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UTAH SNAP-ED DATA 2018

FINAL ANNUAL REPORT TEMPLATE FOR STATES (DELIVERABLE 3.6)

Supplemental Nutrition Assistance Program Education (SNAP-Ed) Annual Report

Executive Summary, FFY [2018] (≤ 5 pages)

- **How SNAP-Ed Is Organized in Your State**

Utah Department of Workforce Services (DWS), headquartered in Salt Lake City, Utah, with multiple branches throughout the state is the State Agency overseeing the SNAP-Ed program.

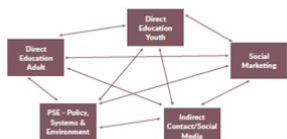
The State Implementing Agency (SIA) is Utah State University, Extension/Nutrition, Dietetics, and Food Sciences Food \$ense program. The SIA headquarters are located in Logan, Utah and implemented in all 29 counties in Utah. A few of the counties are just online education only because of the small target audience. Classes in those counties can be requested or participants may cross county lines to attend. Utah receives approximately \$1,500,000 in SNAP-Ed funding each year, which goes directly to education provided by the SIA.

- **The Issues Your State/Implementing Agency Is Addressing**

Utahns experience hunger, poverty, unemployment and many other hardships that contribute to an increased risk of obesity and chronic diseases. Over 14% of Utah households are food insecure and 12.7% of Utahns are living in poverty (FRAC, 2014). Utah has a fairly low unemployment rate of 3.8%, however, many Utah families are considered working poor as a result of working part-time or full-time jobs with low wages (US Bureau of Labor Statistics, 2016). Eighty-three percent of low-income families have a family member who works, however, only thirty-five percent of children in poor families have at least one full-time working parent (NCCP, 2014; Working Poor Families Project, 2013). In addition to the economic challenges faced by these families, these individuals are also at higher risk of chronic diseases and poor health outcomes such as obesity, diabetes, and high blood pressure. Poverty, hunger, obesity, and chronic diseases are represented in every demographic group in Utah; however, there are several groups that experience these at disproportionately higher rates including children, Hispanics, and single female-headed households.

Utah State University focuses on a comprehensive approach reaching all target audiences through various methods. USU reaches all communities, all 29 counties.

SNAF-Ed utilizes comprehensive approaches by reaching multiple levels. Sharing similar messages helps make the healthy choice the easy choice.

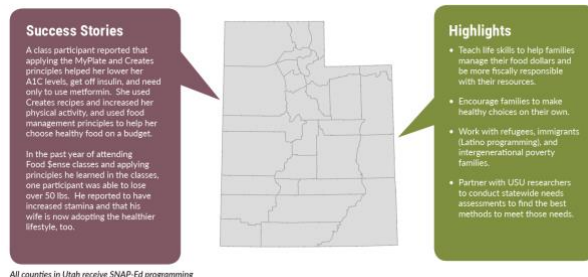


Executive Summary, FFY [2018] (≤ 5 pages)

- **How SNAP-Ed Works in Your State**

In Utah, we have provided many innovative practices to meet the guidance given through Food and Nutrition Services (FNS). Multiple approaches include: 1) individual, group and family nutrition education and physical activity promotion in addition to related interventions; 2) comprehensive, multi-level interventions in environmental settings; and 3) community and public health approaches that reach a large segment of the population. As the chart shown above, Utah developed this to showcase the importance and interconnection needed to host a comprehensive program.

Utah provides this to all areas in Utah. All 29 counties.



- **Results and Perspective**

In fiscal year 2018, Utah State University Food \$ense (SNAP-ED) provides comprehensive programming, with rigorous evaluations including retrospective post/pre (intent to change, 6 month and 1 year follow up behavior change surveys (not completed yet for 2018). These surveys indicate positive changes for low-income families and individuals improving nutrition decisions, physical activity and food security. Through comprehensive programming Utah Food \$ense (SNAP-Ed) program is seeing a difference in improvements in individual, family, community, and state changes. Supporting the healthy choice through Policy, Systems and Environmental and public health approaches like social media, as well as, providing education through direct and indirect methods is beneficial.

Executive Summary, FFY [2018] (≤ 5 pages)

- **Results and Perspective**

Highlighting Report Impacts

1. (After participating) **Intent to Change** (self-reported by participants)

Objective: 80% demonstrate intent to increase family mealtime and food resource management.

- a. 67% intend to stretch their food dollars through increasing food security through food resource management.
- b. 74% report an intent to eat a variety of fruits and vegetables daily.

2. (After participating) **BRFSS Fruit and Vegetable Module** (self-reported by participants)

Objective: 65% of participants will demonstrate behavior change of increase intake of F/V.

- a. 64% increased “other” vegetable intake.
- b. 57% increased fruit intake.

3. (After 6 months) **Behavior Change Survey** (self-reported by participants)

Objective: 60% demonstrate change to increase family mealtime and food resource management.

- a. 61% reported an increase in choosing and preparing healthy food for their families.

- b. 42% reported an increase in having enough food to last through the month.

4. Thumbs Up (survey conducted at Food Pantries, self-reported by participants).

- a. 84% familiar with the thumbs up signage to support them in choosing healthy foods.
- b. 68% improved dietary intake since programs implementation.

Executive Summary, FFY [2018] (≤ 5 pages)

- **Third Parties Speak**

Title: Applying My Plate – Ashley Sullivan

"My wife and I have started to sit down to make a menu plan. We look at the MyPlate handout to make sure we are getting enough of everything"

Today during the lesson, I was asking about how they have been applying these lessons and two of the participants chimed in that they have started looking at the MyPlate handout while they menu plan/make dinner to make sure they are getting food from each category.

Title: Thanks for teaching us! – Kate Chappell

"Thank you for showing me how to eat better so I can be the fun grandma, instead of the tired old grandma."

I ran into one of my students from the Adult CREATES series classes I taught a couple months ago and she was so excited to tell me that she was planning out her meals for the weeks her grandkids were going to live with her this summer and using the creates handouts. She also said that she had completely changed her diet and was using the MyPlate.gov tracker to make sure she was eating right.

Title: Our family has learned a lot! – Laurie Bates

After teaching her last Family Meal Time class at a Senior Citizen Cultural Center...

"A young Father came up to me and stated " This class has helped my family and myself to see how important having dinner together is we have enjoyed taking the class and have learned a lot from it. I hope you can keep teaching it to others. Thank you"

Title: Taking It to Heart - Hiram Wigant

"I challenged the participants to find one way to incorporate more physical activity in their daily lives. The following week, Sam, one of the employees, shared that he had started riding his bike to work (about 3 miles) once a week. He shared how great he feels when he rides with the rest of the participants."

"Sam expressed that he rides to work nearly every day, and he's been riding his bike to other locations as well, often making long loops. He had already (and just recently) started a resistance physical activity routine he could do for free at home, which he invited the rest of the participants to do. He has also tried nearly every recipe we've had in class. He expressed again how great he feels and how good the recipes are."

Executive Summary, FFY [2018] (≤ 5 pages)

- **For More Information**

State Implementing Agency:
Utah State University
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Online

Websites

Food \$ense <https://extension.usu.edu/foodsense/>

Food \$ense Creates <http://extension.usu.edu/fscreate/>

Mountain Plains Region SNAP-Ed <https://extension.usu.edu/mpr/>

Blogs

Eat Well Utah <http://eatwellutah.org>

Kids Create! <https://kidscreatesite.wordpress.com/>

Instagram

Eat Well Utah <https://www.instagram.com/eatwellutah/>

Food Sense Utah https://www.instagram.com/foodsense_utah/

Pinterest

Eat Well Utah <https://www.pinterest.com/eatwellutah/>

Food Sense Utah <https://www.pinterest.com/foodsenseutah/>

Twitter

Eat Well Utah <https://twitter.com/eatwellutah/>

Utah Food Sense <https://twitter.com/UtahFoodSense>

Utah SNAP-Ed Works https://twitter.com/utah_ed

YouTube

Food \$ense Creates <https://www.youtube.com/channel/UCp5fRTxguUUpO-OJWXLx3FQ>

Food \$ense Training

<https://www.youtube.com/channel/UCGTezat2IKNS7euPK11jZAQ>

LinkedIn

Food \$ense (Utah SNAP-Ed) <https://www.linkedin.com/company/food-ense-utah-snap-ed/>

Facebook

Eat Well Utah -- SNAP-Ed <https://www.facebook.com/eatwell.utah>

Utah Food Sense -- SNAP-Ed <https://www.facebook.com/utahfoodsense>

Kids Create <https://www.facebook.com/kidscreatefoodsense/>

Creaciones en la Cocina <https://www.facebook.com/enlacocina/>

Utah SNAP-Ed Works <https://www.facebook.com/UtahSNAPEd/>

USU Food \$ense NEAs <https://www.facebook.com/groups/FoodSenseNEAs/>

Section A: SMART Objectives and State/National Initiatives (Maximum length: 10 pages)

Table A-1. Progress toward achieving SMART objectives, FFY [2018]

#	SMART Objective	Progress and Relevance of the Accomplishment to Statewide Efforts	Related Framework Indicator
1	Based upon behavior checklists, by September 30, 2018 at least 80 percent of SNAP eligibles who participate in SNAP-Ed lessons statewide will demonstrate intent to increase food security and food access for their families.	3,396 participants or 67% report an intent to stretch their food dollars so there is enough food to last through the entire month	ST2
2	Based upon behavior checklists, by September 30, 2018 at least 70 percent of SNAP eligibles in SNAP-Ed lessons statewide will demonstrate intent to increase family mealtime and food resource management.	3,396 participants or 67% report an intent to stretch their food dollars so there is enough food to last through the entire month	ST2

#	SMART Objective	Progress and Relevance of the Accomplishment to Statewide Efforts	Related Framework Indicator
3	Based upon behavior checklists, by September 30, 2018 at least 80 percent of SNAP eligibles who participate in SNAP-Ed lessons statewide will demonstrate intent to follow the current Dietary Guidelines for Americans, including: establish healthy eating habits and a physically active lifestyle.	<p>3,370 participants or 66.6% report an intent to choose a variety of foods based on MyPlate recommendations</p> <p>3,748 participants or 74% report an intent to eat a variety of fruits and vegetable daily</p> <p>3,182 participants or 62.8% report an intent to choose to be physically active for at least 30 minutes, five days a week</p>	ST1 ST3
4	Based upon behavior checklists, by September 30, 2018, at least 65% of SNAP-Ed eligible individuals who participate in <i>Create Farm Fresh Food</i> series will demonstrate behavior change of increased intake of fruits and vegetables.	<p>Using the BRFSS FV module:</p> <p>64% of participants who attended >1 class reported an increase in “other” vegetable intake.</p> <p>57% of participants who attended >1 class reported an increase in fruit intake.</p> <p>50% of participants who attended >1 class reported an increase in dark green vegetable intake.</p> <p>43% of participants who attended >1 class reported an increase in orange vegetables and beans/legumes.</p>	MT1
5	By September 30, 2018 <i>Create Farm Fresh Food</i> will be offered in at least 75% of counties that have a farmers’ market with an Electronic Benefits	<p>50% of counties that had an active SNAP-Ed program and a farmers’ market with an EBT machine offered a <i>Create Farm Fresh Food (CFFF)</i> series in 2018.</p> <p>Shopping at the farmers’ market was positively associated with mean intake of</p>	MT8b

#	SMART Objective	Progress and Relevance of the Accomplishment to Statewide Efforts	Related Framework Indicator
	Transfer (EBT) machine.	fruit (p=.03), orange vegetables (p=0.004) and “other” vegetables (p=0.034).	
6	By September 30, 2018, Utah SNAP-Ed will launch social marketing campaigns aimed at increasing the awareness of the importance and benefits associated with family mealtimes, physical activity, and healthy food choices among SNAP-Ed eligible families.	<p>Increased social marketing campaigns from one to three campaigns, focusing on increasing physical activity, eating local fruits and vegetables, and increasing family mealtime, respectively.</p> <p>Increased reach of the family mealtime campaign by providing culturally-appropriate marketing materials in Spanish and sharing messaging through Spanish radio stations and Univision.</p>	MT12a
7	Based upon 6-month follow-up behavior checklists, by September 30, 2018 at least 60 percent of SNAP eligibles who participate in SNAP-Ed lessons statewide will demonstrate change in increase food security and food access for their families.	42% reported an increase in having enough food to last through the end of the month	MT2
8	Based upon 6-month follow-up behavior checklists, by September 30, 2018 at least 60 percent of SNAP eligibles in SNAP-Ed lessons statewide will demonstrate change	<p>61% reported an increase in choosing and preparing healthy food for their families on a budget</p> <p>61% reported an increase in shopping with a grocery list</p>	MT2

#	SMART Objective	Progress and Relevance of the Accomplishment to Statewide Efforts	Related Framework Indicator
	in increase family mealtime and food resource management.		
9	Based upon 6-month follow-up behavior checklists, by September 30, 2018 at least 60 percent of SNAP eligibles who participate in SNAP-Ed lessons statewide will demonstrate change to follow the current Dietary Guidelines for Americans, including: establish healthy eating habits and a physically active lifestyle.	<p>66% reported an increase in using MyPlate to make food choices</p> <p>61% reported an increase in eating 2 ½ to 3 cups of vegetables a day</p> <p>62% reported an increase in eating at least two cups of fruit a day</p> <p>55% reported an increase in choosing to be active at least 30 minutes 5 days a week</p>	MT1 MT3
10	Based upon Utah State Office of Education Child Nutrition Program reporting, by September 30, 2018, three additional Utah schools will offer the National School Breakfast Program to the student body.	<p>13 additional schools offered the National School Breakfast Program during the 2017-2018 or 2018-2019 school year that did not offer the program in 2016-2017.</p> <p>An additional 7.7% of students participated in the school breakfast program during the 2016-2017 school year. Additional schools offering the SBP will hopefully result in continued growth.</p>	ST7 MT5a
11	Based upon Utah State Office of Education Child Nutrition Program reporting, by September 30, 2018, three additional Utah schools will offer the National School	28 schools changed from a traditional service to model to an alternative service model for offering the School Breakfast Program from the 2017-2018 or 2018-2019 school year.	ST7 MT5a

