedom in terms of how they spend their time, focus group participants described freshman year as a dangerous time. The combination of free time, reduced parental monitoring, and increase of outside influence(s) can allow freshmen to get into financial trouble, especially through overspending. Additionally, young adults who are beginning to make more complex financial decisions often find themselves in a downward financial spiral of debt. The study further explained that they will not easily repay their accumulated debt while in college or even after they have gained fulltime employment in three workplaces.

### **Status Quo of Financial Knowledge**

The analyzed data reveal that 60% of the students (n=57) did not have any formal/informal training at high schools regarding FLE. This finding was consistent with the findings by UNCFSP (2012), highlighted a huge gap in financial literacy among high school and college students mostly at HBCUs.

### **Financial Education Opportunities**

The survey data confirmed that 65% of the total students (n=57) have not participated in any FLE course in college other than the SM\$. This finding supports Sherraden, Johnson, Guo, & Elliott, (2011) who suggested that youth financial literacy is lacking in many colleges and universities. Correspondingly, the study carried out by UNCFSP (2012), suggested that all colleges and universities should consider offering financial management courses as their

responsibility to create a campus environment that encourages optimal financial decision-making by the students.

### **Students' Interest in Financial Education**

The results disclosed that 59% (41% very interested and 18% somewhat interested) of the students (n=57) were interested in enhancing their knowledge and skills about FLE. A similar finding was reported by UNCFSP (2012), stating 88.7% (2,026) of HBCU students agreed or strongly agreed that they want to learn about personal finance while they are in college. The study further stated that 73.4% (1,677) of the participants believed that HBCUs have a responsibility to provide their students a required personal finance course and 82.3% (1,879) believed that HBCUs have a responsibility to provide students an optional personal finance course.

### **Purpose to Participate in Financial Education**

Of the stated most important purposes, 88% of the students (n=57) responded that increasing knowledge about FLE was the first and foremost reason to participate in the SM\$ program.

### **Willingness to Participate in a Financial Education Program**

The results illustrated that 85% (60% definitely yes and 25% yes) of the students (n=57) were willing to participate in a SM\$ program. These findings are consistent with the findings reported by UNCFSP (2012), that 76.57% (1,748) HBCU students want their institutions to provide them high-quality financial education. They believe that HBCUs have an obligation to help their students make good financial decisions. The willingness of the students in this finding was supported by UNCFSP (2012), study that HBCU students, faculty members, and

administrators agreed that HBCUs should provide some level of effective financial education for their students.

### **Financial Needs Assessment**

Of the given long list of the potential topics to be covered in the FLE program, the participating students in the survey were asked to select the 10 most important topics in priority order considering their own needs, interests, financial knowledge, skills, and personal environment. Of the 10 major topics, 86% chose money management, followed by pay yourself first and renting, buying, borrowing as the second and third most important topics by 79% of the students. Similarly, paying for college & car and credit management were the fourth and the fifth prioritized topics by 75% and 74% students respectively. These findings have a strong correlation with the findings presented by Schwab (2011), which state that only one-third (32%) of college students understand credit-card interest and fees. The other topics of interest are presented in order (Table 1).

Table 1: *Topics of Interest in the Financial Literacy and Education Program*

### **Outputs**

Altogether, a total of 17 workshops and one money-saving poster contest were organized on campus, which 229 students attended. A total of 52 coin banks were distributed. Students benefitted greatly by interacting with educators and peers during these 18 occasions.

### **Immediate Outcomes**

i) All respondents (100%) increased their financial literacy and strengthened their knowledge, attitudes, skills, and aspirations (KASA) regarding the 10 prioritized topics (Table 1). ii) Seventy-five percentage of the respondents (n=57) prepared their first ever savings plan (weekly, monthly, and annual). iii) All recipients of the coin banks (n=52) started saving money,

which they had never done before. The students collectively set a goal for saving \$12,480.00/year; each person was determined to plug money potholes, cut down expenses (soda, coffee, dining out) and find disappearing dollars by introducing a spending plan. On an average, they planned to save aside \$5.00/week to put into the coin bank project. iv) They transferred the savings from the coin bank to the bank account (saving) each month. The coin bank project seemed to have a great impact on developing the saving habits of the students. v) The participants initiated savings (coin bank) for unforeseen emergencies and an unwavering commitment to continue the practice. Similarly, 80% of the students (n=57) developed a monthly spending plan and challenged themselves to maintain a positive balance. Eighty-five percent of the total participants enlarged their FLE learning network through peers and financial educators. All of the students (n=57) utilized the given online financial tools and educational materials, 90% of them strengthened their financial capabilities, and all participants (100%) found the needs versus wants approach very useful to plug the money holes. A majority of the students (60%) shared their willingness to pass the acquired KASA on to family members, friends, colleagues, and neighbors. According to them, doing so would keep improving their financial capability, networking skills, and leadership qualities.

### **Summary**

A majority of the students highlighted the needs for financial literacy and education and their willingness to participate in the program. The SM\$ program would certainly bridge the knowledge gap of >60% students who never had similar program at high schools nor in college thus far. Available literature and the findings of the study reveal that financial literacy has become increasingly important for the college students as they have to make many decisions

pertaining to the personal finance management at early ages that might impact their whole life. The significance of the financial literacy and education program seems more critical for the freshmen as a majority of them come out of their home and parental guidance for the first time. Additionally, the findings of the study may benefit all stake holders (financial educators/coaches, college students, counselors, financial planners, policy makers in financial aid offices) working at higher academic institutions.

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**Table 1: Topics of Interest in the Financial Literacy and Education Program**

Financial topics	Response	
	Frequency (number)	(%)
1. Budgeting (spending, saving, tracking)	49	86
2. Pay yourself first	45	79
3. Renting, buying, and borrowing	45	79
4. Paying for college & car	43	75
5. Credit card, and debt management	42	74
6. Increasing earning power	40	70
7. Financial risk management	38	67
8. Investing/saving	36	63
9. Financial services	35	61
10. Life/auto/health insurance	33	58

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## **BEST PRACTICES**

### **"Preparing for Caregiving: A Collaboration between AARP, FCS Extension and Social Work"**

Amy F. Kostelic and Natalie D. Pope

More than 34 million Americans provide unpaid care to an older person, yet minimal opportunities exist to prepare individuals and families to plan ahead for caregiving. To address this need, Cooperative Extension Services collaborated with social work faculty and a state AARP office to translate and disseminate AARP's program, Prepare to Care, a program designed to help families discuss and create caregiving plans. This project evaluated the effectiveness and feasibility of disseminating the program through extension services. Data from 16 agents and 135 participants suggest the program increased people's preparedness for caregiving and knowledge of aging services ( $p < .05$ ).

