

Food Sovereignty in Indigenous Communities

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National Nutrition Month Advancements in Diabetes

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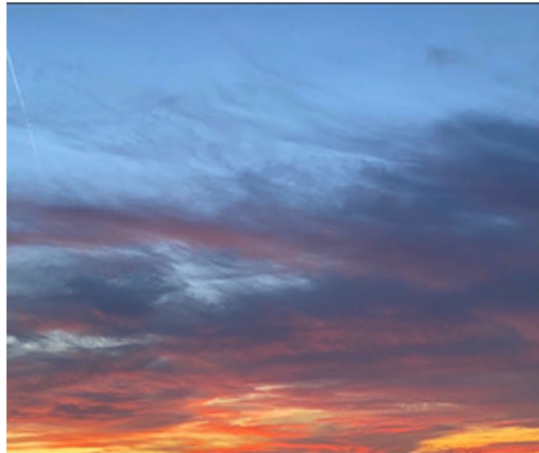
People



Tradition



Nature



Overview

- Introduction
- Food Insecurity
- Food Sovereignty
- FRESH Study
- Osage Community Supported Agriculture Study
- Q and A

Acknowledgements

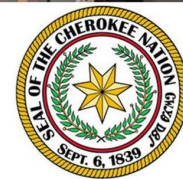


Center for Indigenous Health Research and Policy

www.indigenoushealth.com



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CHEROKEE NATION

Food Insecurity

- “Lack of consistent access to enough food for an active, healthy life” - Hunger & Health
 - US Department of Agriculture, (2019). Definitions of Food Security
- “In 2020, an estimated 1 in 8 American were food insecure, equating to over 38 million Americans, including 12 million children.”
 - Coleman-Jensen, A., et al. (2019) Household Food Security in the United States in 2018. U.S. Department of Agriculture Economic Research Service

How Does This Affect Native Communities?

- People living in rural communities face hunger at higher rates than people who live in urban areas.¹
- Most evident reasons:
 - Poverty
 - People of Color – Natives living in rural communities experience some of the highest rates of food insecurity of any racial or ethnic group.
 - Pandemic (Feeding America, (2022). Millions of People in Rural Communities Face Hunger)
- In 2017, First Nations Development Institute researchers found that 54% of AIAN people live in rural and small town areas.
 - Dewees S, Marks B. (2017) Twice Invisible: Understanding Rural Native America.
- From 2000-2010, 25% of AI/ANs were twice as likely to be food insecure compared to whites.
 - Blue Bird Jernigan.V, et al. Food Insecurity among American Indians and Alaska Natives: A National Profile using the Current Population Survey – Food Security Supplement. *J Hunger Environ Nutri.* 2017;12(1): 1-10.

Food Insecurity and Diabetes Prevention

- Limited access to fresh foods
- Food preparation knowledge
- Cost of fresh food

Indigenous Food Sovereignty

- The right and responsibility of Indigenous people to healthy and culturally appropriate foods produced through traditional Indigenous practices
 - Settee P, Shukla, S. Indigenous Food Systems: Concepts, Cases, and Conversations. Toronto Ontario: Canadian Scholars; 2020.
- Supports communities in taking greater control over their food systems by increasing traditional and healthy food access and reducing dependence on packaged and fast foods
 - Jernigan VBB. Addressing food security and food sovereignty in Native American communities. Health and Social Issues of Native American Women. 2012:113-132.
- Mirrors public health efforts to address diet-related disparities through food system change in other populations

OSU CIHRP Indigenous Food Sovereignty and Health Symposium (February, 2022)

<https://indigenoushealth.com/events/>

Indigenous Food Sovereignty Assessment Tool

- First Nations Development Institute
- Data belongs to organization, it is not shared
- Online and Free

<https://www.firstnations.org/publications/food-sovereignty-assessments-a-tool-to-grow-healthy-native-communities/>