#	SMART Objective	Progress and Relevance of the Accomplishment to Statewide Efforts	Related Framework Indicator
	Breakfast Program via an alternative service model such as breakfast in the classroom, breakfast after the bell, or grab and go carts.		
12	Based upon SNAP-Ed PSE evaluation and reporting, by September 30, 2018, at least twenty-five food pantries will fully implement the Thumbs Up for Healthy Choices project, increasing the visibility of healthy options to pantry clients.	<p>24 food pantries fully implemented Thumbs Up for Healthy Choices during FY 2018.</p> <p>Top PSE changes included: 22 pantries improved visibility of healthy options.</p> <p>11 pantries included fresh produce in pantry offerings.</p> <p>9 pantries improved layout, or display of foods to encourage healthy selections.</p>	ST5c ST7 MT5a
13	Based upon SNAP-Ed PSE evaluation and reporting, by September 30, 2018, at least 50% of food pantry clients surveyed will report that the Thumbs Up for Healthy Choices project has been influential in their food choices at food pantries.	<p>84% of surveyed food pantry clients that were familiar with the Thumbs Up program reported the program made making healthy choices in the pantry easier.</p> <p>67% of surveyed food pantry clients that were familiar with the Thumbs Up program reported improved dietary intake since the program's implementation.</p> <p>68% of surveyed food pantry clients that were familiar with the Thumbs Up program reported improved dietary intake for their family since the program's implementation.</p>	ST7 MT5f
14	As a result of the Thumbs Up Retail 2-3 small food retailers will increase the amount of shelf space filled by	1 retail setting reported increasing the amount of shelf space filled by healthy foods.	ST7 MT5f

#	SMART Objective	Progress and Relevance of the Accomplishment to Statewide Efforts	Related Framework Indicator
	healthy foods. In addition, consumers who shop at those stores will purchase more healthy food items than prior to the intervention in 2018.	1 retail setting reported a 55% increase in sales of items marked with a Thumbs Up sign.	
15	Based upon SNAP-Ed reporting, by September 30, 2018, Food \$ense will provide nutrition education at a minimum of fifteen farmers' markets that accept SNAP benefits.	Food \$ense provided nutrition education at 13 farmers' markets during FY 2018.	MT5e
16	Based upon behavior checklists, by September 30, 2018, at least 65% of SNAP eligible individuals who participate in <i>Create Farm Fresh Food</i> series will demonstrate behavior change of increased use of SNAP benefits at farmers' markets.	<p>2% of <i>CFFF</i> participants reported using EBT benefits at the farmers' market, although 26% of participants reported shopping at farmers market more frequently as a result of the classes.</p> <p>Improvements to the <i>CFFF</i> curriculum will be made to more explicitly encourage participants to use SNAP benefits at the farmers market. Additional efforts will also be made to ensure that the majority of participants are receiving SNAP benefits.</p>	MT8e
17	As a result of Hunger Solutions Institute, coalitions will be formed to fight against hunger in Utah. Assisting to make food security a priority in Utah.	3 coalitions have formed to support the Hunger Solutions Institute, including SNAC, Campus Kitchen and the food recovery network. All approvals have been done to become an institute at Utah State University.	ST7c

#	SMART Objective	Progress and Relevance of the Accomplishment to Statewide Efforts	Related Framework Indicator

Table A-2. Insight about achieving SMART objectives, FFY [2018]

#	SMART Objective	Facilitators, Setbacks, and Lessons Learned	Recommendations
1	ST food Security	Objectives were set to a high standard	We will continue to emphasize this concept in curriculum
2	ST food resource management	Objectives were set to a high standard	We will continue to emphasize this concept in curriculum
3	ST healthy eating & physical Activity	Objectives were set to a high standard	We will continue to emphasize this concept in curriculum
4	CFFF increase fruit & vegetable intake	<p>Participant retention is difficult for a series of classes, particularly during the summer.</p> <p>The most common barrier to shopping at farmers' market is being busy during market times. PSE strategies that improve the convenience of farmers' markets would help additional SNAP-Ed participants shop at markets.</p>	Continue to improve strategies to retain participants for an entire CFFF series.
5	CFFF (EBT)	Several counties with farmers' markets with EBT machines did not have an active or fully-staffed SNAP-Ed program during the market season.	Additional timely trainings to improve awareness of SNAP-Ed educators about the CFFF curriculum will be conducted to increase use of the curriculum in appropriate counties, specifically those participating in Utah

#	SMART Objective	Facilitators, Setbacks, and Lessons Learned	Recommendations
			Farmer's Market Promotion Program (see table A-3).
6	Social marketing	<p>Due to a change in staffing this year, evaluation efforts for one of the campaigns was postponed until FY 2019. With a new evaluation coordinator, plans are already in place for FY2019 data collection.</p> <p>Another set-back is that some of the marketing methods/mediums (specifically radio and tv stations) did not provide data for reach of the ads.</p> <p>In order to provide a more consistent report, we modified how we recorded the reach by only including available data and not estimating reach based on that data (like we did last year). For example, we only provided the number of impressions for the public transit ads and not the number of people reached because that data was not available.</p>	To better prepare for this, we will better research the different companies in order to prioritize those that do reach our audience and provide reportable data.
7	MT food security	33% of participants reported always having enough food to last through the month prior to participating in classes leaving less room for improvement.	We will continue to emphasize this concept in curriculum
8	MT food resource management	Objectives were met.	We will continue to emphasize this concept in curriculum
9	MT healthy eating & physical activity	Healthy eating objectives were met. Physical activity objectives were not met suggesting a	We will continue to emphasize this concept in curriculum

#	SMART Objective	Facilitators, Setbacks, and Lessons Learned	Recommendations
		stronger emphasis on this topic in classes is warranted. Focusing on participant-specific barriers to making changes to physical activity may be helpful.	
10	National School Breakfast Program Offered	Multi-sector partnerships to influence awareness of low participation as well as success stories from local implementers have been essential for work with the School Breakfast Program.	Not all improvements can be attributed to the work of UBET. Additional evaluation of what resulted in improved SBP accessibility should be collected.
11	NSB alternative service model	See above facilitators.	See above recommendations.
12	Thumbs Up food pantries	Proper Thumbs Up implementation require committed educators. The pantries that had the most positive response from participant surveys conducted had implemented more than one strategy from the toolkit.	Identify food pantry managers that champion the program and will assist with implementation and maintenance. Identify community partners to work with for PSE changes to maximize reach and impact.
13	Thumbs Up food choices	Food pantry clients that were familiar with the Thumbs Up program reported positive changes in their selection and intake of promoted healthy foods.	Consider conducting individual level assessment to assure that PSE work is ultimately impacting targeted behavior. Events/strategies that increase the awareness of the PSE change among the target audience are

#	SMART Objective	Facilitators, Setbacks, and Lessons Learned	Recommendations
			essential to ensure people notice the changes.
14	Thumbs Up Retail-Shelf Space	<p>Anecdotal reports suggest an increase in number of healthy foods sold, but measurements of shelf space occupied by healthy items not collected.</p> <p>Store managers who champion the program are more likely to take the risk of stocking additional healthy foods.</p> <p>Local partners to work together on implementation are essential, especially for store's with larger inventories.</p>	Additional training of educators implementing and reporting on Thumbs Up in retail settings needs to be conducted to set objectives with quantitative measures such as amount of shelf space.
15	Farmers' Market Booths	Farmers' markets require significant amount of staff time making it difficult for part-time educators to balance direct education, markets, and PSE work.	Consider cost effectiveness for time and resource requirements of farmers' market booths and potential reach and impact of target population.
16	CFFF SNAP benefits	<p>Uncertain why not many participants reported using SNAP benefits at farmers' markets. Locations seemed appropriate to reach SNAP eligible audiences, but will assess locations for next market season.</p> <p>Will also look into other barriers that would inhibit people from using SNAP at farmers markets (i.e.: unfamiliar with</p>	Understanding the multitude of barriers that participants experience to using SNAP benefits at farmers' markets is an essential part of a successful CFFF series.

#	SMART Objective	Facilitators, Setbacks, and Lessons Learned	Recommendations
		acceptance/use, ran out of benefits before market, etc.).	
17	Hunger Solutions Institute	The approval process has proven lengthy, financial and personnel restrictions are also barriers to the Institute.	Seek additional funding

Table A-3. SNAP-Ed contributions to State and national initiatives, FFY [2018]

State/ National	Initiative	Objective, Role, Activities, and Results of SNAP-Ed Engagement	Related Framework Indicator
S-1	Utah's Intergenerational Poverty Initiative	<p>Objective: To address the complex issue of intergenerational poverty (IGP) through research and collaboration.</p> <p>Role: Utah SNAP-Ed participates by providing SNAP-Ed resources to IGP Families.</p> <p>Activities:</p> <ul style="list-style-type: none"> • Create Family Meal classes are often provided specifically to IGP families. • Eat Well Utah Newsletter is sent to all IGP families that provide e-mail addresses to the state agency. • Front-line educators are encouraged to promote their direct education classes to IGP families. <p>Results: Since October 2017, the Eat Well Utah Newsletter has expanded its reach from 44,071 to 59,002 IGP families.</p>	ST1-4, LT8
S-2	Utah Farmers' Market Promotion	<p>Objective: To increase the accessibility of local agriculture products for SNAP recipients by training and supporting farmers' market vendors and managers, improving capacity to accept EBT funds, and promoting markets to the SNAP audience.</p> <p>Role: Assist with grant writing</p> <p>(During the project: Assist with formative and outcome evaluations and oversee all social marketing directed to the SNAP target population).</p>	MT8, LT12d, LT12e

State/ National	Initiative	Objective, Role, Activities, and Results of SNAP-Ed Engagement	Related Framework Indicator
		Activities: <ul style="list-style-type: none"> • Provided information for project justification • Planned social marketing component • Provided answer for USDA grant reviewer questions Results: Received notice of reward (\$494,292.24) for project.	
S-3		NA	
N-1		NA	
N-2		NA	
N-3		NA	

Table B-1. Outcomes Related to Building Organizational Infrastructures (ST7), FFY [2018]

<u>Priority Indicator</u> <u>ST7</u>	Accomplishments/Outcomes (Include Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objective/ Other Related Framework Indicators
ST7a. Number of Organizational Partnerships at Each Level	Local: 48 Regional: 0 Tribal: 1 Statewide: 3	NA

<u>Priority Indicator</u> <u>ST7</u>	Accomplishments/Outcomes <i>(Include Online Links and Refer to Attachments in Appendix A, if any)</i>	Related SMART Objective/ Other Related Framework Indicators
ST7b-c: Description and Results of Up to 5 Top Organizational Partnerships. Include different geographical levels, if possible.	<p>Name: SNAP-Ed & UDOH-EPICC</p> <p>Membership: SNAP-Ed and Utah Department of Health EPICC Program in Weber-Morgan County.</p> <p>Purpose of Partnership: To collectively support the implementation of the Thumbs Up for Healthy Choices program in retail settings.</p> <p>Depth of Relationship: Collaboration</p> <p>Accomplishments: UDOH has adopted the Thumbs Up program for retail settings and have implemented the program in 2 retail settings in Weber County. SNAP-Ed has assisted with the implementation, maintenance, and promotion of the program at these locations.</p> <p>Lessons learned: UDOH-EPICC program has similar programmatic goals to SNAP-Ed. We are both working on improving visibility and appeal of healthy food choices in retail settings so rather than developing two separate programs we have worked together to implement the same program. This has expanded the reach and impact of both programs while avoiding duplication of efforts.</p>	<p>14</p> <p>ST7, MT5</p>

<u>Priority Indicator</u> <u>ST7</u>	Accomplishments/Outcomes <i>(Include Online Links and Refer to Attachments in Appendix A, if any)</i>	Related SMART Objective/ Other Related Framework Indicators
ST7b-c: Description and Results of Up to 5 Top Organizational Partnerships. Include different geographical levels, if possible.	<p>Name: Department of Workforce Services</p> <p>Membership: SNAP-Ed and Utah Department of Workforce Services</p> <p>Purpose of Partnership: State Agency and Referral System</p> <p>Depth of Relationship: Coordination</p> <p>Accomplishments: The Department of Workforce Services provides an Intergenerational poverty (IGP) list who are eligible for SNAP-Ed. We use this list to recruit for direct education and send a monthly wellness newsletter over e-mail.</p> <p>Lessons learned: Although DWS does a great job at referring eligible people to our direct education they don't always have the time or means to attend classes. That is why we are working on developing more online tools that can be used to educate our SNAP-Ed population.</p>	NA

<u>Priority Indicator</u> <u>ST7</u>	Accomplishments/Outcomes <i>(Include Online Links and Refer to Attachments in Appendix A, if any)</i>	Related SMART Objective/ Other Related Framework Indicators
ST7b-c: Description and Results of Up to 5 Top Organizational Partnerships. Include different geographical levels, if possible.	<p>Name: Utah State University Extension</p> <p>Membership: SNAP-Ed and Utah State University Extension</p> <p>Purpose of Partnership: External funding/resources, research and access to specialists</p> <p>Depth of Relationship: Collaboration</p> <p>Accomplishments: Together with extension 4 journal articles were published and 4 more submitted. 2 national and 1 state level presentations were given which included SNAP-Ed research and curricula.</p> <p>Lessons learned: USU extension helps to make our evidence-based curricula possible.</p>	NA

<u>Priority Indicator</u> <u>ST7</u>	Accomplishments/Outcomes <i>(Include Online Links and Refer to Attachments in Appendix A, if any)</i>	Related SMART Objective/ Other Related Framework Indicators
ST7b-c: Description and Results of Up to 5 Top Organizational Partnerships. Include different geographical levels, if possible.	<p>Name: Uintah School District</p> <p>Membership: SNAP-Ed and Uintah School District</p> <p>Purpose of Partnership: Youth education and summer meal sites</p> <p>Depth of Relationship: Cooperator</p> <p>Accomplishments: Provided an USDA Summer Meal Site on an Indian Reservation. Fed an estimated 795 children, 90% of whom are American Indian.</p> <p>Lessons learned: The relationships built in Indian Reservation communities are great ways to start to address food insecurities. A large percentage of children who come to the summer lunch program are without any parents escorting them. More people need to get involved.</p>	NA

