

**Journal of Nutrition Education and Behavior Supplement**  
***Network for a Healthy California: Evaluation Results of Multi-Level***  
**Nutrition Education through SNAP-Ed**

**Backman, D, V Scruggs, S Bowie, AA Atiedu, L Bye, A Dennis, M Hall, A Ossa, S Wertlieb, and SB Foerster. 2011a. "Using a Toolbox Educational Lessons to Improve Fruit, Vegetable, and Physical Activity Behaviors among African American Women in California."**

This paper evaluates the effectiveness of the Fruit, Vegetable, and Physical Activity Toolbox for Community Educators (Toolbox), an intervention originally designed for Spanish and English audiences, in changing knowledge, attitudes, and behavior among low-income African American women. The treatment group reported significant changes in nine measures of attitude, compared to one measure in the control group, as well as twelve measures of confidence and five measures of empowerment for which the control group showed no changes. Women in the treatment group compared to the control were also more likely to make behavioral changes to meet recommendations for fruit and vegetable consumption and physical activity.

**Backman, D., J. Cheung, D. Francis, S. Sugerman, and C. Granger. 2011b. "Catering Trucks in California Promote Healthy Eating in Low-Wage Worksites."**

This paper examines whether point-of-purchase merchandising would increase sales of selected healthy entrees at catering trucks that service workers in low-income census tracts. Eight catering trucks in San Diego, California participated in a five week study. Two healthy entrees were created for the study. Sales rose sharply during the healthy entrée promotion, increasing by 37.4% for the turkey sandwich and 14.4% for the chicken wrap on promotion vs. baseline. Point-of-purchase merchandising can positively impact sales of healthy entrees at catering trucks.

**Backman, D., G. Gonzaga, S. Sugerman, D. Francis, and S. Cook. 2011c. "Effect of Fresh Fruit Availability at Worksites on the Fruit and Vegetable Consumption of Low-Wage Employees."**

This paper examines the impact of fresh fruit availability at worksites on the fruit and vegetable consumption and related psychosocial determinants of low-wage employees. Participants in the intervention worksites showed a significant increase in fruit, vegetable, and total fruit and vegetable consumption, purchasing of fruits, family purchasing of vegetables, and self-efficacy toward eating 2 servings of fruit each day compared to the control worksites. Improving access to fruit during the workday can improve fruit and vegetable consumption, purchasing habits, and self-efficacy of low-income employees.

**\*Broyles, Shelia L. Howard L. Taras, Kari Herzog, Justine Kozo, Jesse Brennan. Cultural Adaptation of a Nutrition Education Curriculum for Latino Families Promote Acceptance.** Nutrition Education Aimed at Toddlers and Animal Trackers for children ages two to four (NEAT AT2) was adapted for urban, lower income, Hispanic, low literacy parents of toddlers. The original design, lessons and reinforcement activities were adapted by increasing traditional foods, promoting affordable, nutrient-rich foods, emphasizing family meal time, and translating materials to Spanish. Based on 409 parent satisfaction surveys, on a five point scale the program was rated 4.96 for both helpfulness and enjoyment, and 4.98 for the likelihood of recommending the program to a friend.

**\*Farfan-Ramirez, Lucrecia, Lisa Diemoz, Elizabeth J. Gong, MaryAnn A. Lagura. Curriculum Intervention in Preschool Children - Nutrition Matters!**

The Nutrition Matters! (NM!) curriculum provides age-appropriate education in Nutrition, Gardening and Physical Activity; this paper presents evaluation findings from the Nutrition and Gardening components. The evaluation measured children's eating behaviors before and after completing the NM! curriculum. Observers recorded whether children brought featured foods (figs, raspberries, snap peas and beets) to their plate, to their nose/mouth, and whether the child chewed and/or swallowed the food. A significant increase in preferences was found for figs, raspberries and snap peas following curriculum completion.

**Foerster, SB and Gregson J. "Commentary: From the Network for a Healthy California."**

This foreword summarizes the mission of the Network, describes the size, program scope, and regional structure of the Network, comments on the relevance of the evaluation articles included in the supplement, and offers recommends that future work in SNAP-Ed use a social-ecological framework and defined social marketing approaches, with a focus on fruits and vegetables, physical activity, food security, and sugar-sweetened beverages to support obesity prevention.