Caregiving is one of the most important roles a person will ever hold over the course of their life. Understanding that many people do not plan for caregiving or often believe that a caregiving crisis will happen to them, AARP created a five-step guide for families. Prepare to Care: A Resource Guide for Families, emphasizes the importance of planning ahead, rather than waiting for a crisis, to optimize both individual and family preparedness regarding mental, physical, and financial care of individuals with long-term care needs. Conversations about care

can be met with resistance; the resource guide includes tips for starting caregiving conversations and provides information and checklists about organizing important documents, assessing need, and locating resources. The information is simple and straightforward: (1) start the conversation; (2) form your team; (3) make a plan; (4) find support; and (5) care for yourself (AARP, 2012).

Based on a declining volunteer base in their volunteer train-the-trainer model to disseminate the information and with increasing challenges to reach rural areas, AARP recognized an opportunity for the program's message to access a wider audience. AARP thus granted permission to Family Consumer Sciences (FCS) Extension Services and collaborating researchers from the College of Social Work to evaluate the effectiveness and feasibility of the program, translated and disseminated through the state extension services. In turn, age-related programming, in particular those that highlight caregiving, are increasing in demand throughout Kentucky as counties grow older and middle age adults struggle with being members of the sandwich generation. Like so many programs related to caregiving, Kentucky FSC has existing resources that highlight caregiver health, but none that provide information on caregiver preparation and/or training, making the collaboration with AARP and the College of Social Work a desirable partnership.

### **Objective**

By 2029, all baby boomers will be at least 65 years old as will more than 20% of the U.S. population (Colby & Ortman, 2015). The influence of this group will have increasing implications for not only researchers, policy makers and health-care providers, but for families who will need to care for their aging relatives. As America ages, extension agents are becoming increasingly aware of ways in which aging programs can empower older adults and their families

(Chen, 2001). Furthermore, agents recognized how boomers and their families are a prime target population to present caregiving preparation programs, as information can help them with their aging parents today and with their own health decisions in the future.

Chronic illness and disability rates increase with age and are associated with the need for caregiving. An estimated 80% of older adults live with at least one chronic disease, and 77% have at least two (National Council on Aging [NCOA], 2018). There is also a growing prevalence of Alzheimer's disease (AD) and other dementias. Unpaid caregivers—families, friends, neighbors, provide over 80% of the necessary assistance for older adults to be safe and half of these provide help to someone with dementia (Alzheimer's Association, 2018).

The typical family caregiver is a middle-aged baby boomer who takes care of both her children and aging parents (Family Caregiver Alliance, 2016). Disability, chronic disease and dementia can take a devastating toll on caregivers financially, physically and emotionally (Alzheimer's Association, 2018; National Alliance on Caregiving [NAC] & AARP, 2015). When families plan for care needs in later life, however, family members often experience less stress because they have time to prepare for the caregiving role and are relieved from the burden of being the sole decision maker (Pinquart, Sörensen, & Peak, 2004; Pinquart, & Sörensen, 2002; USDHHS, n.d.). While discussing the future needs of aging parents will not completely shield families from negative outcomes, AARP advocates for adult children and families to discuss caregiving prior to parental dependency. If families do not plan for caregiving, the odds that caregiving decisions will be made reactively and under pressure increase.

## **Purpose of the Study**

Given that many people do not plan for caregiving or believe that a caregiving crisis will occur, AARP created a program designed to help families discuss and create a caregiving plan. Kentucky AARP granted permission to FCS Extension and collaborating researchers to evaluate the effectiveness and feasibility of the program within extension services using a train-the-trainer model. The project goals included: (1) supplement the existing AARP program with extension materials including a facilitator guide, activities and evaluation tool; (2) train extension agents to educate the public about caregiver preparation; and (3) evaluate program effectiveness using a train-the-trainer approach.

## **Methods/Procedures**

FCS Extension collaborated with a state AARP office and a social work faculty member from a land-grant institution. Over the course of a year, existing AARP Prepare to Care presentations slides were adapted to include curriculum pieces consistent with extension programming, such as a script, discussion questions and activities. A facilitator guide was also created for agent's use when preparing and delivering the program. Sign-in rosters, marketing materials, four supplemental extension publications that can be distributed as handouts and evaluation materials were also developed for the final extension curriculum. All materials underwent an internal and external blind review within the university's formal extension review system.

As final curriculum revisions were made, a recruitment email, seeking 15 total agents, was sent to every FCS county extension agent across the state via a county agent listserv. Agents were informed that only the first five agents from rural, suburban and urban counties (as



specified by the USDA) who responded would be invited to participate in the pilot project for a total of 15 agents. In February 2017, the recruited agents attended one of two mandatory half day face-to-face training sessions strategically located at sites within a few hours driving distance from agent's respective counties. Trainings focused on teaching agents the Prepare to Care curriculum as well as recruitment, consent and evaluation procedures. Agents were tasked to recruit and deliver the program to 15 participants over the course of three months. They could teach the program as many times as needed to reach 15 participants. Agents recruited participants as they would for any other extension program, using word-of-mouth advertising, recruitment flyers and announcements in newsletters and/or local media sources. Agents also agreed to participate in an agent focus group to provide researchers with feedback upon program completion.

Between March and June 2017, 16 Kentucky cooperative extension agents delivered the Prepare to Care program to community members in their respective 15 counties (two agents were involved in the final delivery in one of the counties). Each program lasted 90 minutes. The lesson started with a battery of assessments that took participants approximately 10-15 minutes to complete. The Prepare to Care lesson, which included the AARP adapted PowerPoint presentation and supplemental script/discussion/activities lasted about 45-60 minutes. Agents distributed and collected follow-up evaluations upon program completion. Post evaluation evaluations took participants approximately 10-15 minutes to complete. Surveys from one agent were lost in the mail and were not included in the final sample. Data in this paper represents information from 14 counties, 15 agents, and 135 program participants.

