

"I love gardening... but there was too much walking and my feet hurt."

"I wish I had learned more about when to pick the produce."

# Cultivating Success: Evaluating Camper Satisfaction, Social Outcomes, and Perceived Content-Knowledge Acquisition in a 4-H Youth Gardening Program

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"I got to taste fruits and veggies and talk about the differences—it was super fun."

"At 4-H Camp I learned about different food groups and serving sizes."

## Introduction

- 4-H residential camps support youth growth in independence, social skills, leadership, and resilience. "4-H camps foster responsibility, social connection, and leadership through experiential activities." Garst & Whittington (2020) / Sibthorp et al. (2020)
- Youth gardening programs improve nutrition knowledge, STEM learning, environmental awareness, and willingness to try new foods. "Youth gardens have shown consistent improvements in nutrition knowledge and STEM learning." Holloway et al. (2023)/ Graves et al. (2016)
- Gardens function as hands-on learning spaces that connect youth to food systems and healthy eating.
- Little research has examined gardening education within overnight 4-H camp settings. "There is a need to better understand gardening education within residential camp contexts." literature gap identified in study
- This study explores how a gardening track relates to camper satisfaction, social outcomes, and perceived content-knowledge gain.



## Conclusions

- Gardening camp contributes to social and personal development
- Higher satisfaction → higher perceived knowledge
- Findings extend Kirkpatrick Levels 1 and 2 within youth camp settings

## Implications

- Suggest integrating youth gardening into more 4-H and camp programs
- Emphasize diverse learning environments
- Suggest further research into long-term retention and behavior change
- Establishes groundwork for comparative study of effects of youth gardening on urban vs rural populations.
- Suggest importance of edible experiences in youth satisfaction

## Findings

CLS Mean = 3.22 / 4    Content Knowledge = 3.69 / 4    Satisfaction = 8.3 / 10



Variable Pair	r	p-value	Interpretation
CLS-- Content Knowledge	.421	< .001	Moderate + Positive
Satisfaction --Content Knowledge	.411	< .001	Moderate + Positive
CLS -- Satisfaction	.389	< .001	Moderate + Positive

## Methodology

### Camp & Evaluation Design

- ex-post facto quasi-experimental

### Scales Used

- "American Camp Association (ACA) Camper Learning Scale (CLS)
- Program Evaluation-Knowledge Gain / Satisfaction

### Participants

n = 192 eligible responses

## Conceptual Framework

This study was guided by the Kirkpatrick Evaluation Model (KEM), a widely used framework for evaluating educational and training programs.

KEM outlines four levels of learning outcomes:

### Level 1: Satisfaction

Participants' enjoyment, engagement, and immediate reactions to the program.

### Level 2: Knowledge & Attitudes

Changes in content knowledge, skill understanding, interest, and confidence.

(Levels 3 and 4 were not assessed due to participant age and time constraints.)

For this study, Levels 1 and 2 were emphasized to evaluate camper satisfaction, perceived content-knowledge gain, and social/personal outcomes associated with the gardening track.

"I love gardening, it was so fun, and I learned how plants grow."

"We used our senses to taste, smell, hear, touch, and see to learn about different fruits."

"We learned how to plant seeds and learned about different pollinators."

"I learned how to make plants grow better with compost."

"I didn't know that food had a different job."

"I learned more about being a good friend and gardener."

"This track took my mind off being homesick."

"I love the food and fruit they served."