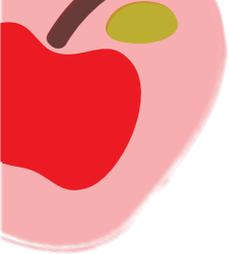




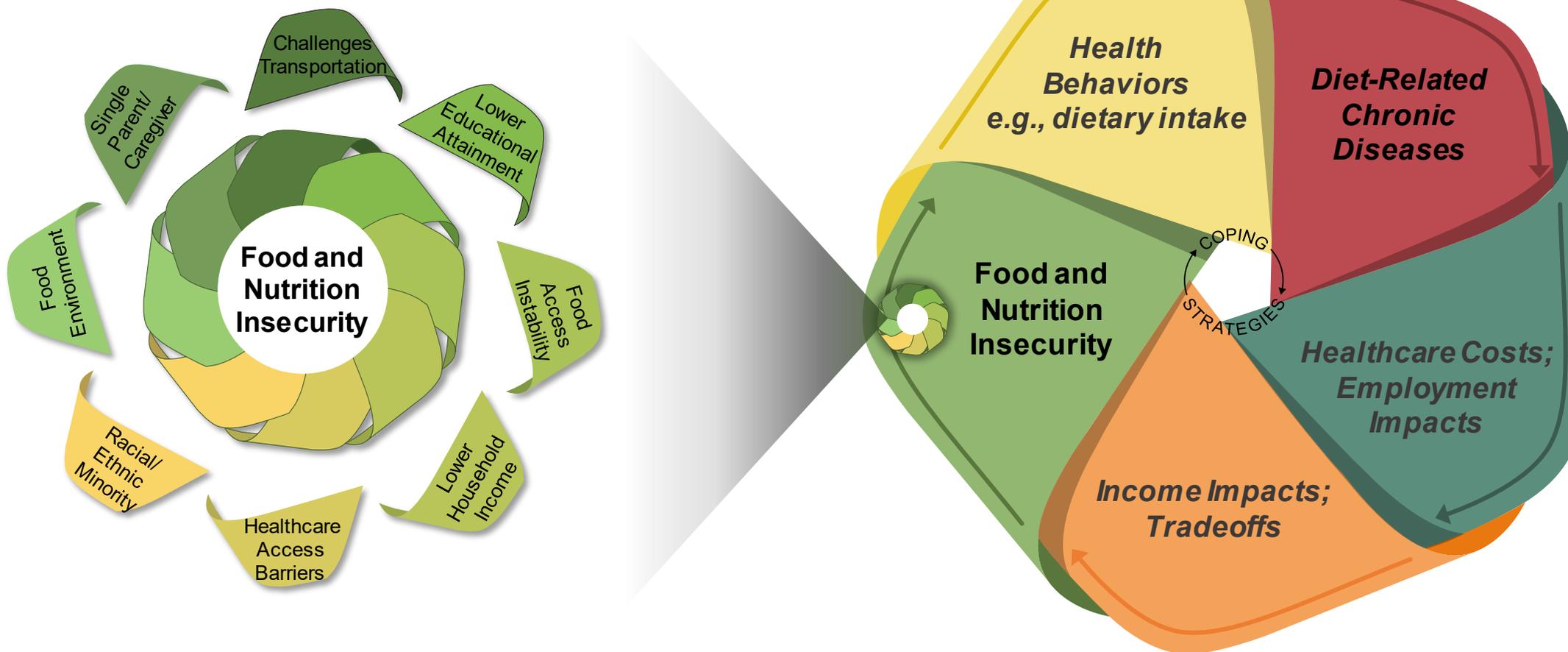
Food System and Food Environment Interventions and Programs: *Findings, Lessons, and Considerations*

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Texas A&M University System | Texas A&M AgriLife | College of Agriculture and Life Sciences