Program effectiveness was measured through several quantitative evaluations selected from standardized caregiver and preparation for caregiving survey instruments (Archbold,

Stewart, Greenlick, & Harvath, 1990; Fowler, 2006; Sörensen & Pinquart, 2001) (see Table1). Demographic information was obtained by asking questions about age, gender, race, ethnicity, income, education, and marital status. Perceived preparation for caregiving was measured using the eight-item Preparedness for Caregiving Scale (PCS) (Archbold et al., 1990;  $\alpha = .94$ ). Possible scores range from 0 to 32 with higher scores indicating more perceived preparation.

Two subscales from Sörensen and Pinquart's (2001) measure of Preparation for Future Care Needs (PFCN) were used with items slightly reworded for completion by adult children or other caregivers. The three-item "becoming aware" subscale included statements such as: "I pay close attention to how my family member or friend's physical & mental capabilities are changing to assess whether he/she may soon need help or care" ( $\alpha = .78$ ). The three-item "gathering information" subscale included such statements as: "I have gathered information about options for care by talking to friends, family, or health care professionals" ( $\alpha = .81$ ). Both PFCN subscales used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Knowledge of Aging Services was measured using a seven-item Likert scale (1 = not at all true of me; 5 = completely true of me) with items such as "I am well-informed about the federal programs for seniors, including Social Security, Medicare, and Medicaid" ( $\alpha = .93$ ) (Sörensen & Pinquart, 2001). Possible scores range from 7 to 35. An eight-item scale developed by Fowler (2006) was used to measure Discussion of Future Care Needs. This instrument asks participants to report on how much they had discussed with their parent/relative within a range of issues pertaining to future care needs.

## Results

Overall, data from the 135 individuals who attended the Prepare to Care program suggest that the program increased people's confidence to discuss care plans with family and significant others. The final sample included mostly women ( $n = 104$ ; 78%) and ranged in age from 21 to 87 ( $M = 62$ ). Most of the sample was White (75%) and had a varied educational background ranging from a high school diploma or GED to a graduate degree. Financially, the majority of participants reported having "enough [money] with a little left over" (49%). Table 2 in the Appendix summarizes additional participant demographic information.

Prior to the Prepare to Care program, mean scores on the Preparedness for Caregiving scale (Archbold et al., 1990) were 23.69 ( $SD = 6.68$ ) and 27.17 ( $SD = 6.28$ ) following the program. Scores on the measure increased between pre- and post-program and this difference was statistically significant ( $p < .05$ ; see Table 3), suggesting that participants felt more prepared for caregiving as a result of the Prepare to Care program. Scores on the Discussion of Future Care needs measure (Fowler, 2006) were taken at one time point – before the program; participants' mean score was 21.21 ( $SD = 9.4$ ). Knowledge of aging services increased ( $M = 20.7$  compared to  $M = 25.0$ ) following the Prepare to Care program and this increase was statistically significant ( $p < .05$ ; see Table 3). Participants were asked at one time point (before the program) about their awareness of the need to plan and steps they had taken to gather information about care needs in late life. Scores were significantly skewed and kurtotic which suggests that participants overestimated their preparations for future care.

Participants also responded to additional qualitative questions that allowed them to comment about lesson satisfaction, what they learned, and what they planned to do because of the program. In particular, participants expressed how useful they found the AARP Prepare to

Care workbooks provided and published by AARP and distributed by agents. This workbook, available as a pdf on the AARP website and in bounded form and available for ordering directly from AARP, free of charge, proved to be a practical resource for participants to take home. Participants also reported wanting more specific information about arranging for a living will and power of attorney, dealing with family members who deny that relatives are unable to live independently and need support, and paying for long term care services.

Upon program completion, 10 of the 15 participating extension agents attended one of three focus groups on the feasibility and sustainability of the program. Two face-to-face and one online focus group were scheduled to help accommodate most participants. Each focus group lasted between 40-60 minutes. Agent comments supported the value of the program and need to train remaining agents across the state (a statewide agent training was implemented in May 2018 as a result). Agents also provided helpful insight into recruitment challenges that many extension agents and programs face, especially those related to aging because the topic of aging tends to make people “uncomfortable”. Lengthy discussion highlighted the importance of targeting various audiences outside of the aging community, such as chambers of commerce, health departments, libraries, churches, extension homemaker groups, farmers, rehabilitation facilities, 4-H and schools. Agents also shed light on their experiences with a growing number of young adult caregivers --about a 1/3, according to Pew Research Center & California Health Care Foundation, (2013). Agents reflected that even children and adolescents and younger adults, such as those being raised by their grandparents, could benefit from programs on caregiver preparation. Because caregiving affects everyone, everyone needs to prepare. Extension sits in a unique position across the state and can collaborate with agencies, such as AARP, to offer support.

## Discussion

This paper describes a project involving collaboration between extension, AARP, and social work. Trends such as families having fewer children, increased divorce rates, and changes in health care delivery, like early hospital discharge, make it increasingly necessary for families to plan for the likelihood of late life disability. This project reinforces how families and middle-aged adults can benefit from thinking about and making plans for aging given that early planning enables people to have more options and more control over their options (Schroeder & Osteen, 2018). Through the use of AARP's Prepare to Care workbook and PowerPoint presentation along with the FCS supplemental curriculum, FCS county agents can enhance community partnerships and teach community members to plan ahead for caregiving by highlighting the four steps in the process of preparing for future care needs: (a) becoming aware, (b) gathering information, (c) deciding on preferences, and (d) making concrete plans (Sörensen & Pinquart, 2001). Results of this pilot study support the strength, need and effectiveness of this program by demonstrating that agents can be a useful conduit to communicate and disseminate information about planning for care needs in late life. Findings from Fowler's (2006) Discussion of Future Care Needs measure indicated that program participants' scores ( $M=21.21$ ;  $SD = 9.4$ ) were comparable to other studies (Fowler & Fisher, 2009) where adult children's mean score was 21.17 ( $SD = 9.32$ ) and parents' was 18.08 ( $SD = 8.91$ ). Participation in Prepare to Care increased participants' perceived preparedness for caregiving and their knowledge of aging services.

