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Create Healthy Gardens: Evaluation of A SNAP-Ed and Master Gardener Collaboration

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Abstract

A multidisciplinary team established the Davis County Create Healthy Gardens (CHG) program to improve access to fresh produce and help low-income residents gain skills to grow food and prepare nourishing meals. An evaluation of the program shows that participants had access to over 275 pounds of fresh produce, and most participants reported an increase in fruit and vegetable consumption. They also reported an increase in their knowledge in gardening and food preparation.

Introduction & Problem Statement

In Davis County, Utah, more than 10% of children were food insecure in 2020 (Feeding America, 2020), suggesting their nutritional needs are not being met. Furthermore, there are 11 low-income census tracts in Davis County with low access to food due to limited access to grocery stores (United States Department of Agriculture, 2022). Having low access to healthy foods is especially problematic as adults with lower incomes in Davis County do not consume the recommended daily servings of fruits and vegetables (Utah Department of Health, 2021). Eating the recommended daily intake of fruits and vegetables is important as it is associated with a lower risk for multiple chronic diseases (Lee et al., 2022).

To address low dietary intake coupled with low access to healthy foods, Utah State University (USU) Extension's Create Better Health (SNAP-Ed) program partnered with the USU Extension Master Gardener program to establish the Davis County Create Healthy Gardens (CHG) program. This program provides participants with nutrition education to prepare healthy foods while providing them with the gardening education and tools needed to grow healthy foods.

Response & Target Audience

In collaboration with USU Master Gardeners, Create Better Health (SNAP-Ed) utilized the Create Farm Fresh Garden toolkit and an adaptation of the Create Farm Fresh Food education series to guide the program. The 6-class education series was held monthly throughout the summer, from May through October of 2022. This series provided participants with the skills to grow, prepare, and consume fresh fruits and vegetables. While attending sessions, participants received access to a free garden plot and seeds for up to seven different vegetables to practice and reinforce the skills they learned during the gardening lessons. Educational handouts, recipe demonstration videos, and recipe samples were also provided to support the nutrition lessons. Participants were encouraged work on the garden plots between lessons and to share meals they created with instructors.

Figure 1: Families working in the gardens



The CHG priority population was Davis County families with incomes at or below 185% of the federal poverty line and residing in government-subsidized apartments or living near the Clearfield Community Garden. This area lies within a USDA low-income and low food access census tract (2020). During the 2021 and 2022 summer growing seasons, approximately 27 families participated in CHG, totaling 69 adults and 52 youth. See Table 1 for a description of the demographic characteristics of participants.

Table 1
Demographic Characteristics of Participants.

Characteristic	Participants (<i>n</i> = 121)	
	<i>n</i>	%
Gender		
Female	82	67.8%
Male	39	32.2%
Age		
Less than 5 years	9	7.5%
5-17 years	43	35.5%
18-59 years	50	41.3%
60 years or older	19	15.7%
Ethnicity		
Hispanic/Latino	44	36.4%
Non-Hispanic/Latino	77	63.6%
Race		
American Indian or Alaska Native	1	0.8%
Asian	7	5.8%
Black or African-American	4	3.3%
Native Hawaiian or Other Pacific Islander	1	0.8%
White	108	89.3%

Outcomes & Impact

The goal of CHG was to increase participant access to and consumption of fruits and vegetables. The program objective was to have at least 30% of participants report an increase in fruit and vegetable intake after participating in the class series. The program also aimed to increase access to healthy food with the establishment of a new garden and improve educational support at an existing garden.

The CHG team surveyed participants at the end of the program to assess changes in their fruit and vegetable consumption. Most participants ($n = 9$) self-reported an increase in their consumption of fruits (55.6%) and vegetables (66.7%). In addition, some participants reported that their families ate more fruits (37.5%) and vegetables (66.7%). The evaluation measured access to fruit and vegetables by having participants at the Clearfield Community Garden record the produce they harvested. According to the harvest log, 275 pounds of produce were harvested over the two growing seasons.

Evaluation results also indicated participants experienced increased knowledge and confidence in gardening and food preparation with fresh produce. Knowledge and confidence changes were evaluated using pre- and post-surveys. Descriptive statistics were used to determine the median responses pre and post-intervention to determine percent changes (see Table 2).

Table 2

Change in Knowledge, Confidence, and Behaviors by CHG Participants in Davis County.