<u>Priority Indicator</u> <u>ST7</u>	Accomplishments/Outcomes <i>(Include Online Links and Refer to Attachments in Appendix A, if any)</i>	Related SMART Objective/ Other Related Framework Indicators
ST7b-c: Description and Results of Up to 5 Top Organizational Partnerships. Include different geographical levels, if possible.	<p>Name: Millard County School District</p> <p>Membership: SNAP-Ed and Millard County School District</p> <p>Purpose of Partnership: Direct Education for the youth of Millard County.</p> <p>Depth of Relationship: Cooperator</p> <p>Accomplishments: Through the Physical Education teacher the NEA is able to coordinate teaching all classes in the district through just one person. She has a great rapport with all teachers and uses gym time to teach MyPlate curriculum throughout the entire school year.</p> <p>Lessons learned: The NEA who works in this school district teaches in over 50 classes. Her lesson learned is to always be prepared because her time may be cut short by teachers or circumstances. She can't afford to have any wasted time during classes.</p>	NA
Other Metrics, if any	NA	
Related Materials, if any	NA	

Table B-2. Outcomes Related to Building Multi-Sector Partnerships (ST8), FFY [2018]

<u>Priority Indicator ST8</u>	Accomplishments/Outcomes	Related SMART Objective/Other Related Framework Indicators
ST8a: Number of Multi-Sector Partnerships or Coalitions at Each Level	Local: 146 Regional: 0 Tribal: 1 Statewide: 4	NA
ST8b-d: Name, Description, and Results of Up to 5 Top Multi-sector Partnerships. Include different geographical levels, if possible.	<p>Name: State Nutrition Action Coalition (SNAC)</p> <p>Purpose, number of partner organizations: The goal of SNAC is to unite Utah agencies to improve food security, nutrition, and health for Utahns. 10 partner organizations were represented during FY 2018.</p> <p>Depth of Relationship: Coalition</p> <p>SNAP-Ed influence in partnership: SNAP-Ed takes a leadership role within SNAC. SNAP-Ed has led the compilation of 3 SNAC reports which highlight coalition work. SNAP-Ed is also highly involved in several of the projects that have resulted from this work group.</p> <p>Accomplishments: Formation of successful subgroups and projects including Utah Breakfast Expansion Team (UBET) and the Utah Produce Initiative Collaboration (UPIC). Additional partnerships have also been formed allowing agencies to leverage resources to expand programming and reach.</p> <p>Lessons learned: During FY 2019 we are going develop a strategic plan for the group. We have many successful subgroups or projects that have resulted from SNAC but do not have a focus or goal for the coalition for this year.</p>	NA
ST8b-d: Name, Description,	Name: Utah Breakfast Expansion Team (UBET)	10, 11

Priority Indicator ST8	Accomplishments/Outcomes	Related SMART Objective/Other Related Framework Indicators
and Results of Up to 5 Top Multi-sector Partnerships. Include different geographical levels, if possible.	<p>Purpose, number of partner organizations: UBET works to increase participation in School Breakfast Programs (SBP) among low-income students. 10 organizations are involved in UBET.</p> <p>Depth of Relationship: Coalition</p> <p>SNAP-Ed influence in partnership: SNAP-Ed assists with the development of each of the statewide breakfast reports. SNAP-Ed also assists in the promotion of breakfast in schools where they are providing direct education.</p> <p>Accomplishments: There was a 7.7% increase in SBP during the 2016-2017 school year (most recent data). UBET worked with Partners in the Classroom which provided grants for schools interested in implementing an alternative breakfast model. UBET also released the second edition of the statewide breakfast report, "Starting the Day Off Right: Best Practices for Increasing School Breakfast Participation in Utah Schools."</p> <p>Lessons learned: Moving the needle for school breakfast participation is difficult from the grass roots level. Members of UBET are looking into a various forms of Utah School Board of Education "rules" that would encourage schools to offer SBP via an alternative service model to increase participation. Other members are also looking into the feasibility of state legislative support for requiring SBP be offered in schools serving high percentages of low-income students.</p>	<p>MT5a, ST7</p>
ST8b-d: Name, Description, and Results of	Name: Utah Produce Initiative Collaboration (UPIC)	<p>NA</p>

<u>Priority Indicator ST8</u>	Accomplishments/Outcomes	Related SMART Objective/Other Related Framework Indicators
<p>Up to 5 Top Multi-sector Partnerships. Include different geographical levels, if possible.</p>	<p>Purpose, number of partner organizations: To improve fresh fruit and vegetable access across Utah's priority communities through produce doubling incentives and fruit and vegetable prescriptions. UPIC is led by the Utah Department of Health. 9 organizations are involved in UPIC.</p> <p>Depth of Relationship: Coordination</p> <p>SNAP-Ed influence in partnership: SNAP-Ed is involved in the marketing subcommittee of UPIC. SNAP-Ed assists in increasing the awareness of the Double Up Food Bucks incentive program at farmers market.</p> <p>Accomplishments: UPIC managed Utah's Double Up Food Bucks program for FY 2018. *Reductions in DUFB redemption partially resulted from the program being available mid-market year as compared to the beginning of the market year as in the past.</p> <p>Lessons learned: Locally funding and managing a farmers' market incentive program long term requires a multi-disciplinary and agency approach. This was the first year of UPIC and we will continue to work towards a sustainable program that supports low-income Utahns as well as local farmers, producers and markets.</p>	
<p>ST8b-d: Name, Description, and Results of Up to 5 Top Multi-sector Partnerships. Include different geographical</p>	<p>Name: Healthy Kane Coalition</p> <p>Purpose, number of partner organizations: To Support local health events in Kane County, 14 partners</p> <p>Depth of Relationship: Program implementation and consulting</p> <p>SNAP-Ed influence in partnership: Printed materials used and volunteer hours</p> <p>Accomplishments:</p>	<p>NA</p>

Priority Indicator ST8	Accomplishments/Outcomes	Related SMART Objective/Other Related Framework Indicators
levels, if possible.	<ul style="list-style-type: none"> • booths at local festivals, providing health and nutrition information to our community • Implement events at the elementary schools, such as "bike to school month", "walking challenges", and "back to school triathlon". • Host local 5k races, put on yearly walking challenges for the community and healthy eating challenges throughout the year. <p>Lessons learned: By including school boards in your coalition you reach many more community members. Getting the kids involved brings many more adults as well.</p>	
ST8b-d: Name, Description, and Results of Up to 5 Top Multi-sector Partnerships. Include different geographical levels, if possible.	<p>Name: Workforce Rural Action Partnership</p> <p>Purpose, number of partner organizations: To network with all organizations and resources that serve the low-income population in Washington County, 15 partners</p> <p>Depth of Relationship: Collaboration</p> <p>SNAP-Ed influence in partnership: Approved curriculum taught and promotional materials handed out</p> <p>Accomplishments:</p> <ul style="list-style-type: none"> • Taught a sample direct education class and exchanged contact information to expand the possibilities for teaching sites <p>Lessons learned: There are many community organizations willing to work with us once they understand what we do.</p>	NA
Other Metrics, if any		
Related Materials, if any	<p>2017 SNAC Report: http://extension.usu.edu/fscreate/ou-files/2017-18_staff/2017_SNAC_Report.pdf</p> <p>UBET Statewide Breakfast Report:</p>	

<u>Priority Indicator ST8</u>	Accomplishments/Outcomes	Related SMART Objective/Other Related Framework Indicators
	http://extension.usu.edu/fscreate/ou-files/2017-18_staff/UBET_Report_2nd_2018_2.pdf	

Table B-3. Outcomes Related to Dietary Change (MT1), FFY [2018]

<u>Priority Indicator MT1</u>	Dietary Accomplishments/Outcomes	Related SMART Objective/ Other Related Framework Indicators
Population Segments	<p><i>For each population segment below, list the interventions that were conducted and dietary changes that were achieved in each including the 7 topics outlined above as a guide.</i></p> <p><i>When multiple interventions are conducted for a population segment, add a new row to describe the results.</i></p>	
Working-age adults, 18-59* years *includes Seniors, 60+ years	<p>Intervention(s): Create Better Health; individuals</p> <p>Behavioral changes, units: 5-point Likert scale: never, sometimes, about half the time, most of the time, always</p> <ul style="list-style-type: none"> • 66% reported an increase in using MyPlate to make food choices (f) • 62% reported an increase in eating at least two cups of fruit a day (l) • 61% reported an increase in eating 2 ½ to 3 cups of vegetables a day (m) • 59% reported an increase in eating nuts or nut butters (e) <p>Participants and reach: 4,618 or 1.49% of low-income population in Utah</p> <p>Duration: 6 Months</p> <p>Tools used: 6 Month Follow-up Survey (174 participants surveyed)</p> <p>Comparisons: Continues to show progress in all areas evaluated when compared to previous 3 years of impact data.</p>	4, 9

<u>Priority Indicator</u> <u>MT1</u>	Dietary Accomplishments/Outcomes	Related SMART Objective/ Other Related Framework Indicators
	Relevance: Supports our evidence-based programming and allows for further funding and program improvement.	
Seniors, 60+ years *included in adult numbers reported above.		
Mothers with children	NA	
High school-age youth	NA	
Middle school-age children	NA	
Elementary-age children	NA	
Children, ages 3-5 years (via parents/caregivers)	NA	
Other mixed-age groups or specific segments, e.g., whole families, schools, organizations or communities	NA	
Other mixed-age groups or specific segments, e.g., whole families, schools, organizations or communities <i>Add a row for each different intervention.</i>	NA	NA

<u>Priority Indicator</u> <u>MT1</u>	Dietary Accomplishments/Outcomes	Related SMART Objective/ Other Related Framework Indicators
Other metrics, if any	NA	
Related materials, if any	NA	

Table B-4. Outcomes Related to Changes in Food Resource Management (MT2), FFY [2018]

<u>Priority Indicator</u> <u>MT2</u>	Food Resource Management Accomplishments/Outcomes	Related SMART Objective/ Other Related Framework Indicators
<i>Food Resource Management Intervention</i>	<i>For each named (“branded”) intervention below, describe the intervention and list the food resource management changes that were achieved in each using the 7 topics outlined above as a guide.</i>	

<p>Name of Intervention here: Create Better Health Curriculum</p> <p>Working-age adults, 18-59 years*</p> <p>*Includes seniors, 60+ years</p>	<p>Intervention(s): Create Better Health; Individuals</p> <p>Behavioral changes, units: Likert scale: never, sometimes, about half the time, most of the time, always</p> <ul style="list-style-type: none"> 61% reported an increase in choosing and preparing healthy food for their families on a budget (m) 61% reported an increase in shopping with a grocery list (j) 42% reported an increase in having enough food to last through the end of the month (g) <p>Participants and reach: 4,618 or 1.49% of low-income population in Utah</p> <p>Duration: 6 Months</p> <p>Tools used: 6 Month Follow-up Survey (174 participants surveyed)</p> <p>Comparisons: Continues to show progress in all areas evaluated when compared to previous 3 years of impact data.</p> <p>Relevance: Supports our evidence-based programming and allows for further funding and program improvement.</p>	7, 8
<p>Seniors, 60+ years</p> <p>*included in adult numbers reported above</p>	<p>Intervention(s):</p> <p>Behavioral changes, units: Most of the time/Always</p> <p>Participants and reach:</p> <p>Duration:</p> <p>Tools used:</p> <p>Comparisons:</p> <p>Relevance:</p>	
<p>Other materials, if any</p>		

Table B-5. Outcomes Related to Changes in Physical Activity and Sedentary Behavior (MT3), FFY [2018]

Priority Indicator <u>MT3</u>	Physical Activity Accomplishments/Outcomes	Related SMART Objective/ Other Related Framework Indicators
Population Groups	<p><i>For each population group below, list the interventions that were conducted and the physical activity changes that were achieved in each using the 7 topics outlined above as a guide.</i></p> <p><i>When multiple interventions are conducted for the same population segment, add a new row using the 7-point outline for each.</i></p>	
Working-age adults, 18-59 years*: *includes Seniors, 60+ years	<p>Intervention(s): Create Better Health; Individuals</p> <p>Behavioral changes, units: Most of the time/Always</p> <ul style="list-style-type: none"> • 32% increase in participating in physical activity to make their muscles stronger (c) • 31.3% increase in participating in physical activity to increase muscular strength, muscular endurance and/or flexibility (j) • 29.7% increase in choosing to be active at least 30 minutes 5 days a week (a) <p>Participants and reach: 4,618 or 1.49% of low-income population in Utah</p> <p>Duration: 6 Months</p> <p>Tools used: 6 Month Follow-up Survey (174 participants surveyed)</p> <p>Comparisons: Continues to show progress in all areas evaluated when compared to previous 3 years of impact data.</p> <p>Relevance: Supports our evidence-based programming and allows for further funding and program improvement.</p>	9
Mothers with children	NA	
Seniors, 60+ years:	<p>Intervention(s):</p> <p>Behavioral changes, units:</p> <p>Participants and reach</p>	9

<u>Priority Indicator</u> <u>MT3</u>	Physical Activity Accomplishments/Outcomes	Related SMART Objective/ Other Related <i>Framework</i> Indicators
	Duration: Tools used: Comparisons: Relevance:	
High school-age youth:	NA	
Middle school-age children:	NA	
Elementary-age children:	NA	
Children, ages 3-5 years:	NA	
Other mixed-age groups or specific segments, e.g., whole families, schools, organizations, or communities, etc. <i>Add a row for each different population segment.</i>	NA	
Other metrics, if any	NA	
Other materials, if any	NA	

Table B-6. Outcomes Related to Creating Settings with Healthy Environments (MT5), FFY [2018]

