

A Brief Community-Based Nutrition Education Intervention Combined With Food Baskets Can Increase Fruit and Vegetable Consumption Among Low-Income Latinos

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ABSTRACT

Objective: To evaluate the impact of an 8-week community-based nutrition education program combined with food baskets on fruit and vegetable consumption (FVC) among Latinos.

Design: Pre-post intervention study assessing perceived barriers, knowledge, food efficacy, food outcomes, and FVC, using mixed methods (quantitative and qualitative).

Setting: Participants' recruitment and data collection took place in the Seattle Metropolitan area from September 2012 to July 2013.

Participants: Participants' (n = 40) mean age was 37.8 (\pm 10.5) years. Participants were mostly women, from Mexico, uninsured, low income, and overweight or obese.

Intervention: *Nuestras Comidas* was developed through the use of the Social Cognitive Theory and focused on increasing behavioral capability, food efficacy, food outcomes, and FVC.

Main Outcome Measure: Dependent variables were knowledge, perceived barriers, food efficacy, food outcomes, and FVC. Independent variable was the intervention (pre-post).

Statistical Analyses: A McNemar exact test was computed for categorical variables and Wilcoxon signed-rank test and paired *t* test for continuous variables. Focus group data were analyzed by identifying common themes.

Results: Participation in the intervention was significantly associated with increased knowledge, food efficacy, and vegetable consumption.

Conclusions and Implications: A brief nutrition education intervention combined with food baskets can improve healthy eating among Latinos.

Key Words: fruits, vegetables, nutrition education, food baskets, Latinos, Social Cognitive Theory, food choice (*J Nutr Educ Behav.* 2016; ■:1-9.)

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INTRODUCTION

A healthful diet is important for prevention and control of chronic health conditions such as hypertension, diabetes, cardiovascular disease, cancer, and obesity.¹⁻⁴ As part of its *Healthy People 2020*

goals, a critical objective of the federal government is to increase the proportion of children and adults who consume fruits and vegetables.⁵ However, most research concludes that Latinos in the US consume a less healthful diet compared with other racial/ethnic groups,

in part because of less access to healthful foods, food insecurity, and low socioeconomic status.^{6,7} Limited English proficiency, low acculturation, low health literacy, and immigration status also affect diets among Latinos.⁸ In fact, Latinos tend to have higher rates of obesity and diabetes compared with non-Latinos.^{9,10}

Community-based education interventions have been shown to be effective in improving dietary practices among Latinos. Successful interventions were described as being led by bilingual and bicultural community health educators (CHEs), being guided by behavioral theory, and including content that is culturally tailored to the target community.¹¹⁻¹³ These strategies were shown to promote information relevance, likability, and acceptability, all

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aspects that have been shown to predict individual behavior change.¹¹⁻¹⁴

However, these types of interventions are time-intensive, costly, and require high commitment from participants. Many interventions can range from 10 to 16 weeks with some delivered over 24 weeks, marginalizing those most vulnerable who have limited time, resources, and support to commit to and participate in these programs.¹²⁻¹⁵ In addition, many intervention activities stop at the intervention site (whether a group seminar or individual education), and, apart from helping set goals, participants are often left with limited opportunities to connect knowledge gained and goals set during the program at home.¹²⁻¹⁵ Participants are again placed in a situation that is heavily dependent on motivation and commitment because they must overcome their own individual barriers as well as barriers from their home environment.

The goal of this study was to implement and quantitatively assess the impact of a lower-dose, brief (8-week), theory-based nutrition education intervention combined with opportunities to connect and practice the learned skills on change in fruit and vegetable consumption (FVC). Additionally, the study aimed to qualitatively explore participant experiences and perceptions of the intervention. The rationale was to keep the strategies of successful nutrition interventions described in the literature (ie, CHE-led, theory-based, and culturally tailored) while providing more opportunities to participants to practice their learned skills at home. This study hypothesized that the brief community-based nutrition education combined with food baskets would increase FVC among Latinos who participated in the intervention.