Despite agents' perspectives that the program offers valuable information and supports the mission of strengthening families in the community, agents faced difficulties in recruiting the recommended number of participants (15 participants for each agent) and concern about lesson sustainability. When asked to further discuss these challenges, they commented specifically

about the barriers of offering aging-related curriculum. Although many communities recognize caregiving as an important topic—and community members even make requests for programs on caregiving--agents shared that their participants would rather keep age-related issues at a distance than attend a program and that would “let aging in.” As a program developer and researcher, this finding is significant because it reminds us that we must educate the public, in addition to extension agents and other volunteer leaders, about the implications of investing in aging-related research and education. Given the trends of longer life expectancies associated with higher disability rates (National Institutes of Health, 2010), planning for the possibility of long-term care is an increasingly important concern for the health and well-being of future older adults. Aging is unavoidable; it happens to all of us and by anticipating aging-related care needs ahead of a crisis, we can learn to take care of ourselves throughout the lifespan and enter old age healthy, and prepared.

One way we can support agents is to provide lessons and education on ageism, as well as on local, state and national demographics so that they recognize the growing numbers of older adults in their own backyard. Extension administrators must also be made aware of the impact that Extension can make on this population and the individuals and families who are affected. If we can help the agents feel more comfortable with aging curriculum, make the curriculum user-friendly and “fun” with both educational and social components, prioritize community partnerships within the aging community and promote administrators to support/require aging programs, agents will be more apt to teach it.

## **Conclusion**

Prepare to Care is a one-time interactive caregiver preparation program aimed at helping families prepare for caregiving and end-of-life decision making. Prepare to Care provides information to family caregivers and potential family caregivers to empower families and older adults and contribute to overall quality of care. With permission from Kentucky AARP, researchers examined ways in which the program is effective in specifically helping community members plan for future care (AARP, 2012). As predicted, Prepare to Care helped increase participants' perceived preparedness for caregiving, as well as their knowledge of aging services.

Partnerships between extension, university researchers and local agencies are a good interdisciplinary fit. All three entities take part in community education and provide direct services to older adults. FCS agents and social workers bring different skills and strengths to a project. Social workers have expertise in assessment, intervention, case management, and advocacy. Extension agents are the eyes and ears in the counties and they are skilled in program development, training, and community education, making extension a catalyst that can establish multidisciplinary partnerships to better address caregiving preparation needs of the older adults and their families.

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**Table 1: Study Instrumentation**

<b>Construct</b>	<b>Instrument: Collected before and after the program</b>
<b>Outcome Measures</b>	
Self-reported preparation for caregiving	<ul style="list-style-type: none"><li>• 8 item <i>Preparedness for Caregiving Scale</i> (PCS) (Archbold et al., 1990; <math>\alpha = .94</math>)</li></ul>
Self-reported awareness of future care needs	<ul style="list-style-type: none"><li>• 3 item “becoming aware” subscale of Sörensen and Pinquart’s (2001) <i>Preparation for Future Care Needs</i> (PFCN) measure (<math>\alpha = .78</math>)</li></ul>
Self-reported gathering information about future care	<ul style="list-style-type: none"><li>• 3 item “gathering information” subscale of Sörensen and Pinquart’s (2001) <i>Preparation for Future Care Needs</i> (PFCN) measure (<math>\alpha = .81</math>)</li></ul>
Self-reported knowledge of aging services	<ul style="list-style-type: none"><li>• 7 item Knowledge of Aging Services scale (Sörensen &amp; Pinquart, 2001; <math>\alpha = .93</math>)</li></ul>
<b>Descriptive Measures (collected only before the program)</b>	
Demographics	<ul style="list-style-type: none"><li>• Information including participant age, gender, ethnicity, education, and financial status.</li></ul>

**Table 2: Demographic Characteristics of the Sample**

Characteristic	N=135	%
Gender		
Female	104	78%
Male	29	22%
Age	Range: 21 87 years old Mean: 62	
Ethnicity		
White	32	75%
Black	24	24%
Biracial	1	>1%
Marital Status		
Married	76	56%
Single	25	19%
Divorced	18	13%
Widowed	11	8%
Separated	4	3%
Engaged	1	1%
Region		
Urban	57	42%
Suburban	38	28%
Rural	40	30%
Education		
High School Diploma or GED	30	22%
Some college	34	25%
Associate's Degree	13	10%
Bachelor's Degree	18	13%
Graduate Degree	29	22%
Financial Status		
Cannot make ends meet	8	6%
Just enough	36	27%
Enough with a little left over	66	49%
Always have money left over	24	18%

**Table 3: Descriptive Statistics and t-test Results for Preparation for Caregiving and Knowledge of Aging Services**

Outcome	<u>Before Program</u>		<u>After Program</u>		n	95% CI for Mean Difference	r	t	df
	M	SD	M	SD					
Caregiving Preparation	23.69	6.68	27.17	6.28	118	-4.51, -2.45	.62*	-6.70*	117
Knowledge of Aging Services	20.7	8.1	25.0	6.4	109	-5.43, -3.15	.68*	-7.5*	108

\*  $p < .05$

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## **BEST PRACTICES**

### **Elementary School Gardens: Survey Findings Identifying Barriers and Opportunities for Garden-based Learning**

Diane Smith, Christina Hansen and Tessa Bryant

Nutrition initiatives such as school gardens are essential to improve health, nutritional status, and academic performance of our nation's children and are a recommended part of comprehensive, integrated nutrition programs from preschool through high school. In Skagit County, WA, eleven of the twenty-five elementary schools (44%) in the county report having a school garden.

**Methods.** Elementary schools (n=25) were surveyed to identify opportunities and barriers to garden education.

**Results.** A description of how gardens are integrated into core instruction and how gardens are sustained over time are presented in this paper. The findings of this survey identified a need for standards-based curricula materials and teacher training about gardening and nutrition. Family and Consumer Science professionals can play a role in supporting school gardens and nutrition education through teacher training and assistance in identifying garden-based curriculum.

School gardens can be beneficial both for academic achievement and address health concerns through nutrition education (Diaz, Warner, & Webb, 2018). Garden-based learning (GBL) is attributed to improvement in student academic achievement (Hughes, DiClaudio, & Savoca, 2013), food consumption habits, (Evans, Ranjit, Fair, Jennings, & Warren, 2016) and personal and social well-being (Williams & Dixon, 2013). Increased attention on getting American school children outside and growing food is illustrated by the increased number of elementary school gardens—from 11.4% in 2006-07 to 26.6% in the 2012-13 school year (Turner, Sandoval, & Chaloupka, 2014; Desmond, Grieshop, & Subramanian, 2004, National Garden Association, 2014).