Priority Indicator MT5	Organizational Accomplishments/Outcomes	Related SMART Objective/ Other Related Framework Indicators
MT5a-f. Adoption by Organizations Participating in SNAP-Ed Interventions	For each intervention, use the 6-point outline described above to present results.	
<p>Name of Intervention:</p> <p><i>Thumbs Up for Healthy Choices in Food Pantries</i></p>	<p>Intervention, potential sites: Thumbs Up is a PSE intervention that uses nudge strategies to improve the availability, visibility and appeal of healthy food choices in food pantry settings.</p> <p>Adoption: 24 food pantries implemented Thumbs Up. 100% of food pantry partners implemented at least one PSE change.</p> <p>Reach: 39,214 (estimated)</p> <p>Comparison: Program reach was estimated to increase by 200% from 2017-2018.</p> <p>Methods: Adoption and reach reported in PEARS. Evaluation of the Thumbs Up program was conducted. See Table C-2 for more detail.</p> <p>Relevance, Lessons: Thumbs Up continues to be implemented in additional pantries increasing reach. Pilot data suggests the program makes it easier to make healthy choices in pantries and positively impacts pantry users' diet quality.</p>	12, 13
<p>Name of Intervention:</p> <p><i>Thumbs Up for Healthy Choices in Retail Settings</i></p>	<p>Intervention, potential sites: Thumbs Up is a PSE intervention that aims to improve the visibility and appeal of healthy options in small retail settings that accept SNAP benefits.</p> <p>Adoption: 4 stores implemented the Thumbs Up program. The implementation was led by SNAP-Ed and the Utah Department of Health.</p>	14

	<p>Reach: Individual reach unknown</p> <p>Comparison: This was the pilot year for Thumbs Up in a retail setting. Each store adopted at least 1 PSE change that improved the availability, ability or appeal of healthy options which resulted in improved sales of Thumbs Up promoted items.</p> <p>Methods: An adapted form of NYC's Adopt a Shop environmental scan tool was used to track PSE changes. The scan was conducted at the beginning and end of the fiscal year to show improvements in store environment. Changes were reported in PEARS.</p> <p>Relevance, Lessons: Thumbs Up in retail settings has potential to improve the availability, visibility and appeal of healthy choices where the SNAP-Ed target audience shops. Due to the time commitment required to work with store setting, partnerships result in the most thorough and effective implementation of the program.</p>	
Other metrics, if any	NA	
Other materials, if any	NA	

Table B-7, R2. Outcomes in Fruit and Vegetable Consumption Reported among Low-Income Populations, FFY [2018]

<u>Priority Indicator R2</u>	Accomplishments/Outcomes	Related SMART Objective/ Other Related <i>Framework</i> Indicators
Population Segments	<i>For the population segments below, describe and quantify the FV changes using the 6 points above as a guide.</i>	
Low-income, working-age adults, 18-59 years:	NA	NA

<u>Priority Indicator R2</u>	Accomplishments/Outcomes	Related SMART Objective/ Other Related Framework Indicators
Mothers with children	NA	NA
Low-income seniors, 60+ years:	NA	NA
Other low-income adult segment(s); specify:	NA	NA
High school-age youth:	NA	NA
Middle school-age children:	NA	NA
Upper elementary-age children:	NA	NA
Other segments, <19 years of age, specify	NA	NA
Other metrics, if any:	NA	
Other materials, if any:	NA	

Table B-8. Indicator from the SNAP-Ed Framework, Individuals, FFY [2018]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>ST1: Healthy Eating</u>	<p>Number/percent of adult participants with healthy behaviors: Participants report usually/always</p> <ul style="list-style-type: none"> 3,370 participants or 66.6% report an intent to choose a variety of foods based on MyPlate recommendations (a) 	3

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
	<ul style="list-style-type: none"> 3,748 participants or 74% report an intent to eat a variety of fruits and vegetable daily (g) (h) <p>Intervention(s): Create MyPlate; Youth years 5-17</p> <p>Behavioral changes, units: Some difference/Significant difference after taking Food \$ense classes</p> <ul style="list-style-type: none"> 46.8% report an intake of lean protein (a) 77.9% report an intake of fruit and vegetables (c) (d) 43.5% report an intake of low-fat dairy (i) 53.7% report an intake of whole grains (j) <p>Participants and reach: 11,143 or 3.59% of low-income population in Utah</p> <p>Duration: 1+ Month (140 parent participants surveyed)</p> <p>Tools used: Youth Parent Online Survey</p> <p>Comparisons: Continues to show progress in all areas evaluated when compared to previous 3 years of impact data.</p> <p>Relevance: Supports our evidence-based programming and allows for further funding and program improvement.</p>	4,9

Table B-9. Indicator from the SNAP-Ed Framework, Environmental Settings, FFY [yyyy]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>ST2: Food Resource Management</u>	Goal-setting or intent to change: Participants report usually/always <ul style="list-style-type: none"> 3,396 participants or 67% report an intent to stretch their food dollars so there is enough food to last through the entire month 	1, 2

Table B-10. Indicator from the SNAP-Ed Framework, Sectors of Influence, FFY [yyyy]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>ST3: Physical Activity and Reduced Sedentary Behavior</u>	Goal-setting or intent to change: Participants report usually/always <ul style="list-style-type: none"> 3,182 participants or 62.8% report an intent to choose to be physically active for at least 30 minutes, five days a week 	3

Table B-11. Indicator from the SNAP-Ed Framework, Population Results, FFY [2018]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>MT12: Social Marketing</u>	Campaigns, statewide, local (number): 3 statewide Reach/market segment of each campaign (number, %^A): 1) 2.9%, 2)6.9%, 3) 3.0%	6

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
	<p>Impressions/medium (TV, radio, outdoor, transit)/campaign (number): 1) NA, 2) Transit-179,305, 3) TV-10,000 & Transit-1,162,407</p> <p>Statewide reach/topic of each campaign (number, %^B): NA</p> <p>Reach/topic of each local/regional campaign (number, %^C): NA</p> <p>People receiving complementary non-media intervention/campaign (number): NA</p> <p>Unaided recall of state, local campaigns (number, %^D): NA</p> <p>^A Reach ÷ market segment x 100 = %</p> <p>^B Reach/campaign ÷ market segment x 100 = %</p> <p>^C Reach/topic in media market x 100 = %</p> <p>^D Recalled ÷ total exposed x 100 = %</p>	

Table C-1. Inventory of Evaluations, by Type, FFY [2018]

#	Name of Intervention Evaluated	Framework Indicators Tracked/ Monitored	Purpose of This Evaluation	Links to Online/ Published Results and Attachments
Formative Evaluations				
1	Thumbs Up Retail Observation Form	NA	Assessment tool used during development	here
Process Evaluations				
2	Create Better Health Survey	NA	Program evaluation	here

#	Name of Intervention Evaluated	Framework Indicators Tracked/ Monitored	Purpose of This Evaluation	Links to Online/ Published Results and Attachments
3	Create Farm Fresh Food Survey	ST1 ST5 MT8	Program evaluation	here
4	Thumbs Up Survey	ST5	Program evaluation	here
Outcome Evaluations				
5	Retrospective Create Better Health Pre/Post Participant Form	ST1-ST4	To show goals and intent to change from “Create Better Health” participants	here
6	Retrospective Create Family Meals Pre/Post Participant Form	ST1-ST3	To show goals and intent to change from “Create Family Meals” participants	here
7	Youth MyPlate Parent Online Survey	ST1	To show change in youth through their guardian’s perspective 1+ months later	here
Impact Evaluations				
8	6 Month Follow-Up Online Survey	MT1-MT4	To show change in our direct education participants 6 months later	here

Table C-2. Abstracts of Rigorous Evaluations, FFY [2018]

Abstract: Rigorous Evaluation #1 [2018]	
Title	Create Better Health (CBH) Adult Education Pilot Study
Rationale/Objective	Utah SNAP-Ed updated their adult education curriculum <i>Creates</i> to include a more structured set of lessons for frontline educators to effectively teach

	<p>participants how to eat well and be active on a budget. The evaluation was conducted to assess the format and effectiveness of the updated curriculum on nutrition and physical activity knowledge and intent to change related behaviors among adult SNAP-Ed participants.</p>
Intervention	<p>CBH is a direct nutrition education strategy. CBH is based on the USDA Dietary Guidelines 2015-2020 and teaches how to make nutritious food choices and be physically active. The curriculum also has a strong emphasis on scratch cooking using foods already on hand. Participants are encouraged to attend a series of four to eight classes.</p> <p>Delivery locations and partners for the pilot study included:</p> <ul style="list-style-type: none"> • Department of Workforce Services offices • Women, Infants, and Children (WIC) offices <p>Utah State University Extension Offices</p>
Audience/Sites/Systems	<p>108 adult SNAP-Ed participants in 6 counties in Utah were included in this pilot study.</p>
Design	<p>The study was a non-experimental design with participants completing a survey at the end of a CBH class. This study design was selected for the pilot of the curriculum. Results were used for program improvement. Ongoing evaluation of the curriculum's impact on participant nutrition and physical activity related behaviors is collected through a pre and post survey distributed at the beginning and end of each series. Follow-up surveys are also collected at the 6-month and 1-year post intervention.</p>
Methods	<p>A 30-item questionnaire was used to collect data on demographic characteristics including food security status, number of SNAP-Ed classes attended, as well as nutrition, cooking, and the effectiveness of the CBH class to improve nutrition and physical activity knowledge and behavioral intentions. Surveys were distributed by SNAP-Ed educators at the end of a <i>Create Better Health</i> class. Statistical analysis was conducted using SPSS 25.0. Analysis included Spearman rho and Mann-Whitney U Test.</p>
Main Outcome Measures	<ul style="list-style-type: none"> • Better understanding of MyPlate • Plans to change diet • Plans to be more physically active in next week • Confidence to create a healthy meal at home • New information about: <ul style="list-style-type: none"> -Cooking skills

	<ul style="list-style-type: none"> -How to stretch food dollars to last the month -How to keep food safe • Will make the recipe at home • Role of exposure on program impacts • Associations between food security level and program impacts
Results	<p>Participants agreed/strongly agreed they</p> <ul style="list-style-type: none"> • Have a better understanding of MyPlate (87%) • Plan to be more active (79%) • Have confidence to create meal at home (89%) • Have ideas to stretch food dollars (79%) • Have new information on cooking skills (83%) • Understand how to keep food safe (75%) • Plan to make recipe at home (96%) <p>Repeated exposure to the program resulted in better understanding of the cooking skills demonstrated ($r=.258$, $P=.011$), ability to create meals at home from food on hand ($r=.258$, $P=.011$) and new ideas for stretching food dollars ($r=.209$, $P=.040$) and being physically active ($r=.22$, $P=.031$).</p> <p>The class was particularly effective for participants who reported stress about having enough money make nutritious meals. These participants were more likely than food secure participants to leave the class with new ideas about how to be physically active ($P<.000$), a better understanding of cooking skills ($P<.000$), and a better understanding to keep food safe during preparation and storage ($P<.000$).</p>
Implications/Conclusions	<p>The pilot study suggests that CBH may increase nutrition, cooking, and physical activity knowledge among participants, especially those that are food insecure and attend multiple classes. Participants also reported intent to change nutrition and physical activity behaviors. Encouraged by these findings, CBH will be used as Utah SNAP-Ed's main adult education curricula. Ongoing evaluation to ensure the effectiveness of the curriculum at initiating sustainable behavior change will be conducted.</p>
Funding Sources	SNAP-Ed Grant

Title	Thumbs Up for Healthy Choices in Food Pantries
Rationale/Objective	Thumbs Up is a nudge program used in food pantries to make healthy choices easier in the food pantry. The evaluation was conducted to determine if the program was effective at making healthy choices easier to make and if food pantry users felt the program improved their dietary intake.
Intervention	Thumbs Up for Healthy Choices in food pantries is a PSE strategy. Thumbs Up uses product promotion nudge strategies, including shelf talkers and educators to help food pantry clients easily identify available healthy foods. This PSE strategy is supported by nutrition education booths in the waiting areas of the pantry. SNAP-Ed educators teach food pantry clients about the Thumbs Up program as well as provide a sample of healthy recipe that can be made using items available at the pantry. Thumbs Up is offered at client-choice food pantries throughout Utah.
Audience/Sites/Systems	Thumbs Up research was conducted in 6 urban food pantries that had the Thumbs Up program in place for at least 4 months. The sample size was 409 food pantry users, the majority of which were non-Hispanic, white females.
Design	The study was a non-experimental design with participants being asked at one point in time about their familiarity and experience with the Thumbs Up program. This study design was selected to maximize resources.
Methods	Data was collected over a one-month period at 6-urban food pantries. Undergraduate research assistants and SNAP-Ed educators approached clients in food pantry waiting areas and presented a letter of information that included details about the study. Participants who verbally agreed to participate were given the survey in English or Spanish. Results from the surveys were imported into SPSS 25.0 for analysis. Frequencies, descriptive statistics, chi-square associations and imputed logistic regression were analyzed.
Main Outcome Measures	<ul style="list-style-type: none"> • Recognition/familiarity with the Thumbs Up program. • Impact of Thumbs Up on reported dietary quality.

	<ul style="list-style-type: none"> • Associations between demographic characteristics and program impacts • Impact of exposure on program impacts.
Results	<ul style="list-style-type: none"> • 84% of participants agree/strongly agree Thumbs Up makes healthy choices easier. • 67% of participants agree/strongly agree they eat healthier since Thumbs Up was implemented. • Hispanics were more likely to report healthy eating for themselves ($p=.002$) and their families ($p=.001$) than non-Hispanics. • After controlling for age, ethnicity, and gender, program exposure was significantly associated with using targeted foods at home ($P<.001$) and selecting foods with Thumbs Up signs ($P=.002$). • The most commonly reported barriers to making healthy choices in pantries included lack of availability and lack of time to compare products.
Implications/Conclusions	<p>These results suggest that the Thumbs Up for Healthy Choices program positively impacts food pantry users' reported selection of targeted healthy foods. Nudge programs, including Thumbs Up, are low-input strategies that may improve food pantry users' selection and consumption of healthy foods. Thumbs Up is most effective when implemented as part of a multi-level intervention that also increases availability of healthy options and improves the nutrition knowledge and skills of pantry users.</p>
Funding Sources	Utah State University Extension Mini-Grant Program.

