

Promoting Better Family Meals for Girls Attending Summer Programs

Richard R. Rosenkranz, PhD, & David A. Dzewaltowski, PhD

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## Introduction

Numerous cross-sectional studies and some longitudinal studies have identified the positive attributes and protective effects of the traditional family meal. Children and adolescents who frequently eat meals with their families are more likely to eat fruits & vegetables,<sup>1</sup> less likely to consume fried foods, soda, or sweets,<sup>2</sup> less likely to have disordered eating patterns,<sup>3</sup> and less likely to be overweight.<sup>4,5</sup> However, very few published reports evaluate programs designed to increase the frequency or quality of family meals.<sup>6</sup> Therefore, the purpose of this program was to promote better family meals at home for girls attending a summer program by improving the girls' food preparation skills, and abilities to be family change agents for more healthful family mealtimes.

## Overview

A family meal promotion program was implemented successfully with more than 100 girls attending five summer day care programs in groups ranging in size from 10 to 35, ages 6 to 12. Two young women were trained as role models to lead discussions and activities, informed by social cognitive theory. These discussions and activities stressed the importance of family meals, and how to make healthful improvements to the family mealtime environment.

Social Cognitive Theory identifies behavioral skills and self efficacy as key determinants of behavior, both of which can be improved through active mastery experiences and observation of role models.<sup>7</sup> Girls participated in active mastery experiences to improve skills and self-efficacy by practicing healthful family mealtimes in our program through the preparation and consumption of fruit and vegetable snack recipes. These activities helped girls to learn food preparation skills, effective asking behaviors,<sup>8</sup> and how to be family change agents for more

healthful family mealtimes. Girls completed activities encouraging them to: 1) Ask permission to turn off the television during meals; 2) Ask to replace soda with water at mealtime; 3) Help parents prepare food, set the table, and clean up after meals; 4) Ask to include a fruit and vegetable in the meal; 5) Use good table manners; and 6) Ask to be physically active with a parent before or after the meal. The program consisted of a total of eight contact hours, delivered in four sessions, for two hours at a time, once a week.

### Session structure

Each session started with a discussion of family meals including a focus on two target behaviors each week aimed at personal improvement and being family change agents at home to improve family meals. Program leaders encouraged the girls to improve target behaviors, and praised girls for making attempts at improvement, even if attempts were unsuccessful. Each focus of family mealtime improvement was represented by a shape and color of plastic bead, which girls received according to how much they reported attempting the target behavior in the past week (Table 1). Girls used the beads to make necklaces and bracelets following the discussion, then wore the jewelry to remind themselves about the target behaviors. Following the beadwork, girls engaged in a fun physical activity including dancing, yoga, active games, or walking. Girls were encouraged to try any of these physical activities at home with a parent before or after family meals. After the fun physical activity, leaders individually assigned girls to a task for fruit and vegetable snack preparation and table setting. Girls then actively learned culinary practices including how to wash foods, tables, dishes, and how to measure, cut, and combine ingredients. Once the snack was prepared, girls role-played family mealtime, including the practice of good table manners and asking behaviors (e.g., Could we please have water to

drink with our meal?). The session concluded with clean up, brief discussion, and a small assignment that reinforced target behaviors at home.

### Evaluation

Girls were informally interviewed at program end to determine likes and dislikes of the program. Components most frequently liked included dancing and working with food. Dislikes included paperwork related to take-home assignments. In addition, twenty-nine mothers agreed to participate in baseline and follow-up surveys, which were used to assess the impact of the program on the home environment. These mothers were not directly involved in the summer program, and were not informed by researchers or program leaders about the specifics of the program's purpose. Thus, bias from demand characteristics or social desirability<sup>9</sup> was minimized. Survey items included the frequency of family meals (FEAQ-R<sup>10</sup>) and parents' frequency of some target behaviors (using previously published items<sup>10-12</sup> and novel items created for this evaluation). Differences in family mealtime between baseline and follow-up measures were assessed with paired t-tests (Table 2). For family meal frequency, means were significantly higher at follow-up, compared to baseline ( $t = 2.88, p = .008$ ). For parents eating fruit at breakfast, means were also significantly higher at follow-up, compared to baseline ( $t = 2.74, p = .011$ ). Although other program target behaviors appeared greater at follow-up, no significant differences were found between baseline and follow-up for shared physical activity, parents eating vegetables at dinner, parent social support for physical activity, or parents eating with television ( $p > .05$ ).

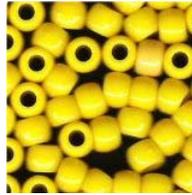
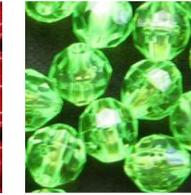
The outcomes of our program demonstrate the feasibility of implementing this hands-on, enjoyable intervention program with girls in a summer program. Further, the results of this

program indicated an impact among participants on family mealtime (Table 2). Similar to the work of Johnson and colleagues<sup>6</sup> we were able to increase the frequency of meals that parents reported eating together with their children at home, and parents reported eating fruits at breakfast more frequently after the program. Future work can refine and possibly extend this type of program as an intervention with children, and use a randomized controlled trial to determine the impact on dietary habits of children and their parents, using validated measures.