School gardens and garden-based learning have roots in 18th century Europe followed by several periods of intense American activity throughout the 20th century (Birky, 2009). Initially introduced to support the “Nature Study” movement, school gardens took on the role of contributing to food production during WWI and then the Victory gardens of WWII (Duncan, Collins, Fuhrman, Knauft, & Berle, 2016).

In the recent joint position paper “Comprehensive Nutrition Programs and Services in Schools” from the Academy for Nutrition and Dietetics, Society for Nutrition Education and Behavior, and School Nutrition Association (Hayes, Contento, & Weekly, 2018), nutrition initiatives including farm to school and school gardens are considered essential to improve health, nutritional status, and academic performance of our nation’s children and are recommended as part of a comprehensive, integrated nutrition programming from preschool through high school.

## **Purpose and Objectives**

Interest in school gardens has not eluded the schools in Skagit County, WA with 11 of the 25 elementary schools (44%) in the county report having a school garden. To better understand how school gardens are used in education and identify barriers and opportunities to GBL, a survey of gardens in elementary schools was conducted. This paper describes how gardens are integrated into core instruction and how gardens are sustained over time.

## **Methodology**

**Survey Development and Distribution.** Every elementary school in the county (n=25) was contacted by phone to determine if the school had a garden. The person with the most knowledge of the school garden was identified. For purposes of this study, a garden was identified as plants grown in the ground outdoors, either in raised beds, in pots, or in greenhouses, and thus, distinctive from an indoor, classroom-based garden.

Two unique self-administered questionnaires were developed for (1) schools with a garden, and (2) schools without a garden. The survey questions reflected school garden concerns consistently represented in other survey tools (Azuma, Horan, & Gottlieb, 2001; Hendrix & Fisher, 2014) beyond which, the questionnaire was not further validated. For schools that reported the presence of a garden, a self-administered survey was distributed by email to the person identified as having the most knowledge of the school garden. A request to return the survey within seven days was included in the email. A repeat request was made if the survey was not returned, with a third and fourth request made on day 14 and day 21. If a school did not have a garden, a self-administered survey was electronically mailed to the school principal or office



staff for completion. The study was reviewed and approved for exemption status by Washington State University IRB before the study.

Survey Tool. The survey questionnaire completed by schools with gardens was divided into 6 sections, composed of a total of 33 items that were either categorical yes-or-no items or write-in responses in the following five areas: (1) leadership; (2) student involvement, (3) community support, (4) lessons/curricula; and (5) garden characteristics. An additional item was provided at the end of the questionnaire for any open, unsolicited comments by teachers. See appendix A for Questionnaire No. 1.

The questionnaire completed by schools without a garden was divided into three sections, composed of five items that were categorical yes-or-no items or write-in response in the following two areas about gardens in schools: 1) interest in establishing a garden, and 2) barriers to establishing a garden. See Appendix B for Questionnaire No. 2.

## **Results and Findings**

The presence of school gardens at Skagit County elementary schools is higher than the national average, 44% compared to 27%. Table 1 illustrates the response rate for schools surveyed. In total, 19 of the 25 schools returned completed surveys, of which nine were from schools with gardens and ten from schools without gardens. This represents a 76% return rate, overall.

Schools with Gardens. Nine of the 11 schools with gardens responded to the survey (82% response rate), which focused on garden leadership and support (see Table 2). Teachers were the primary faculty taking leadership of the school gardens, with support from principals, followed by staff members that guide after-school garden club activities. One school reported that district

maintenance personnel had contributed to the garden establishment by building raised beds. Science departments were most frequently the responsible academic subject for ongoing supervision of the garden, followed by school garden clubs, Farm to School (FTS) coordinators, and Parent-Teacher Associations.

Garden access by classes varied widely, ranging from three times per week to once a month. Students grew fruits, vegetables, herbs, flowers, and trees. Three gardens reported using on-site composting. Six schools reported most use by after-school garden clubs, two responded that the garden was open at recess to all students, and one school identified that the garden was utilized solely by the speech-language pathologist and her students, suggesting very limited utilization and access.

Schools named parents, staff, students, volunteers, maintenance department and civic groups as those involved in initial garden building. Most of schools reported that the gardens were later sustained by grants, donations (cash and in-kind), and out of pocket. Only one school reported community assistance with ongoing garden expenses and needs.

School gardens in Skagit County elementary schools have been in existence from just a few weeks to a few years. The cost of building and maintaining the gardens varied enormously, ranging from \$250-\$5,000. A decrease in garden care and maintenance during the summer months was reported. Some teachers indicated they visited occasionally, and at one school specifically, custodial staff watered and tended the garden during summer hours; however, there was predominantly little regular care for school gardens during the summer months. In response to a question regarding the end-use of excess garden produce, no schools reported harvesting food from the garden for home preparation or farmers market sales, though interest in such activities was expressed.

Schools without gardens. For schools that self-reported the absence of a garden, a series of short questions regarding general interest and perceived barriers to garden establishment were asked. Table 3 lists the identified benefits and perceived barriers for gardens reported by schools without gardens.

Half of the schools, 5 out of 10, were interested in establishing a garden for three identified purposes: (1) education in science topics, (2) knowledge of healthful foods, and (3) food access benefits. Specifically, schools identified the experiential learning available via gardens as both complementary and supplementary to science and nutrition subjects, where students can examine in detail plant growth, life cycle, and the role of decomposers.

Additionally, respondents remarked that GBL learning of science topics facilitates student learning in data analysis and interpretation skills. In this way, they believe gardens are a link to, and key element of, applied science lessons and development of critical thinking skills.

The principal health benefit perceived by schools is the opportunity to increase knowledge of healthful foods and encourage produce consumption. Schools identified the desire to offer students fruit and vegetable cultivation experience and tangible linkages with the SNAP-Ed nutrition education program (U.S. Department Agriculture, 2017). Similarly, the third beneficial outcome perceived by schools related to food access. Respondents noted their inclination to see students cultivate and harvest sufficient produce for sale at local farmers markets, for distribution to area food banks and/or to supplement weekend backpack programs that provide food security to school-age kids.

Curricula. Table 4 details the curricula used for GBL in Skagit County elementary schools. Five of nine responders reported that they do not use a curriculum. Three schools reported that they use the School-Based Garden Education Program (Miles, Riddle, &

Atterberry, 2014), one school uses the USDA Dig In! ‘Standards-Based Curriculum’ (U. S. Department of Agriculture, Food and Nutrition Services, 2013) and one utilizes the online resources available through the Edible Schoolyard website (nd). Two schools utilize a combination of curricula that includes 4H materials and lessons from teacher-owned books.