Section D: Connecting Fiscal and Program Results (Maximum length: 5 pages)

Table D-1. State's Funding Snapshot, FFY [2018]

Agency	Original Grant, FY [yyyy], \$	Original Carryover from Prior FY Approved in Annual Award Letter, \$	Total Approved Budget Amendments, \$	Midyear Carryover Amendments approved by FNS, \$	Year-End Final Approved Budget, \$
SIA #1 Utah State University Food Sense	1,560,394	0.00	NA	NA	1,560,394
SIA #2 (name)	NA				
SIA #3 (name)	NA				
SIA #4 (name)	NA				
State Agency (name)	NA				
Total State SNAP-Ed Grant for SA: (name)	1,560,394				\$1,560,394

Table D-2. SIA's Variance from the Planned Annual Budget and Carryover FFY [2018]

Type of Expenditure	Year-End Final Approved Budget, \$	Final Expenditures, \$ (Est)	% of Final Approved Budget Expended (Est)	Carryover Used to Cover Actual Expenditures, \$ (Est)
DIRECT COSTS				
Salary/Benefits	1,149,895.29	1,173,082.63	102%	NA
Contracts/Subcontracts	20,000	20,000	100%	NA
Materials	77,843.96	102,203.80	131%	NA

Type of Expenditure	Year-End Final Approved Budget, \$	Final Expenditures, \$ (Est)	% of Final Approved Budget Expended (Est)	Carryover Used to Cover Actual Expenditures, \$ (Est)
Other Direct Costs (Travel)	80,000.00	82,640.84	103%	NA
TOTAL DIRECT COSTS	1,327,739.25	\$1,377,927.27	102%	NA
TOTAL INDIRECT COSTS	232,654.75	202,466.73	87%	NA
TOTAL (DIRECT + INDIRECT)	1,560,394.00	1,580,394*	100%	NA
Carryover to Next FFY (Estimate): \$	NA	0.00	NA	NA

*\$20,000 was used from local state funds.

Table D-3. SIA's Reasons for Budget Variations, FFY [2018]

Line Item with Significant Variance from Approved Budget	Variance, \$ (%)	Explanation
Salary/Benefits	3%	Increased with staff changes and raises. Funding was from the decrease in (F&A/IDC)
Contract/Subcontracts	0%	No change.
Materials	31%	Supplies included copies, updated curriculum and protocol manuals needed printing. Hiring new staff increases supply needs.
Other Direct Costs (travel)	3%	Travel increased with staff increases. NEA trainings conducted 3 times in the year.
Indirect Costs	-13%	With the change in F&A (ICD) rates this decreased the amount that would be used from the plan. Allowing funding to be used in direct education purposes like materials, travel and salary/benefits.
Total SNAP-Ed Grant	0%	Total amount remained the same.

Table D-4. State's Administrative Expenditures, FFY [2018]

Agency	Year-End Total Expenditure, \$	Admin Salaries/ Benefits, \$	Indirect Costs, \$	Overhead Charge s, \$	Total Admin Costs, \$	% Total Admin Costs
SIA #1 Utah State University Food Sense	\$1,560,364	216,392.91	202,466.73	NA	\$418,859.64	27%
SIA #2 (name)						
SIA #4 (name)						
SIA #3 (name)						
State Agency (name)						
Other SA contractors, if any (name)						
Total State SNAP-Ed Grant:	\$1,560,364	216,392.91	202,466.73	NA	\$418,859.64	27%

Table D-5. Agencies and Businesses Funded to Provide SNAP-Ed Services, FFY [2018]

Name of Public Sector Contractor/ Sub-grantee	Geographic Area Where Services Were Delivered, Location of Organization	Primary SNAP-Ed Activities
Utah State University	All 29 counties in Utah	Direct, Indirect, PSE, Social Marketing, etc.
Name of Nonprofit Contractor/Sub-grantee	Geographic Area Where Services Were Delivered, Contractor Location	Primary SNAP-Ed Activities
NA		
Name of Business with SNAP-Ed Contracts	Geographic Area Where Services Were Delivered, Principal Location for SNAP-Ed Services	Primary SNAP-Ed Services
NA		

▲ **Appendix A: Accomplishments Tied to Other Indicators in the *SNAP-Ed Evaluation Framework* (OPTIONAL but highly encouraged)**

Table AA-1. Outcomes related to building infrastructure for positive change (ST5 and ST6), FFY [2018]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>ST5: Need and Readiness</u>	Sites/organizations with need for change: 40 Number of organizations/sites ready for change: 40	NA
<u>ST6: Champions</u>	Number of champions, by domain and setting type: 12, various counties in Utah nominated local champions for the Food Sense Annual Conference Awards Dinner. They included champions from Health Departments, Food Pantries and Charter Schools.	NA

Table AA-2. Outcomes Related to Helping Individuals Change, FFY [2018]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>ST1: Healthy Eating</u>	Please refer to table B-8	NA
<u>LT1: Healthy Eating</u>	NA	NA
<u>ST2: Food Resource Management</u>	Please refer to table B-9	NA
<u>LT2: Food Resource Management</u>	NA	NA
<u>ST3: Physical Activity and Reduced Sedentary Behavior</u>	Please refer to table B-10	NA

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>LT3: Physical Activity and Reduced Sedentary Behavior</u>	NA	NA
<u>ST4: Food Safety</u>	Goal-setting or intent to change: Participants report usually/always <ul style="list-style-type: none"> 3,501 participants or 69.2% report the intent to follow USDA Food Safety recommendations 	NA
<u>MT4: Food Safety</u>	Number and percent of participants reporting practice changes at home: Most of the time/Always (220 surveyed) <ul style="list-style-type: none"> 68 participants or 31% reported an increase in washing hands and surfaces before and after food preparation (a) 68 participants or 31% reported an increase in cooking food thoroughly using USDA recommendations (d) 48 participants or 22% reported increase in refrigerating meat, dairy and other perishables promptly (d) 	NA
<u>LT4: Food Safety</u>	NA	NA

Table AA-3. Outcomes Related to Creating Settings with Healthy Environments, FFY [2018]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>LT5: Nutrition Supports Implementation</u>	Number of sites/organizations that implement multi-component/multi-level interventions with changes as in MT5:	12, 13 & 14 MT5

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
	<ul style="list-style-type: none"> 27 sites (food pantries & small stores) <p>Number of PSEP components per site/organization, and types of components:</p> <ul style="list-style-type: none"> Varied number of PSEP components per site. Component types included promotional materials including shelf talkers & educators, product placement, increased availability of healthy options. Number of sites/organizations that made >PSEP change and showed improved food environment assessment scores: 87% of sites that had a baseline and follow-up environmental scan conducted improved their score. 	
<u>MT6: Physical Activity and Reduced Sedentary Behavior Supports</u>	NA	NA
<u>LT6: Physical Activity Supports Implementation</u>	NA	NA
<u>LT7: Program Recognition</u>	<ul style="list-style-type: none"> Program awards partners received (number, award names): <ul style="list-style-type: none"> Best of State Community Education Award NEAFCS Innovation in Programing: Creaciones en la Cocina Curriculum 3rd Place Western Region NEAFCS SNAP-Ed/EFNEP Educational Program: Thumbs Up for Healthy Choices 1st Place Western Region UEAFCS Innovation in Programing: Creaciones en la Cocina Curriculum 1st Place Utah UEAFCS SNAP-Ed/EFNEP Educational Program: Thumbs Up for Healthy Choices 1st Place Utah Partner organizations winning higher rank (number, award): NA 	LT7d

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
	<ul style="list-style-type: none"> ▪ Partners maintaining rank (number, award): NA ▪ Total reach of organizations with awards: NA 	
LT8: Media Coverage	<p>Electronic, print outlets:</p> <ul style="list-style-type: none"> • Eat Well Utah Newsletter, also referred to as the Utah Intergenerational Poverty Newsletter (S-1), 694,031 emails sent • USU Extension and Food \$ense (SNAP-Ed) 2018 Calendars 7000 calendars distributed • Cinco de Mayo 2325 healthy Cinco de Mayo recipes distributed <p>Websites:</p> <ul style="list-style-type: none"> • USU Extension Food \$ense (SNAP-Ed) https://extension.usu.edu/foodsense/ <p>Social media:</p> <ul style="list-style-type: none"> • Blogs <p>Eat Well Utah https://eatwellutah.org/</p> <p>Kids Create! https://kidscreatesite.wordpress.com/</p> <p>Snappily Ever After (no longer active) http://snappilyforever.blogspot.com/</p> <ul style="list-style-type: none"> • Instagram <p>Eat Well Utah https://www.instagram.com/eatwellutah/</p> <p>Food Sense Utah https://www.instagram.com/foodsense_utah/</p>	NA

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
	<p>Snappily Ever After (no longer active) http://instagram.com/snappilyeverafter</p> <ul style="list-style-type: none"> Pinterest <p>Eat Well Utah https://www.pinterest.com/eatwellutah/</p> <p>Food Sense Utah https://www.pinterest.com/foodsenseutah/</p> <p>Snappily Ever After (no longer active) http://pinterest.com/snappilyeverafter</p> <ul style="list-style-type: none"> Twitter <p>Eat Well Utah https://twitter.com/EatWellUtah</p> <p>Food Sense Utah https://twitter.com/UtahFoodSense</p> <p>Snappily Ever After (no longer active) http://twitter.com/snappilyforever</p> <ul style="list-style-type: none"> YouTube <p>Food \$ense Creates https://www.youtube.com/channel/UCp5fRTxguUUUpO-OJWXLx3FQ/</p> <ul style="list-style-type: none"> Facebook (Statewide Audience) <p>Eat Well Utah – SNAP-Ed https://www.facebook.com/eatwell.utah</p> <p>Utah Food Sense – SNAP-Ed http://www.facebook.com/utahfoodsense</p> <p>Kids Create https://www.facebook.com/kidscreatefoodsense/</p>	

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
	<p>Creacions en la Cocina https://www.facebook.com/enlacocina/</p> <p>Snappily Ever After (no longer active) https://www.facebook.com/snappilyeverafterblo g/</p> <p>12 County Facebook pages are also active and share content from the above state-wide pages along with local information.</p> <ul style="list-style-type: none"> TV Guest Appearances <p>November: <u>Thanksgiving Cornucopia Fruit & Veggie Tray</u> -- Jaqueline Neid-Avila, Davis County Extension Agent, on Fox13</p> <p>December: <u>10 Best Healthy Foods of 2017</u> -- Tayla Russell, Social Media NEA, on Fox 13</p>	
<u>LT9: Leveraged Resources</u>	<p>In-kind contributions (\$):</p> <ul style="list-style-type: none"> \$756 In-kind donation from MAV Media for radio ads \$1050 In-kind donation for public transit ads. \$32,000 In-kind state appropriation for expanding nutrition education. \$50,000 In-kind USU funding. 	NA
<u>LT10: Planned Sustainability</u>	NA	NA
<u>LT11: Unexpected Benefits</u>	<ul style="list-style-type: none"> New public policies (number, description): New initiatives by nonprofit partners (number, description): New business initiatives(number, description): Other, related but exceeding <i>Framework</i> metrics (describe): 	NA

Table AA-4. Outcomes Related to Working across Sectors toward Collective Impact, FFY [2018]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
<u>MT7: Government Policies</u>	NA	NA
<u>LT13: Government Investments</u>	NA	NA
<u>LT12: Food Systems</u>	<ul style="list-style-type: none"> • Food banks with new PSE changes (number): 5 food pantries worked with SNAP-Ed and other community partners to conduct healthy food drives and glean fresh produce to improve availability of healthy foods in the pantry. 	NA
<u>MT8: Agriculture</u>	<ul style="list-style-type: none"> • Farmers' markets accepting EBT (number/10,000 SNAP ppts): 0.61/10,000 SNAP ppts • On-farm markets accepting EBT (number/10,000 SNAP ppts): 0.09/10,000 SNAP ppts • CSAs accepting EBT (number/10,000 SNAP ppts): 0.03/10,000 SNAP ppts • Farmers' markets offering SNAP-incentive (number): 20 (including farm stands), 17 (just farmers markets) • School districts with Farm-to-School (number): 30 • Low-income communities with farmers' markets (%): 11.3% (Percent of tracts with a FM within the tract), 62.9% (Percent of tracts relatively close to a FM in at least somewhat walkable areas) • Low-income residents with increased access to new policy/program: <ul style="list-style-type: none"> -In census-defined area (number): 45 (1822-census area) -SNAP-Ed eligible people (number, %^A): 16 (667-census area), 36.6% 	5, 16

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related Framework Indicators
	^A People <185% FPL ÷ total population x 100 = %.	
<u>LT14: Agriculture Sales and Incentives</u>	NA	NA
<u>MT9: Education Policies</u>	NA	NA
<u>LT15: Educational Attainment</u>	NA	NA
<u>MT10: Community Design and Safety</u>	NA	NA
<u>LT16: Shared Use Streets and Crime Reduction</u>	NA	NA
<u>MT11: Health Care Clinical-Community Linkages</u>	NA	NA
<u>LT17: Health Care Cost Savings</u>	NA	NA
<u>MT12: Social Marketing</u>	Please refer to table B-11	NA
<u>MT13: Media Practices</u>	NA	NA
<u>LT18: Commercial Marketing of Healthy Foods and Beverages</u>	NA	NA
<u>LT19: Community-wide Recognition Programs</u>	NA	NA

Table AA-5. Outcomes related to tracking healthy change among low-income populations (R2), [2018]

