



Outputs and Outcomes at Year 5 of the Out-of-School Program for Youth and Adult Dyads: iCook 4-H

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Abstract

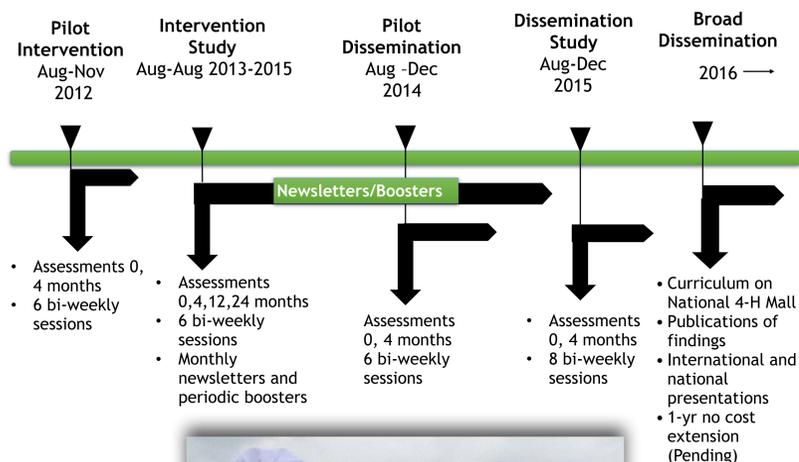
Objective: To present primary outputs and outcomes at year 5 of iCook 4-H. **Description:** iCook 4-H was a 2-year control/treatment intervention study (n=228 dyads) followed by dissemination testing (n=57 dyads). The curriculum is 8, 2-hour sessions designed to impact health-promoting behavior for 9-10 year olds and their adult food preparer. The curriculum content includes food preparation and family activities to encourage eating, communicating and being physically active together. Four seasonal newsletters serve as boosters following sessions. Evidence-based pre/post program outcome evaluations of dyads and a fidelity instrument to test intended versus actual implementation accompany the curriculum. A novel framework, eB4CAST, to document impact and effect of evidence-based research is in development. A training course is on the extension campus moodle website. **Evaluation:** During the intervention study, physical assessments were measured for youth and surveys were completed by dyads. In dissemination, program outcomes were assessed. **Conclusions:** Based on 57% retention, treatment vs control youth were higher for baseline adjusted BMI z-scores, fruit/vegetable intake (2.16 vs 1.67 cups/day; P=0.04) and dairy (0.57 cups/day; P=0.02). No intake differences remained after 1000 kcal standardization. For treatment adults vs control, food resource management was 0.87 points higher (P=0.02). When analyzing the two studies together for program outcomes, treatment vs control was higher, for youth, cooking skills (P=0.0002) and culinary self-efficacy (P=0.03) and, for adults, measure of “cooking, eating, playing together” (P=0.04). iCook 4-H is being prepared for national distribution.

Background

- 5-State, 5-year project for children aged 9-10 and their primary adult meal preparer to cook, eat, and play together.
- Community-based participatory research
- Theoretical framework: Social Cognitive Theory and 4-H “learn by doing” approach

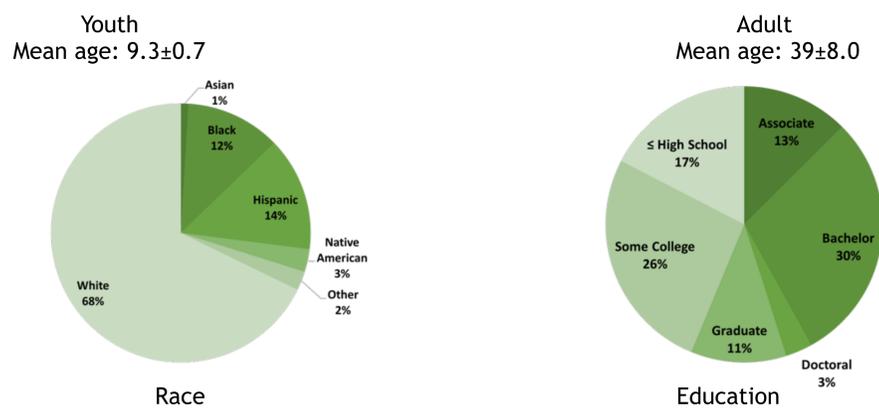
5-Year Study Methods

Control/treatment, nutrition education intervention

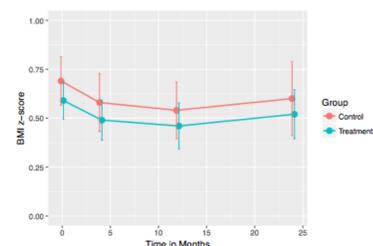


Outcomes

Intervention Study



Youth BMI z-scores



Group	Worse	Same	Improved
Control	5 (14%)	27 (77%)	3 (9%)
Treatment	18 (20%)	65 (73%)	6 (7%)

- Treatment vs. control youth were higher for baseline adjusted BMI z-scores (P=0.01)
- 57% retention after two years

Dyad Associations Around Family Meals

	Difficulties finding time to eat together		Watch TV while eating	
Time in months	0	24	0	24
Control	0.53*	0.27*	0.36	0.65*
Treatment	0.34*	0.29*	0.56*	0.38*

*Significant correlation between youth and adult, P≤ 0.01

Surveys

- Youth:**
- Fruit and vegetable intake over time was 2.16 vs 1.67 cups/day for treatment vs control, respectively (P=0.04)
 - Dairy intake was 0.57 cups/day higher for treatment vs control (P= 0.02)
 - No intake differences remained after 1,000 kcal standardization; treatment had \bar{X} 300 kcal/day higher intake
- Adult:**
- After adjusting for baseline, Food Resource Management (Cooperative Extension Checklist) in treatment was 0.87 point higher (P=0.02) than control
 - Treatment improved in frequency of checking food labels and not letting meat and dairy sit out for over 2 hours (P=0.01)

Intervention/Dissemination Combined Youth/adult program outcomes

- Treatment effect: youth increased cooking skills (P=0.0002) and self efficacy (P=0.03); adults increased cooking, eating and playing together (P=0.04)

Outputs

8-Session Curriculum with Measures for Program Outcomes and Fidelity of Implementation

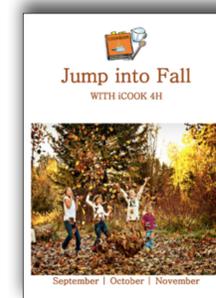


- Youth Outcome Measure
 - 26 item, Likert scale
 - 8-item Cooking Skills (α =.8)
 - 6-item Culinary Self-efficacy (α = 0.84)
 - 4-item Togetherness with Food (α =0.72)
 - 3-item Open to New Foods (α = 0.78)
 - 3-item Physical Activity (α =0.69)
 - 2-item Goal Setting (α = 0.76)



- Adult Outcome Measure
 - 26 item, Likert scale
 - One scale, Cooking, Eating, and Playing Together (α =0.69)

Newsletters for Each Season Report of Overall Impact



Capture, assemble, and sustain community based research to ensure timelessness

Overall Conclusions

- Intervention Study, conducted over two years, had minimal impact on primary research measures
- When the Intervention and Dissemination studies were considered together, there were positive impacts on program outcome measures
- Implementation of the Dissemination Study in multiple settings was successful
- Using the dyad model, there is opportunity for synergism and translation to the home environment as families cook, eat, and play together



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