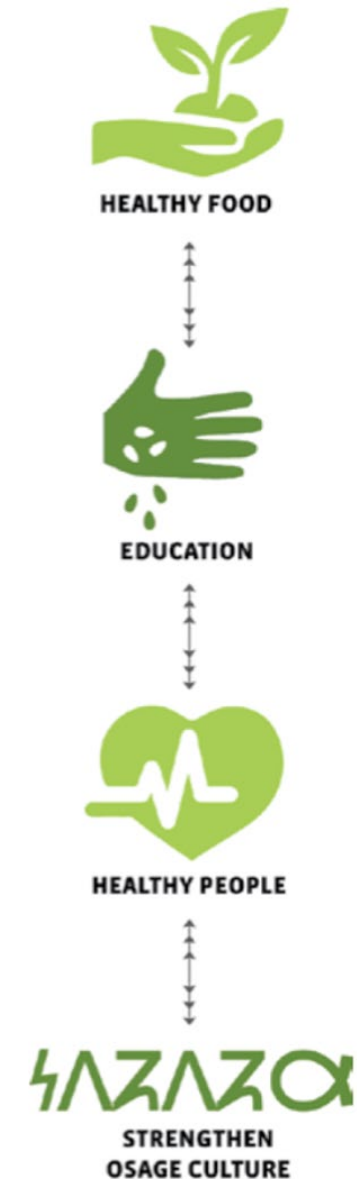
The Food Resource Equity and Sustainability for Health (FRESH) Study



(NIMHD Grant # R01MD011266)

FRESH Study Aims

- Aim 1: Characterize the Osage reservation food environment and assess the correlation of the food environment with prevalent obesity hypertension, and diabetes.
- Aim 2: Develop a culturally relevant, multilevel, multicomponent community gardening intervention and evaluate its efficacy in increasing vegetable and fruit intake and reducing food insecurity, Body Mass Index (BMI), and blood pressure among Osage families.
- Aim 3: Create and disseminate a Web-based multimedia manual and documentary film and evaluate their effectiveness in increasing tribal readiness and capacity to improve tribal food environments.



FRESH Study Overview



- Builds upon Osage Nation vision to create a sustainable tribal food system
- Intervention: Multi-level, multi-component wait-list controlled trial
- 2 communities randomized to intervention group (5 ECEs) - Received intervention in Spring 2018
- 2 communities randomized to control group (4 ECEs) - Received intervention in Fall 2018
- Intervention from Jan to Dec 2018

FRESH Study Overview (con't)

- Setting: Early Childhood Education centers in 4 communities
 - 4 Osage Nation Head Starts
 - 4 Wah-Zha-Zhi Early Learning Academy's (WELAs)
 - 1 Osage Language Immersion School
- Main Outcomes:
 - Increase fruit and vegetable intake in adults and children (primary)
 - Reduce food insecurity, Body Mass Index, and blood pressure (adults only) (secondary)
- Components:
 - Teachers, children, parents, and cooks



Conclusion

- Children had a trend toward higher intake of certain target vegetables after the intervention compared to before
- There was a slight trend in children in both groups being more willing to try target vegetables
- Despite being young (median age=32), food insecurity and obesity were relatively high in this population
- Food insecurity improved in both groups after the intervention

OUTCOMES & NEXT STEPS



- We achieved launch of tribal farm and its continued development
- Tripled active usage of acres and food production
- Used data to advocate for policy and farm was expanded by Osage Nation Congress in 2019
- We developed and disseminated the study information through a PBS series called “Blood Sugar Rising,” which premiered on PBS April 15, 2020
- We were featured in the journal Nature for our CBPR approach
- Next steps are CSA to expand food production

Osage Community Supported Agriculture (OCSA) Study

Continuation of CBPR partnership from the Food Resource Equity and Sustainability of Health (FRESH) project.

National Institute on Minority Health and Health Disparities
Grant No.: R01MD016191

“ Finally, we have a way to do what we did 200 years ago...feed our own people. ”

— Raymond Red Corn, Osage Nation Assistant Principal Chief



OCSA Purpose

Study will implement a new community supported agriculture (CSA) program in which Osage citizens will receive a weekly share of freshly grown farm produce to improve diet and health.

