GEM No. XXX

Let's Cook, Eat, and Talk: Encouraging Healthy Eating Behaviors and Interactive Family Mealtime for an Underserved Neighborhood in Texas

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INTRODUCTION

Family meals are associated with significant benefits including increased dietary quality,[1–4] reduced risk behavior for substance abuse[3–5] and disordered eating behaviors,[3,4] improved cognitive performance among children,[3–5] and strengthened family connectedness.[4,5] Promoting healthy eating through family meals is suggested to be an important public health strategy, but family meal–focused interventions that educate entire families are lacking.[6] Furthermore, family programs that promote healthful family mealtimes through an experiential and observational learning environment for underserved families within a community setting are limited or not widely reported. The objective of *Let's Cook, Eat, and Talk* (LCET) was twofold: to promote healthy eating behaviors by providing combined nutrition education and cooking classes to underserved families in the community setting and to facilitate family mealtime communication to strengthen family relationships among participants in East Lubbock, TX.

PROGRAM OVERVIEW

The LCET program was part of a larger community-wide *East Lubbock Promise Neighborhood* grant program. To develop a culturally and socioeconomically sensitive program, the LCET research team established a community advisory board (CAB) of community leaders (eg, pastors and previous city council member), parents and teachers from schools, a foodservice program director from a food bank, nurses and doctors from the community health centers, and registered dietitian faculty from Texas Tech University in an effort to identify dietary and family communication patterns and develop a tailored intervention. The needs-based assessment through the CAB meetings found that a high prevalence of obesity and related chronic diseases, such as diabetes and high blood pressure, high rates of food insecurity, low accessibility to supermarkets, and low availability of fresh produce were underlying causes of the dietary habits and related chronic disease conditions in the East Lubbock community. Community advisory board members emphasized the importance of cultivating healthy lifestyles and healthy family communication with the goal of creating a healthy environment for the individual family and the wider community.

Development of the LCET Program Curriculum

Two registered dietitian faculty members, 2 chefs from the Lubbock Chef Organization, and 1 home economics teacher developed and taught socioeconomically and culturally sensitive nutrition and cooking education content, which was based on their work experiences with underserved families from the East Lubbock community, outcomes and suggestions from the CAB, and previous family meal literature.[3,7–9] A literature review about the use of imagery for health education suggested that patients' acceptance of and adherence to health-related messages and instruction might be improved through the use of culturally relevant imagery, especially for those with lower levels of education or literacy.[10] Cultural reinforcement of poor dietary behaviors combined with varying literacy levels among African American[11] and Hispanic/Latino[12] populations could make nutrition education and health communication challenging in underserved communities, requiring techniques beyond written and verbal instruction. Therefore, the LCET program lessons used a variety of visual aids targeted to low-income African American and Hispanic families from East Lubbock, including PowerPoint (Microsoft Corporation, Redmond, WA, Version 14.7.2, November 2010) slides with large images and video clips, food models, food packaging, poster boards, and handouts.

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Conflict of Interest Disclosure: The authors have not stated any conflicts of interest.
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J Nutr Educ Behav. 2018;■■:■■-■■

https://doi.org/10.1016/j.jneb.2018.05.012

The LCET program was guided by Social Cognitive Theory (SCT), which emphasizes reciprocal interactions of personal, environmental, and behavior factors to change one's behavior.[13] Indeed, a previous study demonstrated the successful application of SCT to the development of a family meals–focused nutrition intervention in a community setting.[6] The program facilitated adolescents' behavior changes by increasing the self-efficacy of participants, helping them to set goals associated with behavior messages and providing a family mealtime environment. Likewise, LCET sessions incorporated constructs of SCT, such as improving nutrition knowledge and self-confidence of both parents and children through nutrition and cooking lessons and activities (personal factor), providing observational and experiential learning environment by working with chefs and family members, supporting nutrition education materials (eg, MyPlate tip sheets,[14] serving size cards,[15] and a family cookbook[16]) for home use, and increasing outcome expectations of healthy behavior (eg, increased fruit and vegetable consumption and frequency of family dinner table conversation at home).