The school gardens surveyed listed various learning objectives, including science, health and nutrition, and others not drawing from any specific curriculum. Though some had discussed nutrition about fruits and vegetables, this research is consistent with the findings of Graham & Zidenberg-Cherr (2005), identifying a need for standards-based curricula materials and teacher training about gardening and nutrition. In response to a question about food access and food system-related instructional content, none of the schools surveyed currently use their garden as an alternative food access point or as a place to discuss the food system. Skagit County’s childhood food insecurity rate was 22.7 % (Feeding America, 2015) fueling an interest in school gardens as a food resource for low-income children and families with children. Though this food security role by Skagit County school gardens is an unrealized potential, it holds promise as an avenue to more fully meet the food and nutrition needs of school-aged children

### **Limitations**

A limitation of this study was the incomplete responses from schools with gardens, possibly due to the length of the survey, which took upwards to 20 minutes for some responders.

### **Summary and Discussion**

Garden organization, budget, structure, and sustainability were the key challenges identified. Challenges to the organization include garden maintenance and use, as well as class

involvement. Structural challenges include curricular coordination and defining the overall garden program objectives. These findings suggest that for a school garden to be a successful educational asset, there needs to be an organized and central coordinating body that encourages school faculty and parent involvement to ensure the depth of resources necessary to sustain the garden beyond the involvement or tenure of a single champion. Importantly, school garden programs benefit when the garden and GBL objectives are integrated throughout the school and curriculum.

Time, maintenance and available space were limiting factors to a school garden. Beyond the initial establishment of a garden, schools indicated care for the garden during the off-season, especially summers, as a significant barrier. When asked what resources are necessary to maintain the garden, schools reported the necessity for seed and plants, water, tools, materials, weeding, as well as the need for a coordinator or staff person with some gardening experience or knowledge. Insufficient time during the school day for teachers to bring students to the garden for lessons, as well as limited time by teachers and staff persons to maintain the garden and to grow produce before the end of the year without the availability of a green house or hoop house, were reported obstacles.

Further, all school gardens in the survey lack budget support. Instead, garden funds are primarily resourced through donations, school garden grants from external sources, FTS grants, personal funding by teachers, in-kind donations from area businesses, select amounts from classroom budgets and PTA fund allocations or committee sponsorship.

## **Conclusion**

Valuable experiential learning is taking place in Skagit County elementary schools via school gardens, with students being afforded access to the gardens to augment science, math and other subjects; however, no universal curricula are in use, and many schools experience low utilization of garden space for intentional GBL. These findings are consistent with national studies on the benefits and barriers of school gardens (Dyment, 2005; Loftus, et al., 2017; Murakami, 2016).

Based on the survey findings, several elements are key to create and sustain successful school garden programs: (1) consistent sources of sponsorship and funding, summer care and maintenance, (2) standards-based curricula, teacher training, and supplementary materials and resources, and (3) administrative and district level support.

Nutrition initiatives such as school gardens are essential to improve health, nutritional status, and academic performance of our nation's children and are a recommended part of comprehensive, integrated nutrition programming from preschool through high school. Given the high level of interest in school gardens, the benefits of GBL in academics, health and nutrition, and social emotional wellness, and the identified need for standards-based curricula materials and teacher training about gardening and nutrition, Family and Consumer Science professionals can play a role in supporting school garden through teacher training and selection of standard-based curricula. Other possible opportunities include coordination of a Junior Master Gardener program (Texas A&M, 2016) in elementary schools, or collaboration with Future Farmers of America (FFA) programs for high school students service hours to maintain and organize elementary school gardens to ensure coordinated sustainability of garden programs, as well as to strengthen community ties and collaboration between public entities.

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**Table 1. *School Garden response***

Elementary school garden survey response = 19 of 25 (76%)

11 schools with garden	9 surveys returned
14 schools without garden	10 surveys returned

**Table 2. Responses on garden leadership, curriculum characteristics and funding for school gardens. (\*) frequency of response**

<b>Schools with Gardens n=9</b>			
<b>Leadership</b>	<b>Student Involvement</b>	<b>Lesson/Topics</b>	<b>Funding</b>
Individual teachers, primarily science instructors	Open at recess to all students (2)*	Healthy Eating (1)*	Donations
Principal support	After school garden club	Obesity Prevention (1)*	School garden grants from external sources
After-school club staff	Utilized by speech language pathologist and her students	Environment (1)*	FTS grants
District maintenance personnel helped build beds		Benefits of outdoor time (1)*	Personal funding by teacher
Farm to School coordinator		Core Curricula and STEM subjects (1)*	In-kind donations from area businesses
Garden club administrator			Select amounts from classroom budgets
PTA			PTA fund allocations committee sponsorship

**Table 3. Identified benefits and perceived barriers for gardens reported by schools without gardens.**

**SCHOOLS WITHOUT GARDENS N=10**

Identified Benefits	Perceived Barriers
Science Education – Plant Growth, Life Cycle, Critical Thinking	Time for students to come to the garden for lessons
Nutrition Education	Budget and adequate funding for staff pay
Encourage Produce Consumption	Time for staff to maintain garden
Knowledge of Healthy Foods	Available space
Fruit and Vegetable Cultivation Knowledge and Experience	Planning and building the garden
Cultivate and Harvest for Famers Market (Entrepreneurial/Business Learning)	Agreed upon location with water source and maintenance plan
Improve Food Access With Harvested Items To Food Bank Or Weekend Backpack Program	Maintenance, especially in the out of school time (summer and spring break)
	Time for produce or crops to grow for harvest before end of year (need for hoop house)
	Reliance on volunteers resulting in consistency and accountably
	Reliance of donations (inconsistent)

**Table 4. Curriculum used in Garden-based learning**

<i>Curricula used in GBL</i>	<i>Number Reported</i>
<i>USDA Dig In! Standards-Based Nutrition Education from the Ground Up</i>	1
<i>WSU School-Based Garden Education Program</i>	3
<i>No formal curriculum used</i>	5
<i>Edible School Yard Online Resources</i>	1
<i>4H Materials</i>	1
<i>Personal Garden Curriculum books</i>	1

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## **BEST PRACTICES**

### **Farmers' Market Fresh: Impact of Social Marketing on Purchase Intention and Consumption of Locally Grown Fruits and Vegetables**

Christopher T. Sneed, Karen L. Franck and Janie L. Burney

This article examines the effect of a social marketing campaign on low-income participants' intent to purchase and consume locally grown fruits and vegetables. Overall, respondents reported eating more locally grown fruits and vegetables as a result of participating in the campaign. Respondents also reported planning to purchase the locally grown produce demonstrated in the program. Strategies for marketing farmers' markets to low-income audiences and best practices for engaging low-income audiences at the markets are presented. Implications for Extension professionals working with low-income audiences and farmers' markets conclude the article.