AIMS

01

Conduct RCT to test CSA program's effect on diet, blood pressure and blood lipids (primary outcome) and on BMI, HbgA1C, food insecurity and health status (secondary outcomes)

02

Perform economic evaluation to estimate CSA's cost-effectiveness and cost benefit

03

Document and disseminate study processes and findings using participatory video methods and compile a web-based toolkit for other American Indian communities to use CBPR to improve tribal food systems

CSA Food Boxes and Curriculum

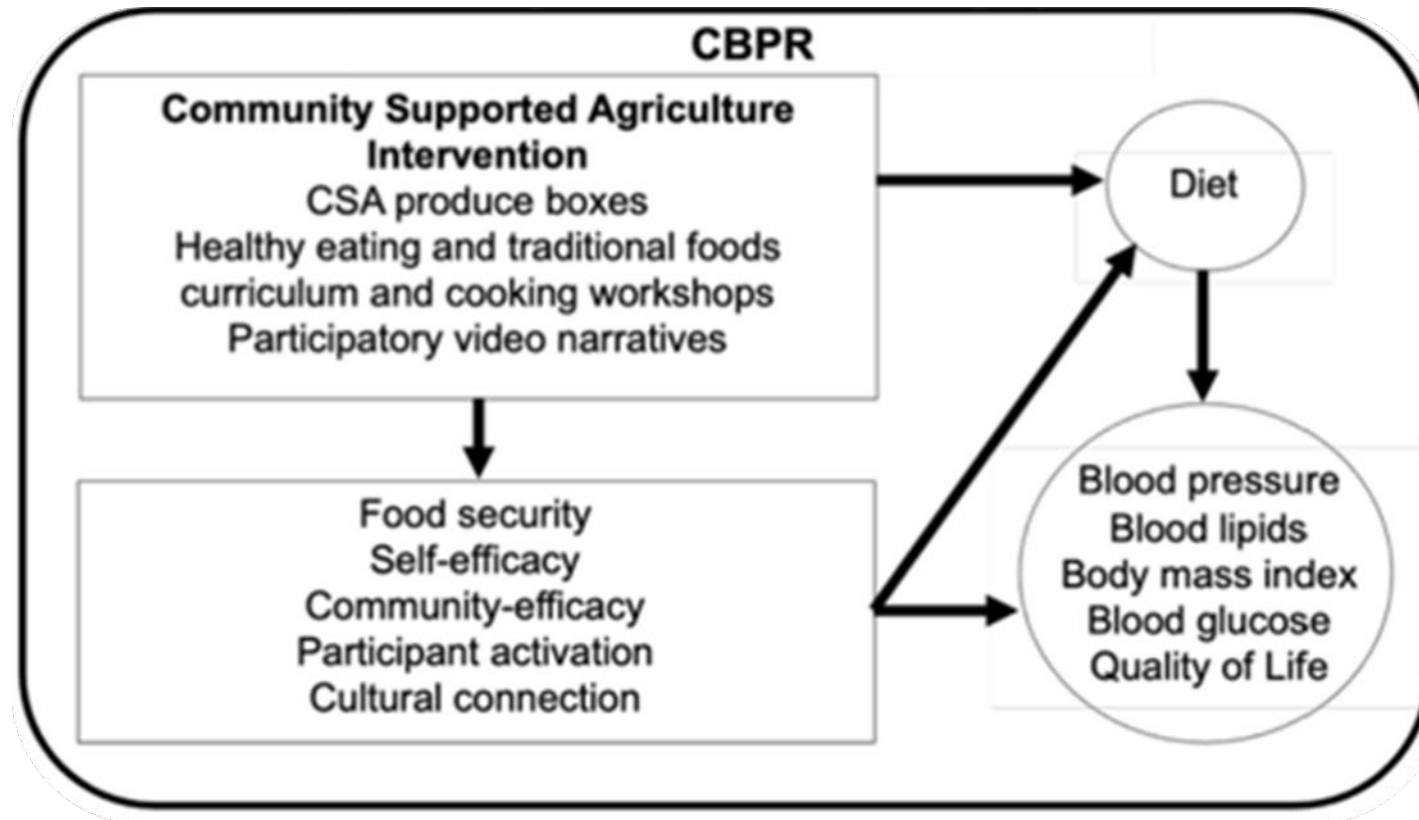
- Strengthen and reconnect participants with the principles of Indigenous food sovereignty
- Increase self-efficacy and daily participation in healthy eating
- Increase community-efficacy and cultural connectedness