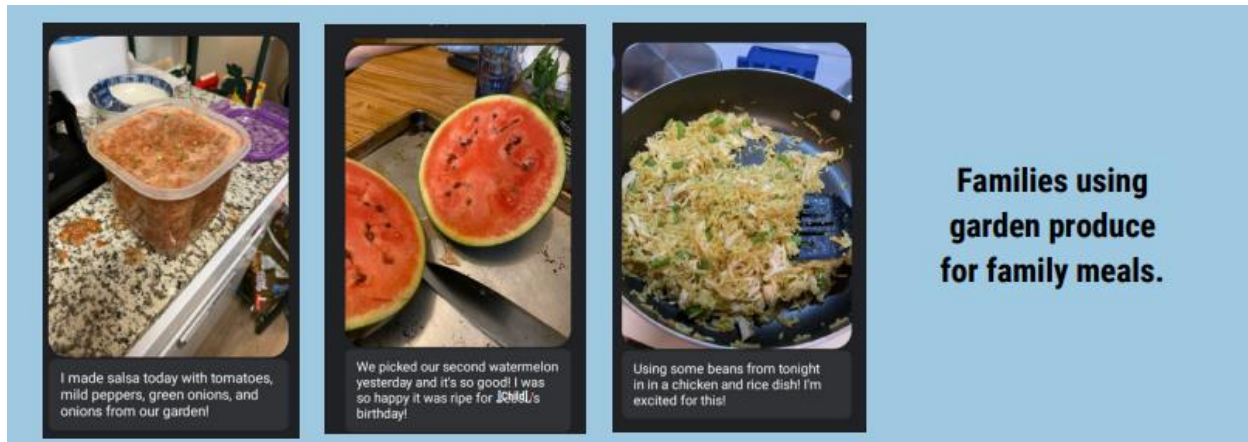
Knowledge and Confidence	Median		% Median Change
	Baseline ($n = 15$)	Follow-up ($n = 9$)	
I know what types of fruits and vegetables grow well in my community.	3	4	25%
I feel confident I can plant a seed that will grow into a fruit or vegetable.	3	4	25%
I know when a fruit or vegetable is ready to pick.	3	4	25%
I know how to prepare garden fresh fruits or vegetables.	2	4	50%
I enjoy gardening.	4	4	0%

As seen in Table 1, there was an increase in the participants' knowledge of types of produce that grow well in their community (25%), confidence in growing and harvesting food (25%), and knowledge of how to prepare what they grow for consumption (50%). Participants also were invited to share meals they created with the produce grown in their garden by texting images and

comments to the CHG team (see picture 2). As shown in picture 2, three participants were excited to share what they prepared with the harvest:

- “I made salsa today with tomatoes, mild peppers, green onions, and onions from our garden!”
- “We picked our second watermelon yesterday and it’s so good! I was so happy it was ripe for [child’s] birthday!”
- “Using some beans from tonight in a chicken and rice dish! I’m excited for this!”

Figure 2: Meals created by participants using garden produce



Another participant said, “I’m so happy! We made a hamburger soup last night with lots of harvested veggies! Zucchini, green beans, a mild pepper, and some...parsley and thyme. It was so very tasty.” The produce harvested by participants was well received and added additional fruits and vegetables to the participants’ diets.

Public Value & Next Steps

The CHG program resulted in increased access to and consumption of fruits and vegetables through gardening. In addition, participants increased their knowledge and confidence in gardening and preparing healthy meals with fresh produce. The CHG team used the evaluation results to write a new curriculum, Create Healthy Gardens, which was also adapted for rural and Latinx participants. The new curriculum is available for statewide use and is currently being implemented in Davis, Cache, and Millard counties to a total of 75 participants across six separate garden sites. The CHG program will help more Utahns with low incomes improve their access to fresh produce and help reduce disparities caused by diet-related chronic diseases.

References

Feeding America. (2020). *Map the meal gap* [Interactive Map].
<https://map.feedingamerica.org/county/2020/child/utah/county/davis>

Lee, S. H., Moore, L. V., Park, S., Harris, D. M., & Blanck, H. M. (2022). Adults meeting fruit and vegetable intake recommendations - United States, 2019). *Morbidity and Mortality Weekly Report*, 71, 1-9. <http://dx.doi.org/10.15585/mmwr.mm7101a1>

United States Department of Agriculture. (2022). *Food access research atlas* [Interactive Map]. <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>

United States Department of Agriculture. (n.d.). *Vegetables*. <https://www.myplate.gov/eat-healthy/vegetables>

Utah Department of Health. (2021). *Utah Behavioral Risk Factor Surveillance System: Nutrition, 2017-2021* [Data set]. <https://ibis.health.utah.gov/ibisph-view/topic/Nutrition.html>