



Simple Suppers: A daycare-based family nutrition education and cooking program delivered to parents and their preschool children over the dinner hour

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Abstract

In order to reverse current trends in childhood obesity, early intervention and engagement of parents are essential. The objective of this 10 month study was to test potential efficacy of a nutrition education and cooking program aimed at teaching parents and their preschool children positive eating behaviors. We hypothesized that participating parents would increase their self-efficacy to engage in positive parenting practices that promote a healthy diet in their children. The curriculum was based on the 2010 Dietary Guidelines and consisted of 10X90 min programs delivered over the dinner hour on a monthly basis in a daycare located in a low-income urban neighborhood. Session components included: nutrition education, family meal prep, group meal, take-home educational materials. The evaluation plan included a pre-, mid-, and post-assessment of 1) parent self-efficacy to engage in healthful practices that promote healthy food choices and eating behaviors in their children (3-point Likert scale) and 2) frequency of family meals prepared and eaten at home (0-7 times per week). Eleven families enrolled in the study and ten completed the program. Linear regression models were developed for each outcome variable. Results significant at $p < 0.05$. Parents were more confident that they could plan one vegetable for lunch and supper (baseline to final, $p=0.02$), encourage their child to eat low fat food (baseline to final, $p=0.02$), introduce a new vegetable on a monthly basis (baseline to final, $p=0.007$), introduce a new vegetable weekly (baseline to midway, $p=0.003$), keep cut up vegetables in the refrigerator (baseline to final, $p=0.05$), and bake meats instead of frying them (baseline to midway, $p=0.02$). Between the baseline and final time points, parents were also more confident that they could have their child help prepare meals ($p=0.03$). Finally, from baseline to the final time point, there was an increase in the number of dinners each week that families prepared at home ($p=0.003$). An innovative nutrition education and cooking class engaged the target audience of parents and preschool-aged children and improved parent confidence level to engage in certain positive parent practices related to improved child diet.

Background and Significance

One in three American children is obese - triple the rate recorded in 1963¹. Obesity leads to serious chronic diseases, such as hypertension, diabetes, and cardiovascular. In order to reverse current trends in childhood obesity, early intervention and engagement of parents are essential. Dietary patterns are established early in life and are hard to change thereafter.² Parents play a major role in shaping the food choices and eating behaviors of their children.³ In order to reverse current trends in childhood obesity, early intervention of the child and engagement of parents are critical. The American Academy of Pediatrics (AAP) Expert Committee established key behaviors associated with a decreased risk for childhood obesity (e.g., encourage fruits and vegetables, limit sugar-sweetened beverages, eat meals as a family).⁴ Parents face multiple barriers to establishing positive eating behaviors for their families, including: lack of nutrition knowledge⁵, cooking/food preparation skills⁶; and time and budget limitations⁷. Few efforts have been made to date to design evidence-based nutrition programs that equip parents of young children with the resources required to overcome these barriers.

Overall Objective

The overall objective of this 10 month study was to test potential efficacy of a nutrition education and cooking program aimed at teaching parents and their preschool children positive eating behaviors.

Study Aim

Evaluate efficacy of participation in program on improvements in parent self-efficacy to engage in positive parenting practices that promote a healthy diet in their children.

Methods

Evaluation Plan: Pre-, Mid-, and Post-Assessment:

Outcomes	Goals
	From baseline to project end (10m):
Parent	
Self-efficacy for making healthy dietary changes in home	-Increase confidence of parents to engage in healthy diet-related practices in the home
Home	
Family meals	-Increase frequency of family meals prepared and shared at home

Curriculum and Session Components

- Simple Suppers program was designed for parents and their pre-school children
- Simple Suppers was designed to be an interactive- hands-on learning experience
- Curriculum was based on the 2010 Dietary Guidelines for Americans and the AAP Childhood Obesity Expert Committee Guidelines
- The program consisted of 10 X 90 minute stand alone sessions delivered over the dinner hour on a monthly basis
- Session components included:
 - Nutrition education, separate for parents and children
 - Skill building in food preparation and cooking
 - Family meal preparation
 - Group meal
 - Take-home educational materials and healthy non-perishable food items
 - Session evaluation

Program Implementation and Delivery

- Simple Suppers was delivered by researchers, dietetic interns, and preschool teachers at the Schoenbaum Family Center, an early childhood laboratory school located in Weinland Park, Columbus, Ohio. The center serves a culturally and economically diverse community of children ages birth to five and their families.