Across the United States, from town squares to neighborhood parks, there has been an exponential increase in the number of farmers' markets. In 1994, the first year the U.S. Department of Agriculture (USDA) began tracking farmers' markets, less than 2,000 markets were in operation. Today, there are over 8,700 markets nationwide (USDA, 2018).

This increase in farmers' markets has been lauded for its potential to improve local economies while improving the health and physical well-being of consumers (Jilcott Pitts et al.,

2015). Farmers' markets are seen as important tools for addressing the obesity epidemic, especially among low-income populations, with the potential to help increase fruit and vegetable consumption and reduce health disparities in this population (Bowling, Moretti, Ringelheim, Tran, & Davison, 2016; Byker, Misyak, Shanks, & Serrano, 2013; Jillcott Pitts et al., 2015; Webber, Stephenson, & Stephenson, 2013). By increasing access to high-quality fruits and vegetables, farmers' markets can improve food environments, particularly for low-income, minority, and rural populations (Blanck, Thomson, Nebeling, & Yaroch, 2011; Giang, Karpyn, Laurison, Hillier, & Perry, 2008; Larson, Story, & Nelson, 2009; Yale University Rudd Center for Food Policy and Obesity, 2008).

A variety of barriers hampering the use of farmers' markets by low-income consumers have been identified in several studies (Jones & Bhatia, 2011). Market inaccessibility, pricing misconceptions, lack of awareness concerning market times and locations, and inability to use Supplemental Nutrition Assistance Program (SNAP) benefits at certain markets are among the top barriers identified (Cole, McNeese, Kinney, Fisher, & Krieger, 2013; Freedman et al., 2016; Haynes-Maslow, Parsons, Wheeler, & Leone, 2013; Leone et al., 2012; Wetherill & Gray, 2015).

Marketing strategies, educational programs, exposure interventions, and environmental support interventions have been implemented to increase patronage of farmers' markets by low-income individuals (Bowling et al., 2016; Dannefer et al., 2015). Research has pointed to the effectiveness of these efforts to increase positive attitudes and consumption of fruits and vegetables, food access, and farmers' market patronage (Dannefer et al., 2015; Jillcott Pitts et al., 2016).

## **Objective**

This article highlights a SNAP-Education (SNAP-Ed) funded social marketing campaign designed to increase fruit and vegetable consumption by low-income individuals through increasing patronage of farmers' markets. The campaign involved using marketing strategies in combination with cooking demonstrations and tastings. The influence of the campaign on participants' consumption of and intention to purchase fruits and vegetables is examined.

## **Method**

A team of specialists working with Extension's SNAP-Ed program developed a statewide social marketing campaign called Farmers' Market Fresh (FMF). The primary objective was to encourage low-income consumers to increase their fruit and vegetable consumption by shopping at farmers' markets. The 12 week campaign was delivered at qualifying farmers' markets by county-based Extension agents and paraprofessionals working with the SNAP-Ed program.

Three components comprised FMF: marketing, food demonstrations/tastings, and children's challenge activities. A marketing tool kit consisting of social media posts for Facebook and Twitter, press releases, promotional posters, a marketing brochure, and a presentation for community partners was developed. The marketing toolkit contained a variety of marketing materials allowing Agents and para-professionals the ability to customize their marketing efforts based on the needs of their counties. County Extension staff used the marketing materials to promote the FMF campaign to the target audience in their respective counties through multiple marketing channels. County Extension staff worked closely with county Department of Human Services offices and other social service agencies including senior centers in their marketing efforts.

As part of the campaign, Agents and paraprofessionals conducted 12 food demonstrations and tastings, one for each of the 12 weeks, using the most commonly purchased fruits and vegetables in the state. Demonstrations and tastings were conducted at the farmers' markets and were timed to coincide with produce availability at the markets. At each demonstration and tasting, participants were given a card containing the recipe being demonstrated. Each recipe card also included information on selecting and storing the produce items used in the recipe. Participants were encouraged to come back each week to the farmers' market and the FMF booth to attend a new food demonstration and obtain a new recipe card. At the end of the 12 weeks, participants would have a collection of recipes fresh from the farmers' market. Youth were invited to participate in children's challenge activities and encouraged to work with their adults to purchase, prepare, and taste each fruit or vegetable demonstrated. Children's challenge activities included a farmers' market scavenger hunt and an activity titled "ask a farmer". Children who met one or more of the challenges received prizes such as nutrition-themed pencils, wristbands, and child-size shopping bags.

In 2016, FMF was offered in 33 counties at 39 farmers' markets. Farmers' markets were defined as retail venues with more than one farm vendor selling at a fixed location during defined hours of operation. Across the 39 farmers' markets, 57,968 direct educational contacts were made through 297 food demonstrations. Using materials from the marketing tool kit, Extension agents and paraprofessionals made 674 posts to the social media sites of local Extension offices and farmers' markets. Additional marketing occurred through 64 newspaper articles and 51 newsletter articles.

A study involving a single sample research design was conducted to evaluate FMF program impacts. All procedures for the study were reviewed and approved by the institutional

review board. A convenience sample of 15 farmers' markets was used. The survey was administered to FMF participants at the farmers' markets by Extension agents and paraprofessionals. The surveys were administered during the final session of the FMF program.

The survey, designed by Extension specialists with expertise in food systems, nutrition, and SNAP-Ed, contained seven questions regarding consumption of and intention to purchase locally grown fruits and vegetables and five demographic questions. For the seven questions related to consumption and purchase intention, a 4-point Likert response scale was used. Participation in a federal assistance program was used as a proxy for income level. Respondents were asked whether anyone in their households participated in any of the following: free or reduced school meals; Women, Infants, and Children (WIC); SNAP; Head Start; or Temporary Assistance for Needy Families.