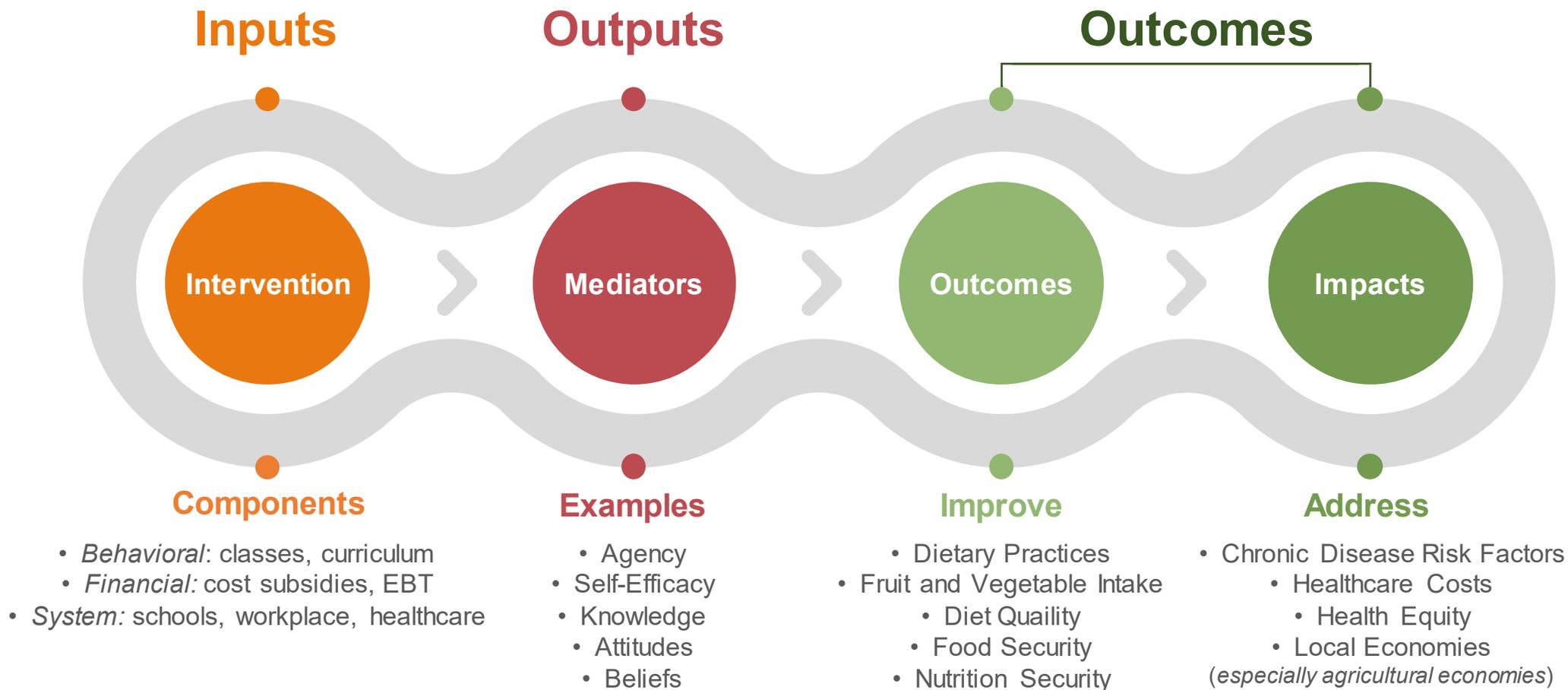


Food Insecurity and Chronic Diseases





Intervention Pathway Examples



Intervention Program Examples

- Cost-Offset (subsidized) Community Supported Agriculture¹
- Produce Prescription (Rx) Programs²
- Farmers Market Nutrition Program³
- Double Up Food Bucks⁴
- Fresh Fruit and Vegetable Program in Schools⁵
- Civic Engagement for Built Environment Change (CEBEC)⁶