****This study was approved by the Institutional Review Board at The Ohio State University***

Results

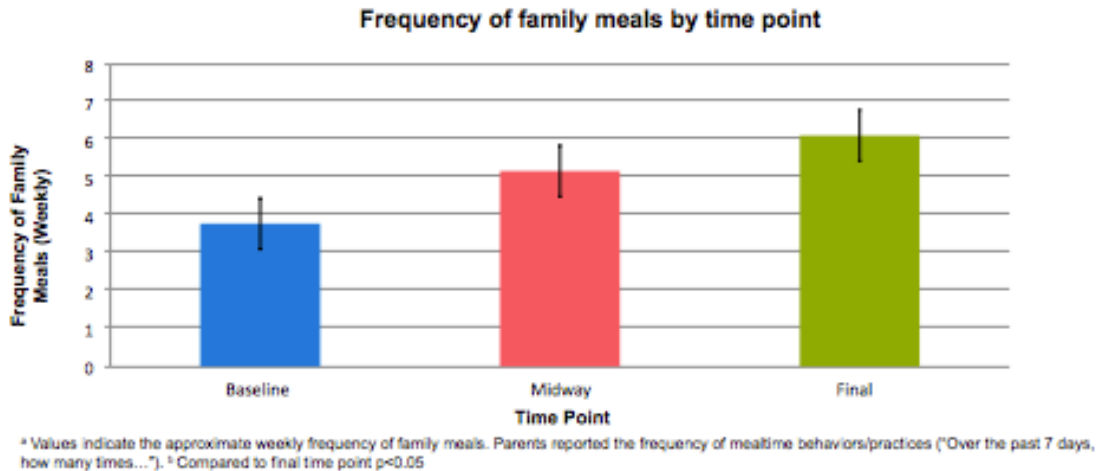
Eleven families enrolled in the study and 10 completed the program. From baseline to final, parents were more confident that they could plan 1 vegetable for lunch and supper ($p=0.02$), encourage their child to eat low fat food ($p=0.02$), introduce a new vegetable on a monthly basis ($p=0.007$), keep cut up vegetables in the refrigerator ($p=0.05$), and have their child help prepare meals ($p=0.03$).

Participant Characteristics By Income Status				
Characteristics of Parents	All parents	Income Group^a		P-value^b
		n = 11	Low	
			n = 6	n = 5
		n (%)		
Education of parent				0.015
High school or less	3 (27.3)	3 (100)	0 (0)	
Some college/technical school	2 (18.2)	2 (100)	0 (0)	
4-year college/advanced degree	6 (54.5)	1 (16.7)	5 (83.3)	
Race of child				0.015
Asian	1 (9.1)	1 (100)	0 (0)	
Hispanic	1 (9.1)	0 (0)	1 (100)	
Non-Hispanic White	3 (27.2)	0 (0)	3 (100)	
Black	6 (54.5)	5 (83.3)	1 (16.7)	

^aincome groups: Low = Reliance on 1+ nutrition assistance program(s); Non-Low = No reliance on nutrition assistance program; ^bP-value according to chi square analysis ($p < 0.05$)

Parent self-efficacy to encourage healthy diet related practices for their children by time point^a			
	Mean (SD)		
	Baseline	Midway (5 month)	Final (10 month)
Plan menus for the family that contain at least 1 serving of vegetable at lunch and supper.	2.55 ^{b,c} (0.12)	2.88 (0.12)	2.88 (0.12)
Cut up vegetables and have them available in the refrigerator for your child.	2.22 ^b (0.21)	2.33 (0.21)	2.78 (0.21)
Have your child help prepare meals.	2.08 ^b (0.18)	2.36 (0.17)	2.58 (0.17)
Serve a new vegetable once a month.	1.75 ^b (0.20)	2.23 (0.19)	2.57 (0.19)
Serve a new vegetable once a week.	1.49 ^c (0.17)	2.22 (0.15)	1.89 (0.15)
Bake meats and other food instead of frying.	2.65 ^c (0.10)	3.02 (0.10)	2.91 (0.10)

^a On a 3-point Likert scale from Very Sure (3) to Not Sure (1), parents rated their level of agreement with statements related to their self-efficacy to establish healthful dietary practices for their family; ^b Compared to final time point $p < 0.05$; ^c Compared to midway time point $p < 0.05$



Conclusion

- Parent participant's demonstrated improvements in self-efficacy to encourage healthy diet related practices for their children. Parents also increased the frequency of family meals prepared and shared at home.
- Findings generated from this pilot test have high relevancy as the need remains for innovative community-based strategies to encourage families with young children to improve the diet quality of children for reduced risk of obesity.

Future Direction

- Increase dosage
- Randomized controlled trial
- Replicate in other neighborhoods
- Try in low income, high class, and middle class neighborhoods
- Touch base with other nutrition education programs