



Low-Income Adults Enrolled in a Cost-offset Community Supported Agriculture Intervention are not Nationally Representative

Jennifer A. Garner, PhD, RD¹; Haley A. Lepior, MS¹; Christopher A. Taylor, PhD, RDN, LD, FAND¹; Karla L. Hanson, PhD²; Alice A. Ammerman, DrPH, RD³; Stephanie B. Jilcott Pitts, PhD⁴; Jane Kolodinsky, PhD, MBA⁵; Marilyn H. Sitaker, MPH⁶; Rebecca A. Seguin, PhD, CSCS, RD⁷

¹The Ohio State University; ²Cornell University; ³University of North Carolina at Chapel Hill; ⁴East Carolina University; ⁵University of Vermont; ⁶The Evergreen State College; ⁷Texas A&M University

BACKGROUND & ABSTRACT

Cost-Offset Community Supported Agriculture (CO-CSA) is a model in which low-income households receive subsidized shares of a local farm's harvest. The goal is to address diet and health disparities among a population with historically poor access to and consumption of healthy foods. The appeal of such an intervention, and thus its reach, is limited to a self-selected subsample of the low-income population that may be non-representative.

The objective of this study was to compare characteristics of CO-CSA enrolled adults from low-income households with those of a nationally-representative sample of low-income adults. We hypothesized that CO-CSA enrollees would be less demographically diverse, have greater nutrition-related knowledge, and report better health than the national sample. CO-CSA enrollee data were drawn from the baseline survey of a multi-state randomized controlled trial testing the CO-CSA model in conjunction with nutrition education among low-income households with children in Vermont, New York, North Carolina, and Washington (n=305). Those data were compared to a nationally-representative sample of low-income adults from households with children evaluated via the National Health and Nutrition Examination Survey, NHANES (2007-2010). Descriptive statistics for demographic, food security, nutrition knowledge, and self-reported health status data were generated using SPSS for both samples. Compared to the national sample, a greater proportion of CO-CSA enrollees were female (97% vs. 57%), white (76% vs. 45%), highly educated (49% vs. 7% college graduates), and food insecure (57% vs. 49%); a smaller proportion were Hispanic (6% vs 34%). A greater proportion of CO-CSA enrollees knew the daily recommendation for fruits and vegetables (3-5 cups; 61% vs. 16%) and reported being in good or excellent health (34% vs. 25%). Differences between the CO-CSA and NHANES samples may be related to the CO-CSA study sampling frame (English-speaking households in certain regions of the U.S.). Results support continued exploration into whether CO-CSA and other local food system interventions have the potential to reach beyond female, white, educated, and nutritionally-knowledgeable segments of the population.

OBJECTIVE & HYPOTHESES

Objective: To compare characteristics of adults enrolled in a Cost-offset Community Supported Agriculture (CO-CSA) program for low-income households with children, Farm Fresh Foods for Healthy Kids (F3HK), with those of a nationally-representative sample of low-income adults from households with children.

Hypotheses: Compared to the national sample, CO-CSA enrollees would be less demographically diverse; have comparable food security status; have greater nutrition knowledge; and report better health status.

METHODS

Data Sourcing

- CO-CSA enrollee data were sourced from baseline F3HK trial surveys completed by low-income adults with children across the four trial states: New York, Vermont, North Carolina, and Washington (n=305).
- A nationally-representative sample of low-income adults from households with children was generated via NHANES data (2007-2010 cycles used due a lack of nutrition knowledge data in recent cycles).