METHODS

Study Design and Participants

This mixed methods (pre-post intervention study) comprised a community nutrition intervention, quantitative tools to assess the impact of the intervention on FVC, and qualitative focus groups to explore participant perceptions of the intervention. The intervention consisted of a group discussion led by a bilingual and bicultural CHE, cooking demonstrations led by a CHE, a take-home food basket with

the ingredients used in cooking demonstrations to practice the recipes learned in the program at home, and targeted newsletters to reinforce the materials covered. Both quantitative and qualitative approaches are appropriate in this study because the use of survey questions and validated scales demonstrate how much the intervention addressed the outcome of interest, and the use of focus groups provide insight into the context and experiences that are unique to participants in this intervention. Although both the qualitative and quantitative data collected in this study may not represent all Latinos, this study does have the potential for inferential transferability.¹⁶ That is to say, the findings of this study may be applicable to others in similar contexts.

Recruitment

The study team posted recruitment fliers on community bulletin boards. Interested individuals contacted the bilingual (Spanish and English) research staff

member, who pre-screened each person to ensure that they met the eligibility criteria. Eligible participants were (1) 18 years and older, (2) self-identified as Hispanic or Latino, (3) proficient in the Spanish language, (4) reported being the main person who cooks for their family, and (5) were not pregnant. All recruitment occurred in the Seattle Metropolitan area. Participant recruitment and retention are shown in Figure 1.

Intervention

Nuestras Comidas (Our Meals) was focused on nutrition and healthy cooking. The Social Cognitive Theory (SCT) guided intervention development. SCT emphasizes reciprocal determinism, which indicates that human behavior is the product of a dynamic interplay among 3 factors: cognitive, environmental, and behavioral.¹⁷ These factors interact with each other to motivate behavior change. The intervention primarily targeted 4 constructs of SCT: behavioral capability (an individual's ability to perform a behavior through

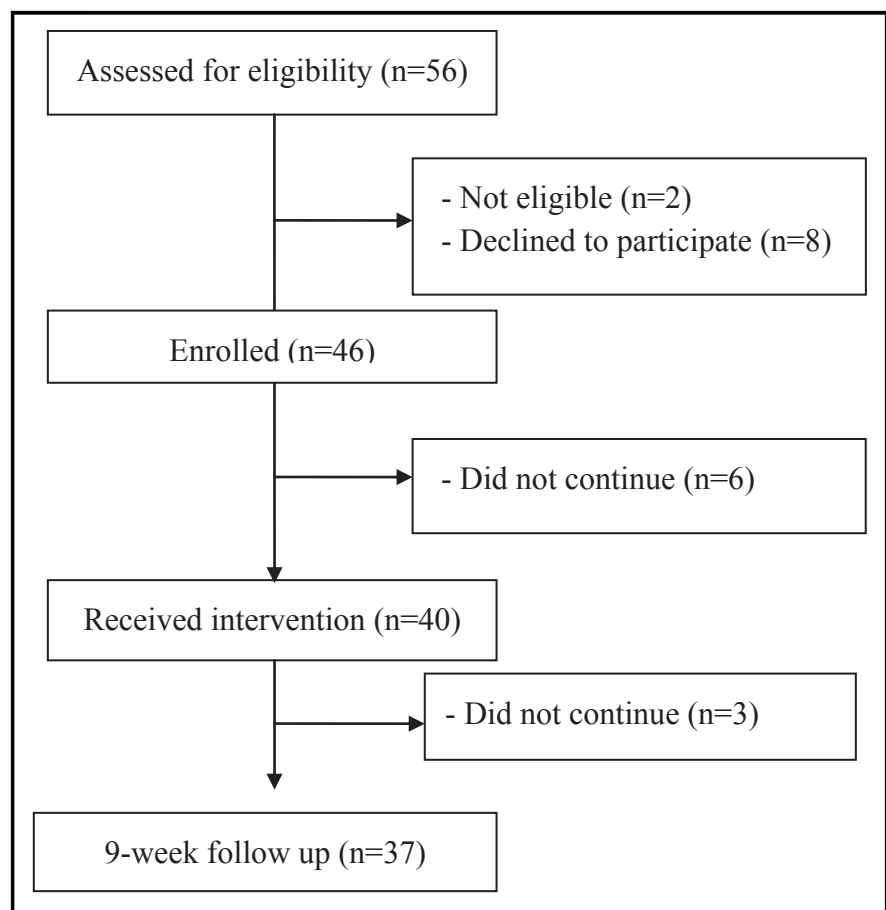


Figure 1. Consort diagram of Latino participants in the *Nuestras Comidas* study.

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