Simple Suppers: Child Findings of a Family Meals Childhood Obesity Prevention Intervention

Purpose

Background: Given the ongoing childhood obesity public health crisis and potential protective effect of family meals, there is need for additional family meals research, specifically experimental studies with expanded health outcomes that focus on the at-risk populations in highest need of intervention. Future research, specifically intervention work, would also benefit from an expansion of the target age range to include younger children, who are laying the foundation of their eating patterns and capable of participating in family meal preparations.

Objective/Hypothesis: The objective of this study was to determine the effectiveness of participation in an evidence-based, field-tested 10-week family meals intervention (Simple Suppers, SS), aimed at eliciting positive changes in child dietary intake and weight status. We hypothesized that diet quality, body mass index (BMI) z-scores, waist circumference (WC) z-scores, blood pressure (BP) z-scores and child food preparation skills/frequency would improve more from baseline to post-intervention among children participating in the intervention than in the controls.

Methods: The SS program, which has previously demonstrated high feasibility and potential pre-efficacy, includes 10 weekly lessons delivered over the dinner hour and targets low-income families with children aged 4-10 yrs. SS was a multiple cohort (3) study, implemented as a pre- and post-test quasi-experimental design with waitlist control. Child outcomes were assessed at baseline and post-test. General linear mixed modeling was used to determine the association in the differences in outcomes, while controlling for potential confounders (household income, cohort, age, sex, race, participant id(family id)), from baseline to post-test and follow-up.

Results: Baseline and 10 week post-test assessments were completed on 126 children (intervention: n=87; control: n=39) from 95 families. Among child participants, 62% were female, 60% were Black and mean age was 6.9 (1.9) years. Among children in the intervention group, daily total (p=0.035) and whole (p=0.019) fruit intake significantly increased in children who attended $\geq$7 lessons compared with those who attended <7 classes. Similarly, child BMI z-score decreased significantly (p= 0.017) in children who attended $\geq$7 lessons compared with those who attended <7 lessons. Compared with children in the control group, child food preparation skills (p<0.001) and frequency of involvement (p<0.001) increased significantly among children in the intervention group with high and low attendance, respectively.

Conclusions: Results from this study demonstrate the potential for engagement in an evidence-based family meals program to improve child weight status and certain skills and behaviors related to family mealtime among a racially diverse sample of families with school-aged children.

Impact

Dietary:
- Increase frequency of fruit & vegetable intake
- Increase in overall diet quality (Healthy Eating Index)
- Decrease intake of sugar-sweetened beverages

Anthropometric/Biometric:
- Achieve healthy weight (BMI z-score)
- Achieve healthy age-/sex-appropriate waist circumference & systolic, diastolic BP

Food Preparation:
- Increase child food preparation skills & involvement

Ohio State Colleges/Units Involved
College of Education and Human Ecology, Department of Human Sciences: doctoral candidate, Ms. Catherine (Katy) Rogers and faculty, Drs. Carolyn Gunther, Sarah Anderson, Carla Miller, Keeley Pratt
College of Public Health, Division of Epidemiology
Department of Statistics: Dr. Christopher Holloman

Community Partners Involved
Faith-based organizations including, Vineyard Community Center and Westerville Area Resources Ministry (WARM)

How you can get involved:

- **Funding to support students**
- **Support our partners**

To get involved, contact:

Carolyn Gunther, PhD
gunther.22@osu.edu
https://simple-suppers.ehe.osu.edu

THE OHIO STATE UNIVERSITY