Indicator	Accomplishments, Links (List Online Links and Refer to Attachments in Appendix A, if any)	Related SMART Objectives/Other Related <i>Framework</i> Indicators
<u>R1: Overall Diet Quality</u>	NA	NA
<u>R3: Whole Grains</u>	NA	NA
<u>R4: Dairy</u>	NA	NA
<u>R5: Beverages</u>	NA	NA
<u>R6: Food Security</u>	NA	NA
<u>R7: Physical Activity and Reduced Sedentary Behavior</u>	NA	NA
<u>R8: Breastfeeding</u>	NA	NA
<u>R9: Healthy Weight</u>	NA	NA
<u>R10: Family Meals</u>	NA	NA
<u>R11: Quality of Life</u>	NA	NA

▲ **Appendix B: List of Attachments (Maximum length: 150 pages)**

Table AB-1. List of Attachments, FFY [2018]

#	Title and Type of Attachments	Annual Report Sections to Which Attachment Relates
1	Thumbs Up SNEB Poster	Attached. http://extension.usu.edu/fscreate/publications_presentations_journal_articles
2	CBH GEM	https://www.jneb.org/article/S1499-4046(18)30850-9/fulltext Create Better Health a Practical Approach to Improving Cooking Skills and Food Security.
3	JNEAFCS	https://www.neafcs.org/assets/documents/journal/2017%20jneafcs%20final%202.pdf page 137 Evaluating the Effectiveness of the SNAP-Ed CREATE Curriculum.
4	Utah Report	www.extension.usu.edu/fscreate Coming January 2019
5	Utah SNAP-Ed Works	https://www.linkedin.com/company/food-ense-utah-snap-ed/ https://twitter.com/utah_ed https://www.facebook.com/UtahSNAPEd

Creating Healthy Behaviors Among Utah's SNAP-Ed Participants

Casey Coombs, RD, CD, Mateja R. Savoie-Roskos, PhD, MPH, RD, Heidi LeBlanc, MS, Sarah Steed, Kim Garrity

Introduction

Utah's Supplemental Nutrition Assistance Program-Education (SNAP-Ed), Food Sense, developed the innovative *CREATE* curriculum which teaches low-income Utahns how to eat according to the Dietary Guidelines for Americans. The *CREATE* curriculum aims to give participants the knowledge, confidence, and cooking skills necessary to create a variety of nutritious meals from common ingredients. It is well established that low-income Americans are at an increased risk of several chronic diseases^{1,2}. It is paramount that nutrition education curricula are available to improve this population's ability to make food and physical activity choices that support a healthy lifestyle^{3,4}. The purpose of this study was to evaluate the effectiveness of the *CREATE* curriculum on participants' intention to change and their actual behavior change in regards to a variety of nutrition-related behaviors.

Methods

The SNAP-Ed *CREATE* Curriculum was evaluated through three participant surveys. After receiving a SNAP-Ed lesson, participants were asked to complete the class participant survey. This survey included retrospective pre-post questions related to their nutrition behaviors before and intention to change those behaviors after receiving SNAP-Ed nutrition education. Participants were also asked to complete a six-month follow-up survey. This survey included 20 retrospective pre-post nutrition-related behavior change questions. In addition, three questions allowed participants to share personal stories and experiences through qualitative responses. All participants received a punch card to track the number of SNAP-Ed classes they attended over the study period. Participants were provided a link to take the follow up survey online after attending six SNAP-Ed classes. This survey included 20 questions about a wide variety of nutrition and physical activity-related behaviors. Retrospective pre-post questions were analyzed using the Wilcoxon Signed Rank test. Qualitative data was organized into codes and themes were developed.

Results

Participants were surveyed up to three points in time; after participating in one SNAP-Ed class (n=6,825), after receiving at least six SNAP-Ed classes (n=168), and six-months after receiving at least one SNAP-Ed class (n=249).

Results (cont'd)

The majority of participants were non-Hispanic, white females ranging from 18 to 60 years of age and either receiving or eligible to receive nutrition assistance benefits. Participants reported an intention to improve all nutrition-related behaviors in pre-post surveys after participating in a SNAP-Ed class (P<0.001). Participants also reported actually changing these behaviors six-months later (P<0.001). After receiving six SNAP-Ed classes, participants reported consuming more whole grains, fruits and vegetables, and less saturated fats and processed food. The majority of participants who completed the six-month follow-up survey discussed how their families have been consuming an overall healthy and well-balanced diet since attending SNAP-Ed classes. Many reported that they have the knowledge base and resources to continue living a healthier lifestyle. Participants feel that they are able to incorporate healthier ingredients into their meals, including items that they would have never used prior to SNAP-Ed classes.

Figure 1. Changes in Nutrition Behaviors After SNAP-Ed Classes

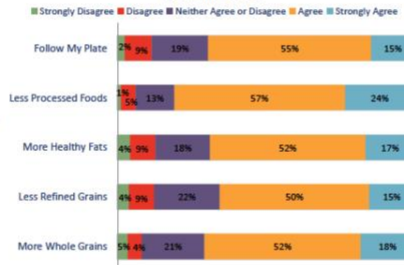


Table 1. Intent to Change and Self-Reported Nutrition-Related Behavior Change in Adult SNAP-Ed Participants in Utah

Questions*	Intent to Change			Self-Reported		
	Retrospective Pretest median (SD)	Retrospective Posttest median (SD)	P-value	Retrospective Pretest median (SD)	Retrospective Posttest median (SD)	P-value
Stretch food 5	4 (3, 5)	4 (4, 5)	<.001	4 (2, 5)	4 (4, 5)	<.001
Shop with a list	4 (3, 5)	4 (4, 5)	<.001	4 (3, 4)	4 (4, 5)	<.001
Prepare meals at home 2-3x/week	4 (3, 5)	5 (4, 5)	<.001	5 (4, 5)	5 (4, 5)	<.001
Eat meals as family 2-3x/week	4 (3, 5)	5 (4, 5)	<.001	4 (3, 5)	5 (4, 5)	<.001
Physically active for 30 minutes 3x/week	4 (3, 5)	4 (3, 5)	<.001	3 (2, 4)	4 (3, 5)	<.001

Table 2. Qualitative Data of SNAP-Ed Participants from the 6 Month Follow-Up Survey

Questions	Participant Responses
How did Food Sense change family diet?	"Food Sense lessons have increased my awareness of other whole grains my family can add to our food storage, prepare, and eat." "We are sitting down as a family more to eat healthier meals and snacks."
Stories about knowledge gained	"I have a neighbor that I was able to share the information with. We make our shopping list together now. We can trade recipes and [we cook with] most of the foods we are growing in our garden. Food Sense has helped us broaden our horizons." "I love shopping with a menu now. It saves so much money for my family. There are times I am asked how I keep our grocery budget so low and I always tell them about the benefits of making a menu before you shop and then sticking to your shopping list."
Stories about lessons	"I really enjoy going to the classes. My boys that go too have been more willing to try new and different foods because they tried it at the class." "I come with a friend of mine who has challenges, she loves the lessons, [company, and delicious food]. Because you make her day, you make my day too."

Conclusions

These results suggest the *CREATE* curriculum is an effective tool for changing a variety of nutrition-related behaviors of its class participants that result in an overall healthier lifestyle. The innovative approach of the *CREATE* lessons to teach participants basic cooking techniques that can be used with any ingredients they have on hand, rather than a single recipe, may attribute to its effectiveness in creating sustained, healthy eating patterns. Further research should be conducted that specifically evaluates the impact of the cooking skills gained in the *CREATE* classes on participants' ability to make and sustain the dietary improvements found in this study.

References

- Martin KS & Ferris AM. Food insecurity and gender are risk factors for obesity. *J Nutr Behav Educ.* 2007;39(1):31-36.
- Darmon H & Drewnowski A. Does social class predict diet quality? *Am J Clin Nutr.* 2008;87:1107-17.
- Jacori M, Lou WY, L'Abbe MP. The 2015 Dietary Guidelines for Americans is associated with a more nutrient-dense diet and a lower risk of obesity. *Am J Clin Nutr.* 2016;104(5):1378-1392.
- Slavin JJ & Lloyd B. Health benefits of fruits and vegetables. *Advances in Nutrition.* 2012;3:506-516.



EXTENSION  FOOD SENSE SNAP-ED
UtahStateUniversity

Create Better Health: A Practical Approach to Improving Cooking Skills and Food Security

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INTRODUCTION

Low-income individuals are at a higher risk for food insecurity, certain chronic diseases, and poor dietary intake as compared to their higher-income counterparts.¹ As a result, it is essential that low-income individuals eligible for the Supplemental Nutrition Assistance Program (SNAP) are provided with opportunities to advance their nutrition-related knowledge, skills, and self-efficacy.^{2,3} Unlike other federal nutrition assistance programs, SNAP participants receive benefits only once a month and have very few restrictions on what foods can be purchased.⁴ The Supplemental Nutrition Assistance Program-Education (SNAP-Ed) is available to help SNAP-eligible individuals make healthy food choices with their SNAP benefits, incorporate physical activity into their daily lives, and improve their food security status.⁵ Developing and evaluating SNAP-Ed curricula remains important to ensure that curriculum content is evidence based, consistent with the most current Dietary Guidelines for Americans, and effective at facilitating behavior change among SNAP-eligible individuals.^{3,6}

The Utah SNAP-Ed program developed the *Create Better Health (CBH)* curriculum,⁷ which augments the

previously used *Create* curriculum.^{8,9} The *CBH* curriculum was developed to 1) incorporate a greater emphasis on physical activity and 2) expand upon the curriculum content and teaching instructions to provide a more structured guide for the Nutrition Education Assistants (NEA) when using the curriculum to teach SNAP-Ed classes. This additional structure also helps ensure that the curriculum is implemented consistently among NEAs across the state. Although many other curricula for SNAP-Ed programs exist, this curriculum is designed with an emphasis on improving food resource management through the use of the ‘create’ concept, making it unique and valuable to educators who want to help others eat healthfully even when limited by availability of foods, recipes, and kitchen appliances. Furthermore, the *CBH* curriculum strongly emphasizes physical activity-related skills and information in each lesson, which is highly encouraged in the SNAP-Ed Plan Guidance.¹⁰

THE CURRICULUM

The *CBH* curriculum, which is based on the 2015–2020 Dietary

Guidelines for Americans,⁸ was developed by a team of Utah SNAP-Ed program specialists and educators.⁷ Based on Social Cognitive Theory,¹¹ the goal of this curriculum is to improve nutrition and physical activity-related knowledge, skills, and self-efficacy to help SNAP-eligible individuals lead an active and healthy life on limited resources.¹¹ Using a paraprofessional model, NEAs conducted a series of 4–8 60-minute classes. There were 3 lessons that Utah SNAP-Ed specialists determined to be essential to be included in each series. The NEAs were able to determine which of the other 5 lessons they wanted to include in the series based on participant needs and interests. This curriculum was offered in a series because repeated education has been found to be more impactful than 1-time education.¹²

The [Table](#) includes a list of lesson topics, objectives, and cooking demonstrations. All lessons contain 3 main components including a nutrition lesson, physical activity discussion, and a cooking demonstration. To help keep participants engaged during the lesson, “discussion starters” and “NEA tips” were included in the curriculum for each lesson. Discussion starters are open-ended questions that NEAs can use to engage participants and cater the content to their needs. These questions were designed to help the NEA capture changes the participants make as a result of what they learn during the series. The NEA tips included activities and other strategies that experienced NEAs previously determined to be essential to keeping lessons lively and interesting. During the hands-on cooking demonstration, NEAs facilitated a discussion on how

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Table. Create Better Health Lesson Topics, Objectives, and Cooking Demonstrations

Lesson #	a) Nutrition Topic b) Physical Activity Topic	Select Lesson Objectives	Create Demonstration Options
1 ^a	a) Introduction to MyPlate b) Introduction to physical activity recommendations	Identify the 5 food groups represented in MyPlate. Identify USDA's physical activity recommendations.	Create a skillet meal
2 ^a	a) Meal planning & grocery shopping b) Physical activity goal setting	Name 3 grocery shopping tips that help stretch food dollars. Define realistic physical activity goal setting.	Create a stir fry OR create a pizza
3	a) Nutrition facts label b) Overcoming physical activity barriers	Use the Nutrition Facts Label to make healthier food selections. Identify barriers to being physically active and at least one strategy to overcome that barrier.	Create a soup OR create a quick bread
4	a) Fruits & vegetables b) Aerobic activity	Identify the number of cups of fruits and vegetables needed per day according to MyPlate. Name 3 ways to increase fruit and vegetable consumption. Define aerobic activity and USDA's recommendations for aerobic activity.	Create amazing veggies OR create a salad
5	a) Protein & food safety b) Resistance training	Identify the amount of protein needed per day according to My Plate. Explain the importance of protein and how to choose lean protein options. Define resistance training.	Create an omelet
6	a) Grains b) Balance & flexibility	Explain the benefits associated with eating whole grains. Identify how many ounces of whole grains needed per day according to MyPlate. Identify the recommendations for balance and flexibility activity.	Create a wrap/sandwich OR create a casserole
7	a) Dairy & smart beverage choices b) Injury prevention	Explain the benefits associated with dairy and making smart beverage choices. Identify tips for preventing injury during physical activity.	Create a smoothie
8 ^a	a) Healthy eating patterns b) Physical activity review	Identify the 3 focuses of the 2015 Dietary Guidelines that are important to create better health. Define USDA's recommendations for physical activity.	Create a fruity dessert

USDA indicates US Department of Agriculture.

^aMust be included in the series.

Notes: All lessons also include the following objectives: 1) Identify at least 2 tips to stretch food dollars by cooking at home; 2) Demonstrate the skills necessary to create nutritious desserts using healthy ingredients.

to adapt the recipe to incorporate foods participants had in their kitchens.

The NEAs attend 3–4 regional trainings annually during which they receive instruction on best practices to reach and engage their audience, including how to use NEA tips and discussion starters. The NEAs are given the opportunity to practice, observe, and give and receive feedback on teaching techniques in small group settings that include their peers, supervisors, and regional NEA trainers.