1. Seguin-Fowler 2021 *Int J Behav Nutr Phys Act* 18; Hanson 2017 *Nutrients* 9. 2. Forbes 2019 *Perm J* 23; Freedman 2013 *Prev Med* 56. 3; Marcinkevage 2019 *Prev Chronic Dis* 16; Omar 2017 *J Gen Intern Med* 32; Trapl 2018 *Prev Chronic Dis* 15; Weinstein 2014 *Diabetes Educ* 40; Ridberg 2019 *Prev Chronic Dis* 16; Saxe-Custack 2019 *Nutrients* 12; Aiyer 2019 *Transl Behav Med* 9(5); York 2020 *Nutr Health* 26; Bryce 2017 *Prev Med Rep* 7. 3. Pitts 2015 *Public Health Nutr* 18; Kunkel 2003 *J Am Diet Assoc* 103; Sinnott 2009 *J Nutr Educ Behav* 41; O'Dare Wilson 2017 *Soc Work Health Care* 56; Johnson 2004 *Prev Chronic Dis* 1; Kropf 2007 *J Am Diet Assoc* 107; Singleton 2016 *Am J Health Behav* 40; Stallings 2016 *J Hunger Environ Nutr* 11. 4. Durward 2019 *J Nutr Educ Behav* 51; Atoloye 2021 *Nutrients* 13; Zimmerman 2016 *FASEB J*; Cohen 2018 *Am J Prev Med* 54; Savoie-Roskos 2016 *J Nutr Educ Behav* 48. 5. Jamelske 2008 *Wis Med J* 107; Qian 2016 *Appl Econ Perspect Policy* 38; Olsho 2015 *J Acad Nutr Diet* 115; Ohri-Vachaspati 2018 *J Acad Nutr Diet* 118; Jamelske 2012 *J Child Nutr Manag* 36; Bica 2012 *J Child Nutr Manag* 36; Masis 2017 *J Nutr Educ Behav* 49. 6. Seguin-Fowler 2014 *J Environ Public Health* 4; Seguin-Fowler 2022 *BMC Public Health* 22.





Farm Fresh Foods for Healthy Kids

A Multilevel, Multicomponent Intervention with Low-Income Families and Farms





Key Objectives

Farm Fresh Foods for Healthy Kids (F3HK)

- Evaluate impacts of cost-offset CSA (CO-CSA) plus tailored education on food security as well as dietary skills, knowledge, attitudes, practices, and intake.
- Identify benefits, opportunities, and challenges for farmers.
- Create and disseminate materials informed by wrap-around mixed methods data collection and analysis:
 - ☑ Farmer tool kit
 - ☑ CSA class curriculum for health educators
 - ☑ Cookbook for families
 - ☑ Undergraduate course modules





Design and Core Intervention Components

Farm Fresh Foods for Healthy Kids (F3HK)

Design

Core Intervention

- Randomized controlled trial
- 305 SNAP-eligible caregivers plus 2-12 year old child
 - 12 rural communities in 4 states



- 15-24 week share; 50% cost
- Share size and pick-up options selected by family
- SNAP/EBT accepted

- Selection of up to 4 kitchen tools (e.g., food processor)



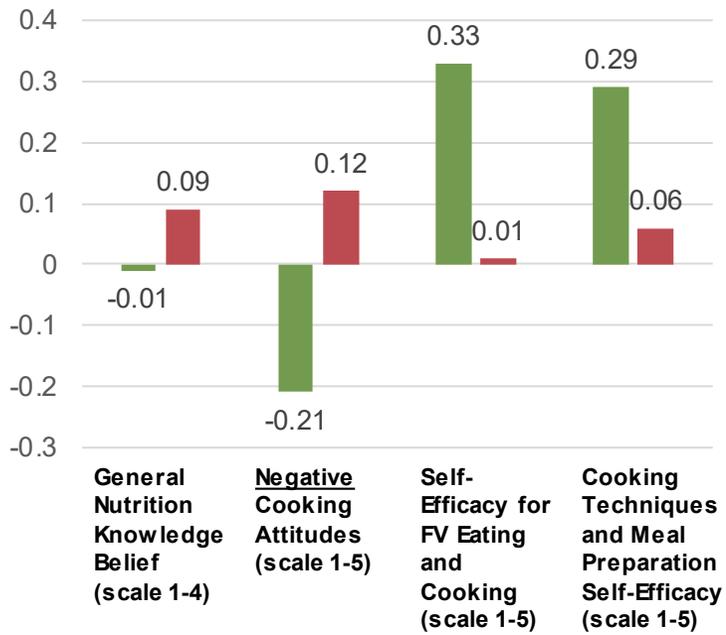
- 9 CSA-tailored, skill-based education sessions