#### Notes

The Institutional Review Board of Kansas State University approved this study prior to collection of evaluation data from subjects. Funding for this project came from Girl Scouts Kaw Valley Council and Community Health Institute at Kansas State University. Special thanks go to Crystal Bryant, Margaret Moore, Lindsay Hicks, and Eleanor Burton for assisting with the program.

**Table 1.** Beads representing targeted behaviors to improve family meals.

	<p>This past week did you _____* ?</p> <p>--A lot- 3 beads --A little- 1 bead --Not at all- none</p> <p>Make a new necklace or bracelet each time, or add beads to existing jewelry.</p>				
<p>Starter beads for program participation- letters to spell first name</p>		<p>*Participate in our program without misbehaving? Colored stars</p>	<p>*Complete your weekly project assignment? Colored hearts</p>	<p>*Eat meals with your family? Red hearts</p>	<p>*Turn off the TV while eating? Black</p>
					
<p>*Replace soda with water? Clear</p>	<p>*Help your family prepare meals &amp; clean up? Yellow</p>	<p>*Practice good manners at mealtime? Pink</p>	<p>*Include fruit in meals? Red</p>	<p>*Include vegetable in meals? Green</p>	<p>*Do physical activity with a parent? Purple</p>

**Table 2.** Baseline to Follow-up Comparisons of Measures Related to Program Target Behavior

Measures	Baseline	Follow-up
	mean (sd)	mean (sd)
Family meal frequency <sup>1</sup>	9.0 (1.9)	*10.0 (2.3)
Parent-child shared physical activity frequency <sup>2</sup>	2.7 (1.6)	2.9 (1.8)
Social support for physical activity <sup>2</sup>	4.6 (1.8)	5.0 (1.7)
Parents eat with TV frequency <sup>3</sup>	4.2 (1.3)	3.8 (1.5)
Parents eat fruit at breakfast frequency <sup>2</sup>	2.3 (1.9)	*2.9 (2.1)
Parents eat vegetables at dinner frequency <sup>2</sup>	5.0 (1.8)	5.3 (2.5)

Note: \*significant difference between baseline and follow-up mean,  $p < .05$ ; <sup>1</sup> scale 4-20; <sup>2</sup> scale 0-7; <sup>3</sup> scale 0-8

## References

1. Gillman MW, Rifas-Shiman SL, Frazier AL, et al. Family dinner and diet quality among older children and adolescents. *Arch Fam Med*. 2000;9:235-240.
2. Videon TM, Manning CK. Influences on adolescent eating patterns: The importance of family meals. *J Adolesc Health*. 2003;32:365-373.
3. Neumark-Sztainer D, Eisenberg ME, Fulkerson JA, Story M, Larson NI. Family meals and disordered eating in adolescents: Longitudinal findings from project EAT. *Arch Pediatr Adolesc Med*. 2008;162:17-22.
4. Taveras EM, Rifas-Shiman SL, Berkey CS, et al. Family dinner and adolescent overweight. *Obes Res*. 2005;13:900-906.
5. Gable S, Chang Y, Krull JL. Television watching and frequency of family meals are predictive of overweight onset and persistence in a national sample of school-aged children. *J Am Diet Assoc*. 2007;107:53-61.
6. Johnson DB, Birkett D, Evens C, Pickering S. Promoting family meals in WIC: Lessons learned from a statewide initiative. *J Nutr Educ Behav*. 2006;38:177-182.
7. Bandura A, ed. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs. 1986.
8. Baranowski T, Davis M, Resnicow K, et al. Gimme 5 fruit, juice, and vegetables for fun and health: Outcome evaluation. *Health Education & Behavior*. 2000;27:96.

9. Klesges LM, Baranowski T, Beech B, et al. Social desirability bias in self-reported dietary, physical activity and weight concerns measures in 8- to 10-year-old African-American girls: Results from the Girls Health Enrichment Multi-site Studies (GEMS). *Prev Med.* 2004;38 Suppl:S78-87.
10. Golan M, Weizman A. Reliability and validity of the family eating and activity habits questionnaire. *Eur J Clin Nutr.* 1998;52:771-777.
11. Trost SG, Sallis JF, Pate RR, Freedson PS, Taylor WC, Dowda M. Evaluating a model of parental influence on youth physical activity. *Am J Prev Med.* 2003;25:277-282.
12. Kelder S, Hoelscher DM, Barroso CS, Walker JL, Cribb P, Hu S. The CATCH Kids Club: A pilot after-school study for improving elementary students' nutrition and physical activity. *Public Health Nutr.* 2005;8:133-140.