Nutrition and cooking lessons emphasized building skills and self-efficacy to plan, purchase, and prepare healthful meals using affordable and culturally preferred foods available locally. Based on the 2010 Dietary Guidelines for Americans[17] and MyPlate,[18] those lessons focused on making nutrient-dense choices from each food group in proper portion sizes while limiting added sugars, solid fats, and sodium. To facilitate the collective meal preparation, each family had its own table to cook family meals with parents and child(ren) (experiential learning); chefs helped each table by demonstrating knife skills and recipe modification methods (observational learning). To ensure sustainability, easy, economic, and popular dinner menus were selected for the family cooking lessons. The chef determined easy recipes based on the estimated active preparation time (under 30 minutes), the skill level of food preparation and knife techniques required, and the local availability and number of different ingredients used. Popularity of the menus was based on the chef's own experiences working in the East Lubbock community. Experiencing the flavors of different cuisines, such as Southwestern/Tex-Mex, Creole/Cajun, Korean, and Chinese American, tasting a variety of seasonal fruits and vegetables, and using various forms of produce (fresh, frozen, or canned) were notable aspects of the curriculum.

Communication lessons targeted increasing dinner table conversation to strengthen family relationships. Basic knowledge of communication, listening skills, conflict resolution, and stress management were discussed, and each lesson featured soft-skill development activities, such as creating and sharing family goals posters, to practice and promote dinner table conversation both in class and at home, as well as the exclusion of electronic devices such as televisions and cell phones from the family meal setting.

The readability of content from nutrition, cooking, and communication lessons was checked by using an online program;[19] the researchers determined it to be at a sixth- to eighth-grade reading level, which was recommended for public information materials according to the National Institutes of Health Plains Languages Initiatives.[20] Program feasibility (eg, family attendance) and fidelity (eg, observations of session delivery) were conducted by a registered dietitian and a trained graduate student based on the previous literature.[21] Average attendance of families at each session (during program implementation) was 92%; 94% of sessions were delivered as intended. The LCET team reviewed and finalized the curriculum (Table 1) and the CAB gave final approval for the program outline and implementation plan.

EVALUATION

A convenience sample of 45 families who lived with ≥1 child (aged 8–12 years) at home at the time of recruitment was recruited from community events in the target neighborhood. Of the 45 families who intended to participate, 13 with their child(ren) (n = 39; 13 parents and caregivers and 26 children) took part in the LCET intervention for 4 Sundays at a community building located within the neighborhood that was equipped with lecture rooms and a commercial kitchen.

Validated survey questions from previous dietary and behavioral research[22–27] were used to assess nutrition knowledge, self-confidence about cooking, home food environment, fruit and vegetable consumption, and frequency of family dinner conversation (Table 2). Five sociodemographic questions (age, gender, highest education level, race/ethnicity, eligibility for the *Supplemental Nutrition Assistance Program*, the *Special Supplemental Nutrition Program for Women, Infants, and Children*, or both), 1 program satisfaction question (*Overall, do you think this class satisfied you and your family?* with a 5-point Likert scale ranging from 1 = very dissatisfied to 5 = very satisfied), and 1 open-ended question (*What did you like the most from the program?*) were added into the questionnaire. A registered dietitian and a trained graduate student administered pre- and postsurveys before and immediately after the intervention.

After the postsurvey, a registered dietitian faculty member conducted an informal interview with the aid of a trained graduate assistant to obtain information regarding behavior changes at home and suggestions for program development. At the end of the communication lesson for week 3, the class instructor explained the interview information and schedule to all families and collected names and available times for possible interviewees. Each interviewee was allocated 10–15 minutes in a comfortable environment and a trained graduate student collected written notes (without audio recording) for further analysis. A general inductive analysis[28] was used to obtain frequent and dominant themes by categorizing interviewees' comments written in a note through careful readings, frequency of meaningful word counting, and labeling relevant words and phrases (coding). A summary of the interview results is mentioned in the Outcomes section.