Key Study Findings

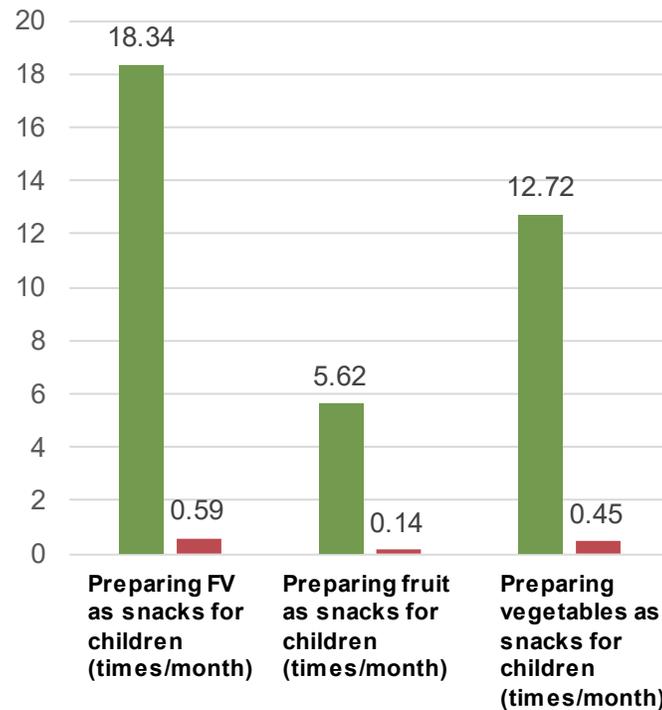
Farm Fresh Foods for Healthy Kids (F3HK)

Improvements in knowledge, attitudes, and self-efficacy



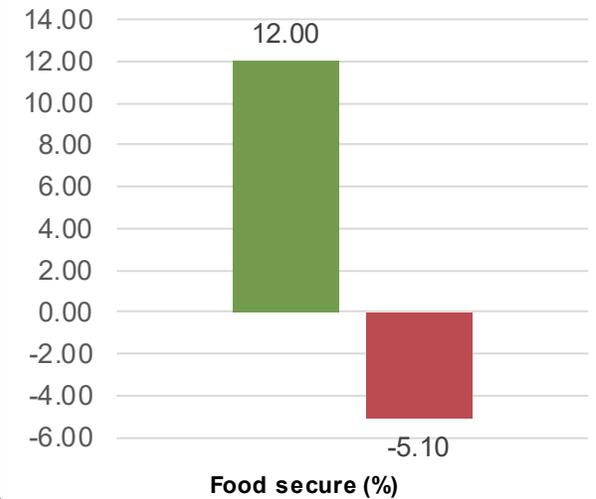
Bold indicates $p < 0.05$

Improvements in preparation and serving of FV to kids

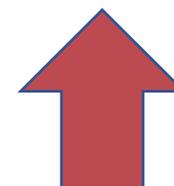


■ Intervention ■ Control

Improvement in food security

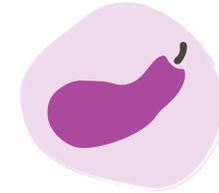


Fruit and vegetable intake (via ASA-24 and dermal carotenoids) among caregivers but not children



Key Lessons

Opportunities, structure, priorities, and optimizing reach for community-engaged research and multisector partnerships



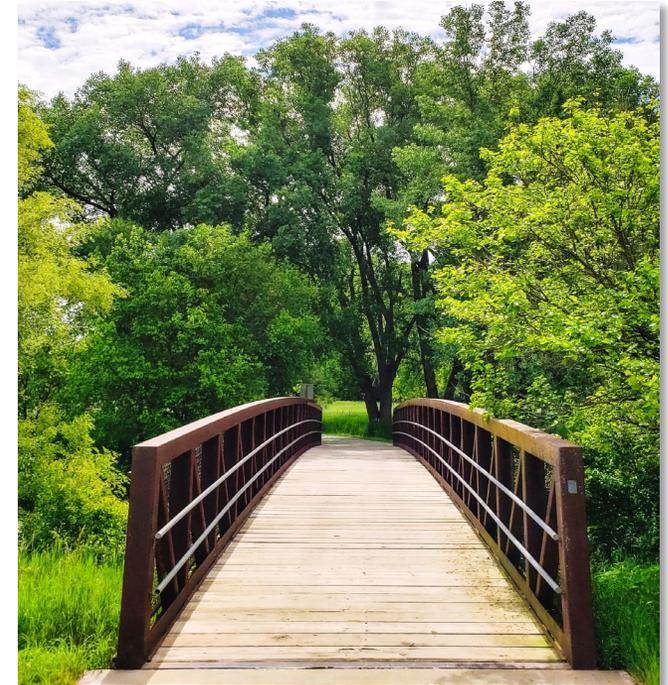
Opportunities and Structure

Expand Predictability, Flexibility, and Variety

“ ... like when I go to the grocery store and I spend ten dollars, **I'm buying what I know I like**, rather than just spending whatever that's costing, and half of it, I don't know what it is and I'm not gonna eat it. ”