## **Results**

Data were analyzed using IBM Statistical Package for the Social Sciences (SPSS) 25. Consent forms and surveys were completed by 725 adults. The 109 respondents who reported participating in at least one federal assistance program were compared with the 616 respondents who did not report participating in federal assistance programs. For this study, participating in federal assistance programs was used as a proxy to identify respondents as limited-resource so 15% of respondents were considered limited-resource which is comparable to 12.7% of Tennessee residents living below poverty (U. S. Census, 2016).

Demographic variables are reported for the study groups in Table 1. The respondents for the two groups differed on age and race. Limited-resource respondents were more likely to be younger than the other respondents with 40% of limited-resource respondents under 35 years old

compared to 16% of other respondents. Furthermore, limited-resource respondents were more diverse compared to the other respondents with 15% of limited-resource respondents identifying as African American and 10% as Hispanic or Latino compared to 6% and 2% of other respondents respectively. These findings are consistent with U.S. Census data for [blinded] overall (76.6% white, 13.4% African American, and 5% Hispanic/Latino). Compared to those living below the poverty level in the state (65.5% white, 27% African American, and 9.3% Hispanic/Latino), there were fewer African Americans in this study but comparable numbers for white and Hispanic/Latino (U. S. Census, 2016).

For both groups, almost all respondents reported eating more locally grown fruit (94% of limited-resource respondents and 95% of other respondents) and eating more locally grown vegetables (94% of limited-resource respondents and 97% of other respondents) as a result of participating in FMF. In addition, 63% of limited-resource respondents and 55% of other respondents reported that they planned to purchase the locally grown produce demonstrated. Furthermore, 67% of limited-resource respondents and 68% of other respondents reported that they intended to try the recipes that they tasted at FMF at home with their families. A chi-square analysis with Monte Carlo simulation indicates no significant differences between limited-resource respondents and the other respondents about eating more locally grown produce and intent to purchase more locally grown produce (Table 2). In conclusion, these findings indicate that limited-resource respondents reported similar healthy behavior changes based on participation in FMF as non-limited-resource respondents indicating the success of this intervention of encouraging healthy behaviors in a Farmers' Market setting.

## Discussion

The main objective of the FMF campaign was to encourage low-income families to increase fresh fruit and vegetable consumption through patronage of farmers' markets. The campaign generated an excitement and enthusiasm for fruits and vegetables at the local farmers' markets, with nearly 58,000 contacts made across 39 farmers' markets. Overall, high rates of locally grown fruit and vegetable consumption were reported by participants. Additionally, respondents indicated an intention to purchase the produce demonstrated in the program. Extension Agents and para-professionals have expressed an interest in implementing the program each year with additional Agents and para-professionals expressing an interest in bringing the program to their counties.

A continued perception of farmers' markets is that the shoppers tend to be white and affluent, making a social marketing campaign targeted to low-income families important to the success of nutrition education efforts (Alkon & McGullen, 2011). It is important to draw low-income families to the market to increase their access to and consumption of locally grown fruits and vegetables. Carefully constructed messages posted in areas where families live and where they apply for SNAP can advertise when markets are open, where they are located, and which markets accept electronic benefits transfer cards. Publicizing programming in various media outlets, such as local newspapers, and using social media posts that can be accessed using a smartphone are other ways to reach the audience in a social marketing campaign.

Once they are at the market, low-income shoppers should be made to feel welcomed and encouraged to participate in nutrition education efforts. For example, many participants in FMF thought they were being asked to purchase what was demonstrated. Clear signage and encouragement from nutrition educators is necessary as well as a suitable location at the market

where the program will be easily seen. Bringing children to the market, as many do, can make participation in market-based nutrition education problematic. Making the experience enjoyable by including activities for children and tastings can attract more participants. Also, keeping the lessons short and succinct allows for personal interaction with the educator. Nutrition education should focus on helping limited-resource audiences understand how to shop at a farmers' market and how to prepare and store foods sold there.

Agencies engaging in exposure and educational interventions at farmers' markets should include a specific plan for marketing not only the interventions but the farmers' market as well. The first step in encouraging low-income participants to purchase and use fresh produce from farmers' markets is to increase attendance at the markets. Promoting information about market hours and locations as well as whether SNAP benefits are accepted at a market can make the market seem more accessible to those with limited income.

Having a reason to attend the market on a routine basis can also serve as an incentive for re-patronage. In this campaign, recipes, taste tests, information on selection and use of different produce, and incentive items proved invaluable in attracting participants and building excitement among participants. Those planning farmers' market interventions would be well served to include such incentives.

These preliminary findings indicate that not all farmers' market patrons are the same. Therefore, campaigns need to identify and segment target audiences carefully to ensure interventions are engaging to different groups. For example, messages might differ depending on age with messages for older adults focused on preparing smaller recipes and food storage compared to messages for younger adults focused on feeding children. Additional research that compares the consumption and purchasing practices of low-income individuals at farmers'



markets offering a social marketing campaign to those at farmers' markets not offering such a campaign could result in beneficial insights. The impact of the social marketing campaign on attracting new consumers to the farmers' markets is worthy of future research.

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**Table 1: Demographic variables**

Variable	Limited-resource (n = 109)	Other respondents (n = 616)
	Number (%)	Number (%)
Age		
25 years and under	20 (18%)	31 (5%)
26 – 34 years	24 (22%)	66 (11%)
35 – 44 years	25 (23%)	63 (10%)
45 – 54 years	14 (13%)	111 (18%)
55 – 64 years	16 (15%)	140 (23%)
65 years or older	10 (9%)	201 (33%)
Race/ethnicity		
African American	16 (15%)	39 (6%)
Hispanic	11 (10%)	12 (2%)
White	69 (63%)	496 (81%)
Other	9 (8%)	39 (6%)
Responsible for preparing meals for children in your care	87 (80%)	254 (41%)

**Table 2: Chi-Square comparisons of limited-resource respondents and other respondents**

Variable	Chi-Square	<i>df</i>	<i>p</i>
Race	38.10	5	< .001
Age	66.63	5	< .001
Purchase more locally grown fruit	4.44	2	<i>n.s.</i>
Purchase more locally grown vegetables	5.69	2	<i>n.s.</i>
Try the demonstrated recipes	1.00	2	<i>n.s.</i>
Intend to purchase the produce demonstrated	2.71	2	<i>n.s.</i>

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