Data Preparation

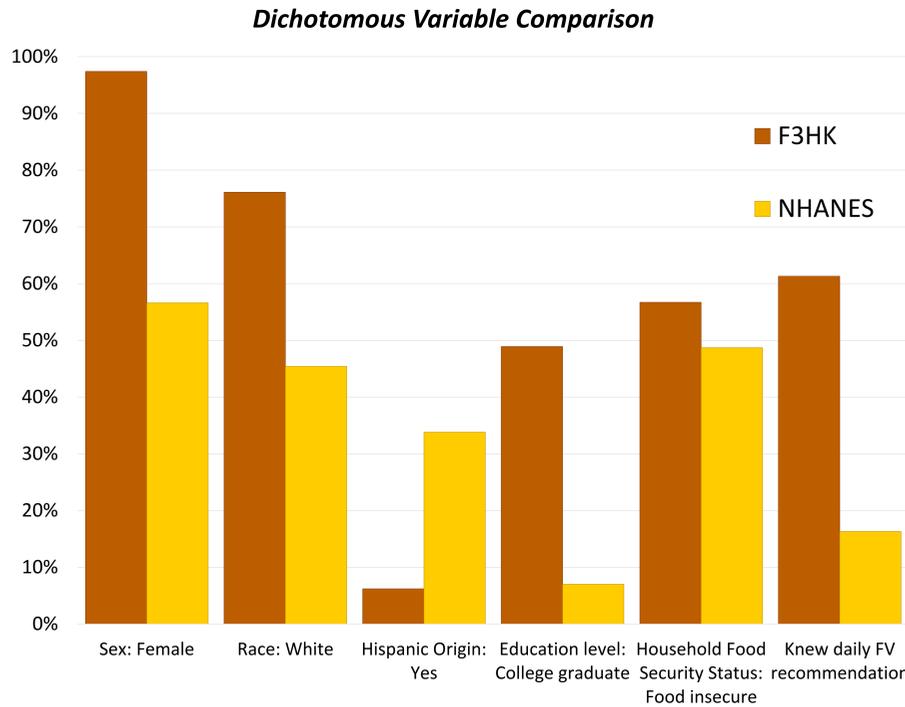
- F3HK and NHANES variables were recoded, as needed and able, to facilitate variable comparisons.

Data Analysis

- Descriptive statistics for both samples were generated using SPSS. SPSS Complex Samples was used to analyze the NHANES dataset to account for oversampling and generate nationally-representative data.

RESULTS

Characteristics of F3HK CO-CSA Enrollees and a Nationally-Representative NHANES Sample of Low-Income Adults in Households with Children



Continuous & Categorical Variable Comparison

	F3HK CO-CSA		NHANES	
	n (mean)	% (S.D.)	n (mean)	% (S.D.)
Demographic Characteristics				
Age	(36.1)	(7.9)	(36.8)	(0.4)*
Marital Status				
Married	132	43.3	549	46.7
Divorced, Widowed, Separated	76	24.9	228	17.1
Never married	68	22.3	215	18.2
Member of an unmarried couple	29	9.5	133	14.4
Employment Status				
Not Employed or Other	165	54.1	545	41
Employed	140	45.9	649	57.8
General Health Status				
Excellent to very good	105	34.4	276	24.5
Good	126	41.3	482	40.7
Fair to poor	74	24.3	339	24.3
Household Characteristics				
Annual Household Income				
Under \$20K	116	38.0	453	36.7
\$20 - \$24.9K	43	14.1	219	16.9
\$25 - \$34.9K	62	20.3	299	26.8
\$35 - \$74.9K	81	26.6	235	19.1
\$75K +	0	0.0	4	0.5
Total Household Size	(4)	(1.5)	(5)	(0.1)*

F3HK: Farm Fresh Foods for Healthy Kids; FV: Fruit and Vegetable; *Standard Error values

RESULTS SUMMARY

Compared to the nationally-representative sample, a greater proportion of F3HK CO-CSA enrollees were:

- Female (97% vs. 57%),
- White (76% vs. 45%),
- Highly educated (49% vs. 7% were college graduates), and
- Food insecure (57% vs. 49%)

A smaller proportion of CO-CSA enrollees were Hispanic (6% vs 34%).

A greater proportion of CO-CSA enrollees:

- Knew the daily recommendation for fruits and vegetables (3-5 cups; 61% vs. 16%), and
- Reported being in good or excellent health (34% vs. 25%)



CONCLUSIONS

CO-CSA enrollees in the F3HK sample were not fully reflective of the general public (as represented via NHANES data).

Differences between the F3HK CO-CSA and NHANES samples are possibly related to the F3HK trial's sampling frame: English-speaking households in certain regions of Vermont, New York, North Carolina, and Washington.

Results support continued exploration into whether CO-CSA and other local food system interventions have the potential to reach beyond white, educated, and nutritionally-knowledgeable segments of the target population. Limited reach of such interventions have negative implications for their ability to shift existing dietary and health disparities.

Future studies should explore potential barriers to participating among currently "unreached" segments of the population and strategies for adapting such interventions for broader appeal and uptake.

ACKNOWLEDGEMENTS

Research reported on this poster was supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture (USDA), under award number 2015-68001-23230. Any opinions, findings, conclusions, or recommendations expressed are those of the authors and do not necessarily reflect the views of the U.S. Department of Agriculture.