Coordinate Convenient Distribution Locations

“ I finish work at like three, then get my son from the bus, [...] **sometimes you just wanna go home.** ”



Bridge programs are needed for temporary and seasonal programs





Competing Priorities

Business Demands

“

I don't really know [why I don't accept food stamps]. I think ... it is like for me a barrier. Anything that I have to do that is new for me, it's like I need someone to hold my hand.

~ NC CSA farmer

”

Social Mission

“

... getting everyone access to good food is really important for making change in our world. But we're also running a business and there's the reality of time management.

~ VT CSA farmer

”

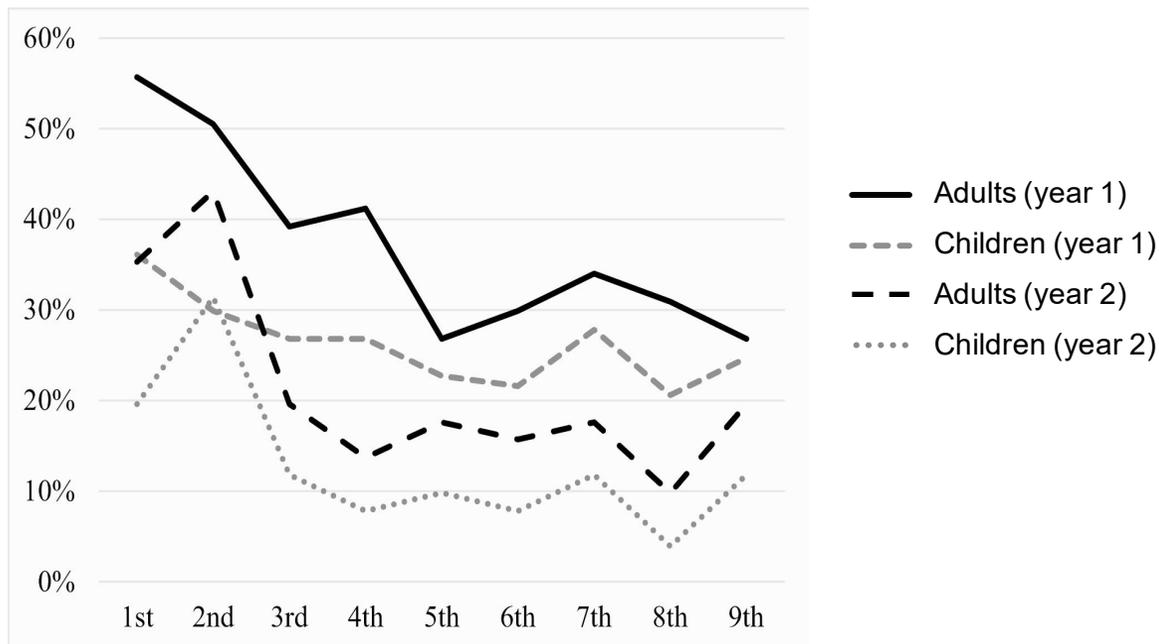




Optimizing Reach

Leverage technology for efficiency and engagement

Percent attendance in F3HK class over time



Findings: Low attendance at classes; diverse levels of baseline nutritional knowledge and schedules. Attendance was bolstered by social connections. Virtual/hybrid and web/app-based materials were suggested solutions.

Lessons: Increase flexibility and leverage technology access via print and digital materials, virtual and asynchronistic classes, social engagement strategies.