Easy recipe adaptation is taught through the use of the 'create' concept. The goal of the 'create' concept is to increase the self-efficacy of participants so they feel prepared to make a healthy meal out of foods they had on hand rather than needing to buy specific ingredients for a recipe. 'Create' concepts teach participants the step-by-step process to create a variety of healthful dishes, including skillet meals, casseroles, soups, sandwiches, smoothies, omelets, pizza, and salads. As NEAs demonstrate each step of the recipe,

participants are encouraged to share ideas of common ingredients that could be substituted into each step of the dish to cater it to items they regularly have at home.

The Figure includes examples of handouts that are distributed during CBH classes that support the 'create' concept. Teaching SNAP-Ed participants how to stretch their food dollar by using foods on hand is a practical approach to improve food security among this vulnerable population. Each CBH class ends with participants setting personal nutrition and



Create a Soup



MyPlate, MyWins: Make it yours
Developed by the USDA's Center for Nutrition Policy and Promotion. Available at choosemyplate.gov.



Create a Pizza



Good Foods to Have on Hand

Figure. Examples of Create Better Health handouts. Figures reprinted with permission.

physical activity goals. Participants are encouraged to share facilitators and barriers to meeting their goals during subsequent classes. The curriculum was piloted by 9 NEAs across the state of Utah over a 6-month period. Classes were held in 6 counties in locations that serve SNAP-eligible individuals including the Department of Workforce Services, Women, Infants, and Children; and Utah State University Extension Offices.

After attending one CBH class within a series, the NEAs read a recruitment script asking participants to complete an evaluation on their experiences with the SNAP-Ed class. Participants had to be 18 years of age or older and English-speaking to complete the evaluation. Interested participants were asked to review and sign an informed consent prior to completing the paper evaluation. Participants received a small kitchen utensil (valued up to \$5) for their time.

EVALUATION

A 30-item evaluation tool was developed by Utah SNAP-Ed specialists to determine the impact of the CBH curriculum. Survey questions were compared to the curriculum for content validity. Internal consistency was measured using Cronbach α . Nine questions addressed nutrition and physical activity-related knowledge and behavioral intentions ($\alpha = .94$), and 4 questions addressed the usefulness of the curriculum content ($\alpha = .93$), with an overall Cronbach α of .96 demonstrating strong internal consistency.¹³ The remaining questions asked about demographic characteristics, qualitative experiences of the SNAP-Ed class, food security status, and program satisfaction.

There were 108 English-speaking adult participants that completed the evaluation during the pilot study. Ninety-seven percent of participants reported being satisfied/very satisfied with the SNAP-Ed class, and 93% reported interest in attending another SNAP-Ed class in the future. Most participants (97%) reported that the length of the class and the amount of information provided was "just right."

When asked to describe their experiences in open-ended questions on the evaluation, participants responded very positively about the CBH classes. One participant stated

[This was] the most comprehensive cooking class I've ever had. I just want to keep coming because not too much information is shared so it's not overwhelming. Just right for moms like us.

Another participant mentioned

I really enjoyed this class. I got so much great information and love the versatility of the recipes.

Participants seemed to appreciate the overall 'create' concept of the curriculum. For example,

I learned a lot about quick meals that are healthy and good without spending too much since most [of the food] is in my pantry.

There was a small yet significant positive correlation between the number of CBH classes attended and new ideas for physical activity ($r_s = .221$, $df = 94$, $P = .031$), better understanding of specific cooking skills highlighted in the lessons ($r_s = .258$, $df = 95$, $P = .011$), ability to create meals at home from food on hand ($r_s = .203$, $df = 96$, $P = .045$), and ideas for stretching food dollars ($r_s = .209$, $df = 95$, $P = .040$) [Spearman rank-order correlation] (SPSS version 23, IBM Corp., Armonk, NY, 2015).

FUTURE PLANS

Encouraged by the effectiveness of the CBH curriculum, Utah SNAP-Ed specialists are working on submitting the curriculum to the national SNAP-Ed Toolkit, which would make it an approved curriculum for SNAP-Ed programs across the country.¹⁴ Each CBH lesson is being made into a full-length video for individuals who are not able to attend in-person classes due to common barriers such as busy schedules, transportation, and childcare, to name a few. Short 5-minute lessons, broken up by specific curriculum topics, are also being developed to distribute and share on various social media platforms as additional resources for participants. In general, the development of supplementary

online learning materials is essential for ensuring that all SNAP-eligible individuals have access to SNAP-Ed nutrition education materials.

The CBH curriculum, handouts, and evaluation can be used by SNAP-Ed, Expanded Food and Nutrition Education Program, and other nutrition education professionals who help low-income individuals make healthy choices on a limited food budget. These results support the recommendation of teaching the CBH lessons in a series. Therefore, this curriculum may be especially applicable for nutrition professionals who teach a series of lessons to the same group of participants.

NOTES

This study was approved by the Institutional Review Board at Utah State University (protocol #7595). Participants were asked to sign an informed consent prior to completing the survey. Participants received a small kitchen utensil (valued up to \$5) for completing the survey. Funding support for curriculum, programming, and evaluation came from the US Department of Agriculture Supplemental Nutrition Assistance Program-Education grant and Utah State University Extension. Special thanks to the Food Sense NEAs and Extension faculty in Davis, Weber, Iron, Juab, Utah, and Box Elder counties for their assistance with this data collection. The CBH Curriculum and handouts are available on the Utah State University Extension Food Sense website.⁷

REFERENCES

1. Gregory CA, Coleman-Jensen A. Food Insecurity, Chronic Disease, and Health Among Working-Age Adults. Washington, DC: Economic Research Service, US Department of Agriculture; 2017.
2. Kaiser L, Chaidez V, Algert S, et al. Food resource management education with SNAP participation improves food security. *J Nutr Educ Behav*. 2015;47:374-378.
3. Rivera RL, Maulding MK, Abbott AR, Craig BA, Eicher-Miller HA. SNAP-Ed (Supplemental Nutrition Assistance Program-Education) increases long-term food security among Indiana

- households with children in a randomized controlled study. *J Nutr*. 2016;146:2375-2382.
4. US Department of Agriculture. Supplemental Nutrition Assistance Program (SNAP). Updated April 25, 2018. <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap>. Accessed May 8, 2018.
 5. US Department of Agriculture, US Department of Health and Human Services. 2015-2020 *Dietary Guidelines for Americans*. 8th ed. Washington, DC: US Department of Agriculture and US Department of Health and Human Services. 2015. <https://health.gov/dietaryguidelines/2015/guidelines/>. Accessed May 8, 2018.
 6. Murray EK, Auld G, Inglis-Widrick R, Baker S. Nutrition content in a national nutrition education program for low-income adults: content analysis and comparison with the 2010 dietary guidelines for Americans. *J Nutr Educ Behav*. 2015;47:566-573.
 7. Coombs C, Neid-Avila J. Create Better Health: Food \$ense (SNAP-Ed) Adult Nutrition Education Curriculum. Washington, DC: US Department of Agriculture; 2018.
 8. Savoie-Roskos MR, Coombs C, Garrity K, LeBlanc H, Jimenez L. Evaluating the effectiveness of the SNAP-Ed CREATE Curriculum. *J NEAFCS*. 2017;12:137-147.
 9. Christofferson D. *Creates Curriculum: Essentials in Creating Family Meals*. 1st ed. Utah: Utah State University Extension; 2013.
 10. US Department of Agriculture, Food and Nutrition Service, Supplemental Nutrition Assistance Program. SNAP-Ed Plan Guidance FY 2019, Nutrition Education and Obesity Prevention Grant Program. Washington, DC: US Department of Agriculture; 2018.
 11. Glanz K, Rimer BK, Viswanath K. *Health Behavior: Theory, Research, and Practice*. 5th ed. San Francisco, CA: Jossey-Bass; 2015.
 12. Olander C. Nutrition Education and the Role of Dosage. Alexandria, VA: Food and Nutrition Service, US Department of Agriculture; 2007.
 13. DeVellis RF. *Scale Development: Theory and Applications*. 4th ed. Thousand Oaks, CA: Sage; 2017.
 14. US Department of Agriculture. SNAP-Ed Toolkit, Obesity Prevention Interventions and Evaluation Framework. Updated October 4, 2016. <https://snap-edtoolkit.org/framework/index/>. Accessed May 8, 2018.

BEST PRACTICES

Evaluating the Effectiveness of the SNAP-Ed *CREATE* Curriculum

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ABSTRACT

The *CREATE* Curriculum was developed by the Utah SNAP-Ed program to increase nutrition and physical activity related knowledge, skills, and self-efficacy among low income individuals in effort to prevent obesity and chronic diseases. The objective of this study was to assess intention to change and actual behavior change of participants after attending SNAP-Ed classes that utilized the *CREATE* Curriculum. The results of this study suggest that the *CREATE* Curriculum is an effective nutrition education tool for improving select nutrition-related behaviors associated with a reduced risk of obesity and chronic diseases among SNAP-Ed participants.

The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) uses evidence-based nutrition education and obesity prevention strategies to initiate nutrition-related behavior change among low-income individuals. The goal of SNAP-Ed is to educate low-income individuals to make “healthy food and lifestyle choices that prevent obesity” (United States Department of Agriculture [USDA], 2016). SNAP-Ed programming has been found to improve food security, increase fruit and vegetable intake, and intention to change a variety of nutrition-related behaviors (Rivera, Maulding, Abbott, Craig, & Eicher-Miller, 2016; Savoie et al., 2015). However, more research is needed to determine long-term changes in overall dietary patterns and healthy lifestyle choices of individuals after receiving nutrition education (Molitor, Sugerman, & Sciortino, 2016; Savoie et al., 2015).

Low-income Americans experience many barriers that make it difficult to prepare healthy meals at home, including lack of time, limited access to and cost of nutritious foods, and lower confidence in their ability to create meals with what is available to them (AbuSabha, Namjoshi, & Klein, 2011; Aggarwal, Monsivais, Cook, & Drewnowski, 2011). As a result, SNAP participants report purchasing large quantities of prepared foods and calorie-dense processed foods (USDA, 2012). Utah's SNAP-Ed program has developed an innovative curriculum, *CREATE*, which aims to help participants overcome these barriers by increasing knowledge, skills, and self-efficacy with purchasing and creating healthful meals. *CREATE* teaches participants general recipes that can be easily adjusted to include ingredients they have on hand. These skills increase participants' confidence, subsequently improving the likelihood that they will make sustained healthier food choices (Burton, Reid, Worsley, & Mavondo, 2017).

OBJECTIVES

To date, no study has determined if participation in SNAP-Ed classes that utilize the *CREATE* curriculum are associated with short-term or long-term nutrition-related behavior change. The objective of this study was to evaluate the effectiveness of the *CREATE* curriculum on participants' progression from intent to change nutrition-related behaviors to long-term healthy eating patterns.

METHOD

The *CREATE* Curriculum, developed by the Utah SNAP-Ed program, was used for all SNAP-Ed nutrition education classes that were offered to low income individuals across the state of Utah. A convenience sample of SNAP-Ed participants was surveyed in 2014 and 2015. Data were collected through three survey tools including: class participant survey, six-month follow up survey, and the six-class follow up survey, each of which is discussed in detail below. This study was approved by the Institutional Review Board at Utah State University and was funded by the Utah State University Extension.

All SNAP-Ed participants who attended a SNAP-Ed class during the study period were asked to complete the class participant survey at the end of class. This survey included basic demographic information regarding income eligibility, age, gender, race, ethnicity, number of people in the household, and participation in nutrition assistance programs. Through a retrospective pretest posttest survey design, participants were asked seven questions related to their nutrition-related behaviors prior to taking SNAP-Ed classes and their intention to change behaviors after attending a SNAP-Ed class.

Participants were also asked to provide their email address or phone number if they were willing to complete the six-month follow up survey. For those participants who agreed, they were contacted via email or phone six months later. The six-month follow up survey included the same basic demographic questions as the class participant survey and 20 nutrition-related behavior change questions formatted in a retrospective pretest posttest design. Participants who completed this survey were entered into a drawing for a kitchen appliance valued at \$250.

Participants received a punch card after their first SNAP-Ed class to track the number of classes they attended over the study period. Once participants attended six SNAP-Ed classes, they were provided with a link and contact information to either take the six-class follow up survey online or over the phone with a SNAP-Ed employee. In addition to the previously listed demographic questions, this survey included 20 questions about current nutrition and physical activity behaviors, which were different than the questions included in the class participant survey and the six-month follow up survey. Participants who completed this survey received a small kitchen appliance valued up to \$20.

Data were compiled and entered in SPSS 21.0 for data analysis. Mean, median, standard deviations, and interquartile range were reported. Retrospective pretest posttest questions were analyzed using the Wilcoxon Signed Rank test and reported using P-values.

RESULTS

A convenience sample of SNAP-Ed participants completed the class participant survey (n=6,825), six-month follow up survey (n=249) and six-class follow up survey (n=168). Demographic characteristics of participants are found in Table 1. The majority of participants in each survey were non-Hispanic white females with ages ranging from 18 years old to over 60 years of age. Most participants who completed the class participant survey and the six-month follow up survey reported either receiving assistance or being eligible to receive assistance benefits such as SNAP, food pantry, WIC, among others.

Table 2 includes the medians, interquartile ranges, and P-values of the seven retrospective pretest and posttest questions from the class participant survey. Pretest and posttest responses from each individual were compared to determine if intention to change select nutrition-related behaviors improved after attending a SNAP-Ed lesson. The median response of each question significantly increased ($P<.001$) from pretest to post test. Table 3 includes the medians, interquartile ranges, and P values of the retrospective pretest and posttest questions from the six-month follow up survey. Pretest and posttest responses from each individual were compared to determine if nutrition-related behaviors improved six months after receiving SNAP-Ed nutrition education. The median response of each question significantly increased ($P<.001$) from pretest to posttest. Participants reported an intention to improve all nutrition-related behaviors surveyed in the class participant survey. Furthermore, participants reported

actually changing those same nutrition-related behaviors in the six-month follow up survey.