Eligibility

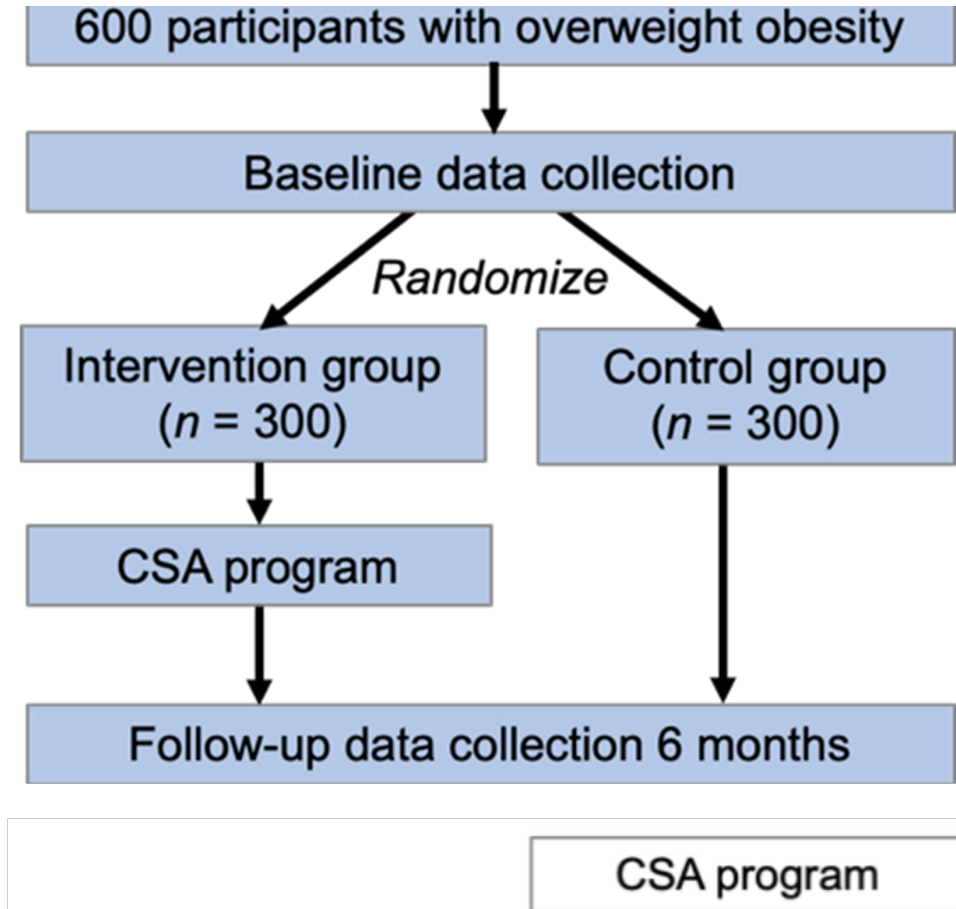
- Adults aged 18-75
- Overweight/Obese (BMI \geq 25 kg/m²)
- Self-report AI residing on Osage Nation reservation
- Willingness and ability to follow study procedures
- *Exclusion Criteria: Pregnant, plan to become pregnant, plan to move outside of Osage Nation reservation*

OCSA Conceptual Model



Randomized Trial Design

The study uses a wait-list control group, and all participants assigned to the control group will have the opportunity to receive the intervention during the completion of the trial.



Data Collection

Data Collection Points:

- Baseline
- 3 Month Follow-up
- 6 Month Follow-up

Primary Outcomes -

- diet
- blood pressure
- blood lipid

Secondary Outcomes -

- BMI
- Hemoglobin A1c (blood sugar)
- food insecurity
- health status

Documentation and Dissemination

- Share findings using participatory video methods and compile a web-based toolkit
- Partner with NCAI and other local/national partners to disseminate toolkit



NCAI Case Study: Osage Nation



Wado!

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