Optimizing Reach

Dissemination Products to Expand Impact

Seguin-Fowler et al. *International Journal of Behavioral Nutrition and Physical Activity* (2021) 18:112
<https://doi.org/10.1186/s12966-021-01168-x>

International Journal of Behavioral Nutrition and Physical Activity

RESEARCH Open Access

Check for updates

Community supported agriculture plus nutrition education improves skills, self-efficacy, and eating behaviors among low-income caregivers but not their children: a randomized controlled trial

Rebecca A. Seguin-Fowler^{1*}, Karla L. Hanson², Stephanie B. Jilcott Pitts³, Jane Kolodinsky⁴, Marilyn Staker⁵, Alice S. Ammerman⁶, Grace A. Marshall⁷, Emily H. Belarmino⁸, Jennifer A. Garner⁹ and Weiwei Wang¹⁰

Abstract

Background: Adults and children in the U.S. consume inadequate quantities of fruit and vegetables (FV), in part, due to poor access among households with lower socioeconomic status. One approach to improving access to FV is community supported agriculture (CSA) in which households purchase a 'share' of local farm produce throughout the growing season. This study examined the effects of cost-offset (half-price) CSA plus tailored nutrition education for low-income households with children.

Methods: The Farm Fresh Foods for Healthy Kids (F3HK) randomized controlled trial in New York, North Carolina, Vermont, and Washington (2016–2018) assigned caregiver-child dyads (n = 305) into cost-offset CSA plus education intervention or control (delayed intervention) groups. Following one growing season of CSA participation, changes in children's diet quality, body mass index (BMI), and physical activity; caregivers' nutrition knowledge, attitudes, behaviors, and diet quality; and household food access and security were examined using multiple linear or logistic regression, with adjustment for baseline value within an intent-to-treat (ITT) framework in which missing data were multiply imputed.



For Families Participating in Community Supported Agriculture Programs

Educator Guide

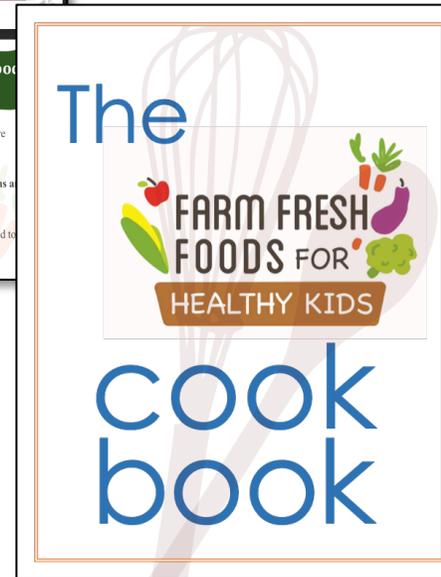
Assessing dietary quality in community-based local foods interventions and evaluations

Part of a series of *Design, Implementation, and Evaluation of Local Food Initiatives for Farms and Families*

A project of Farm Fresh Foods for Healthy Kids

"Design, Implementation, and Evaluation of Local Food Initiatives for Farms and Families" Modules

- Module 1: What's a CSA? Creating a community-based local foods intervention where "local food" is a foreign concept
- Module 2: Assessing dietary quality in community-based local foods interventions and evaluations
- Module 3: What is an economic impact study? Identifying how local food systems add to the economic engine of a community



COST-OFFSET CONTINUATION PLANNING FOR FARMERS
 A GUIDE FOR REGIONAL COACHES

FARM FRESH FOODS FOR HEALTHY KIDS

Central University East Carolina UNIVERSITY OF NORTH CAROLINA THE UNIVERSITY OF VERMONT THE MORGAN STATE COLLEGE

Future Directions:

Intervention Design, Data Collection, and Dissemination

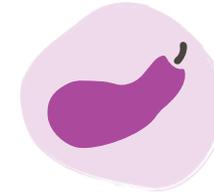
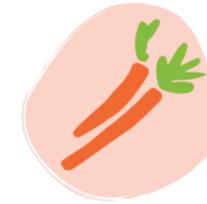


*Health behavior change
and maintenance*

*Sociocultural factors;
social networks; social
determinants of health*

*Community
capacity building;
civic engagement*

*Food systems and
environments; policy*



Future Directions:

Intervention Design, Data Collection, and Dissemination

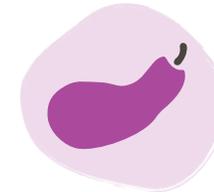


Health behavior change
and maintenance
technology & stability

Sociocultural factors;
social networks; social
determinants of health
tailoring & flexibility

Community
capacity building;
civic engagement
*create agents
of change*

Food systems and
environments; policy
*foster multisector
partnerships*



THANK YOU

For follow-up questions, please email
r.seguin-fowler@ag.tamu.edu