Table 4 includes questions from the six-class follow up survey regarding self-reported changes in nutrition-related behaviors of SNAP-Ed participants who participated in at least six classes. On average, participants agreed that after participating in SNAP-Ed classes they eat more whole grains and healthier fats and fewer refined grains, saturated fat, and processed foods. Participants also reported following the MyPlate recommendations of making half the plate fruit and vegetables.

DISCUSSION

Low-income Americans are at an increased risk of food insecurity and poor dietary patterns, which are associated with higher rates of obesity, type II diabetes and heart disease (Martin & Ferris, 2007; Townsend, Peerson, Love, Achterberg & Murphy, 2001; Darmon & Drewnowski, 2008). Nutrition education strategies that increase food security and nutrition knowledge have the potential to play an important role in improving eating habits that are associated with a reduced risk of obesity (Jessri, Lou & L'Abbe, 2016; Slavin & Lloyd, 2012). Results from this study demonstrate that the *CREATE* curriculum, is an effective nutrition education tool for improving self-reported behaviors associated with a reduced risk of obesity among SNAP-Ed participants. This study reveals a relationship between exposure to the *CREATE* curriculum and self-reported improvements in food security, increased occurrence of family mealtime, and more time spent being physically active. Participants also reported significant

improvements in following the MyPlate recommendations of making half the plate fruits and vegetables and replacing refined grains with whole grain options.

Results of this study are consistent with the limited number of studies that have been published on SNAP-Ed programming. While the *CREATE* curriculum provides a unique cooking-skills approach that emphasizes using foods on hand to create healthy meals, all SNAP-Ed programs have the same goal of improving dietary and lifestyle choices that prevent obesity among the SNAP-Ed eligible audience (USDA, 2016). Several studies suggest that SNAP-Ed is effective at achieving these goals. Previous research on the Utah SNAP-Ed program demonstrated a positive impact on participants' intent to improve nutrition and physical activity related behaviors (Savoie et al., 2015). A study conducted among California SNAP-Ed participants found an increase in fruit and vegetable intake after exposure to a variety of SNAP-Ed interventions (Molitor, Sugerman & Sciortino 2016). SNAP-Ed programming in Indiana was found to improve long-term food security status among households that had one adult receive SNAP-Ed education (Rivera et al., 2016). The current study builds upon the previous literature demonstrating that SNAP-Ed participants in Utah experience sustained improved nutrition-related behaviors and food security at several points post-intervention (Savoie et al., 2015). It also suggests that the *CREATE* curriculum may be an effective way to teach low income individuals about how to make the healthy choice, the easy choice.

Despite the strengths of this study, a study limitation is the inability to match participants' responses throughout the three survey periods. This eliminates the ability to track individual progression from intent to change to long-term behavior change

implementation. Participants in the study self-reported their dietary and physical activity behavior changes which introduces the potential for social desirability bias. There is a discrepancy between the sample sizes among participants who started and those who completed the class participant survey. Nutrition education classes were provided to refugees during the study period. It is possible that a language barrier inhibited some participants from completing the entire survey. Improved methods for collecting surveys from SNAP-Ed participants who have a language barrier are currently in progress. There may be other reasons why some participants did not complete the entire class participant survey. For example, this was the only survey conducted during the study period where participants did not receive an incentive, which may have impacted their interest and motivation for completing the survey.

The findings of this study have strong implications for the future nutrition education of low-income Americans. The *CREATE* curriculum offers educators an alternative model for teaching low-income populations how to successfully implement the Dietary Guidelines for Americans. Further evaluation of the *CREATE* curriculum will be conducted to assess the impact of the teaching strategies not only on sustained behavior change, but also on the long-term health status of its participants.

REFERENCES

- AbuSabha, R., Namjoshi, D., & Klein, A. (2011). Increasing access and affordability of produce improves perceived consumption of vegetables in low-income seniors. *Journal of the American Dietetic Association*, 111(10), 1549-1555. doi: 10.1016/j.jada.2011.07.003
- Aggarwal, A., Monsivais, P., Cook, A.J., & Drewnowski, A. (2011). Does diet cost mediate the relation between socioeconomic position and diet quality? *European Journal of Clinical Nutrition*, 65(9), 1059-1066. doi:10.1038/ejcn.2011.72
- Burton, M., Reid, M., Worsley, A., & Mavondo, F. (2017). Food skills confidence and household gatekeepers' dietary practices. *Appetite*, 108, 183-190. <http://dx.doi.org/10.1016/j.appet.2016.09.033>
- Darmon, N. & Drewnowski, A. (2008). Does social class predict diet quality? *American Journal of Clinical Nutrition*, 87:1107-17.
- Jessri, M., Lou, W.Y., & L'Abbe, M.R. (2016). The 2015 dietary guidelines for Americans is associated with a more nutrient-dense diet and a lower risk of obesity. *The American Journal of Clinical Nutrition*, 104(5):1378-1392.
- Martin, K. S., & Ferris, A. M. (2007). Food insecurity and gender are risk factors for obesity. *Journal of Nutrition Education and Behavior*, 39(1), 31-36. <http://dx.doi.org/10.1016/j.jneb.2006.08.021>
- Molitor, F., Sugerman, S.B., & Sciortino, S. (2016). Fruit and vegetable, fat, and sugar-sweetened beverage intake among low-income mothers living in neighborhoods with Supplemental Nutrition Assistance Program-Education. *Journal of Nutrition*

Education and Behavior, 48(10) 683-690.

<http://dx.doi.org/10.1016/j.jneb.2016.07.002>

Nguyen, B.T., Shuval, K., Bertmann, F., & Yarock, A.L. (2015). The Supplemental Nutrition Assistance Program, food insecurity, dietary quality, and obesity among US adults. *American Journal of Public Health*, 105(7), 1453-1459. doi: 10.2105/AJPH.2015.302580

Rivera, R.L., Maulding, M.K., Abbott, A.R., Craig, B.A., Eicher-Miller, H.A. (2016). SNAP-Ed (Supplemental Nutrition Assistance Program-Education) increases long-term food security among Indiana households with children in a randomized controlled study. *The Journal of Nutrition*, 2375-2382.

Savoie, M., Mispireta, M., Rankin, L., Neill, K., LeBlanc H, & Christofferson, D. (2015). Intention to change nutrition-related behaviors in adult participants of a Supplemental Nutrition Assistance Program-Education. *Journal of Nutrition Education and Behavior*, 47(1) 81-85.
<http://dx.doi.org/10.1016/j.jneb.2014.08.009>

Slavin, J.L., & Lloyd, B. (2012). Health benefits of fruits and vegetables. *Advances in Nutrition*, 3:506-516.

Townsend, M.S., Peerson, J., Love, B., Achterberg, C., & Murphy, S.P. (2001). Food insecurity is positively related to overweight in women. *Journal of Nutrition*, 131(6), 1738-1745. Retrieved from <http://jn.nutrition.org/content/131/6/1738.full>

United States Department of Agriculture. (2016). About SNAP-Ed Connection.

Retrieved from <https://snaped.fns.usda.gov/about-snap-ed-connection-0#snaped>

United States Department of Agriculture. (2012). *Building a healthy America: A profile of*

Education and Behavior, 48(10) 683-690.

<http://dx.doi.org/10.1016/j.jneb.2016.07.002>

Nguyen, B.T., Shuval, K., Bertmann, F., & Yarock, A.L. (2015). The Supplemental Nutrition Assistance Program, food insecurity, dietary quality, and obesity among US adults. *American Journal of Public Health*, 105(7), 1453-1459. doi: 10.2105/AJPH.2015.302580

Rivera, R.L., Maulding, M.K., Abbott, A.R., Craig, B.A., Eicher-Miller, H.A. (2016). SNAP-Ed (Supplemental Nutrition Assistance Program-Education) increases long-term food security among Indiana households with children in a randomized controlled study. *The Journal of Nutrition*, 2375-2382.

Savoie, M., Mispireta, M., Rankin, L., Neill, K., LeBlanc H, & Christofferson, D. (2015). Intention to change nutrition-related behaviors in adult participants of a Supplemental Nutrition Assistance Program-Education. *Journal of Nutrition Education and Behavior*, 47(1) 81-85.
<http://dx.doi.org/10.1016/j.jneb.2014.08.009>

Slavin, J.L., & Lloyd, B. (2012). Health benefits of fruits and vegetables. *Advances in Nutrition*, 3:506-516.

Townsend, M.S., Peerson, J., Love, B., Achterberg, C., & Murphy, S.P. (2001). Food insecurity is positively related to overweight in women. *Journal of Nutrition*, 131(6), 1738-1745. Retrieved from <http://jn.nutrition.org/content/131/6/1738.full>

United States Department of Agriculture. (2016). About SNAP-Ed Connection.

Retrieved from <https://snaped.fns.usda.gov/about-snap-ed-connection-0#snaped>

United States Department of Agriculture. (2012). *Building a healthy America: A profile of*

the supplemental nutrition assistance program. Retrieved from

<http://www.fns.usda.gov/sites/default/files/BuildingHealthyAmerica.pdf>

Wolfson, J.A. & Bleich, S.N. (2014). Is cooking at home associated with better diet quality or weight-loss intention? *Public Health Nutrition*, 18(8), 1397-1406.
doi:10.1017/S1368980014001943

Table 1. Demographic Characteristics of SNAP-Ed Participants from Three Surveys

Demographics	Class Participant Survey (n= 6,825)	Six Class Follow Up Survey (n=168)	Six-Month Follow Up Survey (n=249)
Gender			
Female	79%	81%	92%
Age			
18-34 years old	38%	30%	52%
35-59 years old	40%	50%	40%
60 or older	22%	20%	8%
Race			
American Indian/Alaska Native	5%	3%	1%
Asian	2%	2%	2%
Black/African American	2%	1%	3%
Native Hawaiian or Pacific Islander	90%	88%	93%
White			
Ethnicity			
Non Hispanic	87%	74%	92%
Receive SNAP Benefits			
Yes	34%	24%	57%
Eligible for SNAP Benefits			
Yes	47%	---	49%
Receive Other Assistance			
Yes	41%	32%	43%
Eligible for Other Assistance			
Yes	35%	---	36%
Satisfied with Food \$ense Classes	1%	----	---
Not Satisfied	1%		
Somewhat Satisfied	5%		
Moderately Satisfied	37%		
Very Satisfied	56%		
Extremely Satisfied			

Table 2. *Intention to Change Nutrition-Related Behaviors in Adult SNAP-Ed Participants in Utah (n=5,275)*

Class Participant Survey	Retrospective Pretest	Retrospective Posttest	P-Value
	Median (IQR)	Median (IQR)	
Questions^a			
*Stretch my food dollars so there is food to last all month	4 (3, 5)	4 (4, 5)	<.001
*Shop with a grocery list	4 (3, 5)	4 (4, 5)	<.001
*Prepare meals at home at least three times a week	4 (3, 5)	5 (4, 5)	<.001
*Eat meals together as a family at least three times a week	4 (3, 5)	5 (4, 5)	<.001
*Choose to be physically active for 30 minutes 5 days a week	4 (3, 5)	4 (3, 5)	<.001
Choose whole foods based on MyPlate recommendations	3 (2, 4)	4 (3, 5)	<.001
Follow USDA food safety recommendations	4 (3, 5)	4 (4, 5)	<.001

SNAP-Ed is the Supplemental Nutrition Assistance Program-Education; IQR is the interquartile range.

P < 0.05 is considered significant.

^aValues are median and interquartile range from a Likert scale (1=never, 2= seldom, 3= sometimes, 4= usually, 5= always). Comparisons performed using Wilcoxon signed-rank test.

*Questions were asked on the class participant survey and the 6-month follow up survey

Table 3. Self-Reported Nutrition-Related Behavior Change in Adult SNAP-Ed Participants in Utah (n=249)

Six-Month Follow Up Survey	Retrospective Pretest	Retrospective Posttest	P-Value
	Median (IQR)	Median (IQR)	
<i>Questions^a</i>			
*Stretch my food dollars so there is food to last all month	4 (2, 5)	4 (4, 5)	<.001
*Shop with a grocery list	4 (3, 4)	4 (4, 5)	<.001
*Prepare meals at home at least three times a week	5 (4, 5)	5 (4, 5)	<.001
*Eat meals together as a family at least three times a week	4 (3, 5)	5 (4, 5)	<.001
*Choose to be physically active for 30 minutes 5 days a week	3 (2, 4)	4 (3, 5)	<.001
Plan a menu before shopping	3 (2, 4)	4 (3, 5)	<.001
Make food purchases based on the nutrition facts panel	4 (3, 5)	4 (4, 5)	<.001
Eat breakfast within 2 hours of waking	3 (2, 4)	4 (3, 5)	<.001
Eat at least 2 ½ cups of vegetables a day	3 (2, 4)	4 (3, 4)	<.001
Eat at least 2 cups of fruit a day	3 (3, 4)	4 (3, 5)	<.001
Eat more whole grains than refined grains			

SNAP-Ed is the Supplemental Nutrition Assistance Program-Education; IQR is the interquartile range.

P < 0.05 is considered significant.

^aValues are median and interquartile range from a Likert scale (1=never, 2= seldom, 3= sometimes, 4= usually, 5= always). Comparisons performed using Wilcoxon signed-rank test.

*Questions were asked on the class participant survey and the six-month follow up survey

Table 4. Six-Class Follow Up Survey-Self-Reported Changes in Nutrition-Related Behaviors As a Result of Receiving a Series of SNAP-Ed Nutrition Education Lessons (n=168)

Level of Agreement	Mean (SD)
Eating more whole grains such as brown rice and whole wheat pasta	3.8 (.03)
Eating less refined grains such as white rice and white pasta	3.7 (.97)
Replaced saturated fats such as butter and margarine with healthier fats found in olives, avocados and oils	3.7 (.99)
Eating less processed foods such as frozen and boxed meals	4.0 (.82)
Following MyPlate by filling ½ my plate with fruits and vegetables	3.7 (.92)

Note. SNAP-Ed indicates the Supplemental Nutrition Assistance Program-Education; SD indicates standard deviation.

^aValues are mean ± sd points from a Likert scale (1= strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree).