**Fourney, A, J Gregson, Sharon Sugerman, and A Bellow. 2011. "Building Evaluation Capacity in Local Programs for Multi-site Nutrition Education Interventions "**

From 2004-2008, capacity to conduct program evaluation was built among the Network for a Healthy California's 48 largest local partners. Capacity building was done within a framework of Empowerment Evaluation and Utility-Focused evaluation. Overtime, more programs completed an evaluation, used a more rigorous design, and reported statistically significant results.

**Ghirardelli, A., A. Linares, and A. Fong. 2011. "Usage and Recall of the Food Stamp Office Resource Kit (FSORK) by Food Stamp Applicants in four California Counties."**

This paper evaluates recall and usage of the Food Stamp Office Resource Kit (FSORK), a set of nutrition education materials designed for use in food stamp offices. Data were collected through Client intercept exit surveys, an environmental scan, and individual observations of clients in the food stamp office. Nearly 70 percent of clients recalled, unaided, at least one FSORK element. In the observation study, of clients who initially engaged with the video, 40 percent of their viewing time was spent 'watching' it. Food stamp offices are an effective setting for nutrition education. FSORK has since been distributed to over 265 of California's 300 local offices.

**Ghirardelli, A., V. Quinn, and S.B. Sugerman. 2011. "Reliability of a Retail Food Store Survey and Development of an Accompanying Retail Scoring System to Communicate Survey Findings and Identify Vendors for Healthy Food and Marketing Initiatives."**

This paper describes reliability testing of a retail grocery instrument with weighted scoring to be used as an indicator of the food environment. Measures of availability and price of fruits and vegetables performed well in reliability testing (Kappa .681-.800). Items for vegetable quality were better than for fruits (ICC .708 vs .528). Kappa scores indicated low to moderate agreement (.372 to .674.) on external store marketing measures and higher scores for internal store marketing. "Next to" the check-out counter was more reliable than "within 6 feet." Health departments using the store scoring system reported it as the most useful data communication of neighborhood findings. There was good reliability of the measures among the research pairs. Store scores can show the need to bring in resources and provide access to fruits and vegetables and other healthy foods.

**Gregson, J, M Sowa, and H Kohler Flynn. 2011. "Evaluating Form and Function of Regional Partnerships: Applying Social Network Analysis to the Network for a Healthy California, 2001-2007."**

This paper evaluates the partnership structure of the Network for a Healthy California (Network), a social marketing program, from 2001-2007. Was California's program able to establish and maintain partnerships that 1) provided access to a local audience, 2) facilitated regional collaboration, 3) included new and non-traditional partners, and 4) strengthened regional networks over time, even with significant administrative changes in 2003 and 2006? Sociograms demonstrated that more counties participated, more local agencies worked together, and networks were more integrated in 2007 than in 2001. Increased cohesion of Network partners was demonstrated by decreased fragmentation, and reaching out to new and existing partners are demonstrated by density. The Network has developed in a way consistent with program goals. Social Network Analysis offers great potential for partnership and systems research.

**Keihner, A.J., R. Meigs, S. Sugerman, D. Backman, T. Garbolino, and P. Mitchell. 2011. "The Power Play! Campaign's School Idea & Resource Kits Improve the Determinants of Fruit and Vegetable Intake and Physical Activity among Fourth- and Fifth-Grade Children."**

This paper examines the effect of the California Children's Power Play! Campaign's School Idea & Resource Kits (SIRKs) for fourth/fifth grades on the psychosocial determinants of fruit and vegetable (FV) intake and physical activity (PA). Intervention children made significant gains for FV knowledge (4 items,  $P < .05$  to  $P < .001$ ), positive outcome expectations (fifth-grade only,  $P < .0001$ ), asking/shopping and eating self-efficacy ( $P = .035$  and  $P = .0003$ ); PA knowledge (2 items,  $P < .01$  to  $P < .001$ ), outcome expectations ( $P = .049$ ), and support seeking self-efficacy ( $P = .040$ ), but not self-efficacy to overcome barriers. The Campaign's SIRKs improved the determinants of FV intake and PA.

**MkNelly, Barbara, Stephanie Nishio, Peshek Cynthia, and Michelle Oppen. 2011. "Report: Community Health Centers – A Promising Venue for Supplemental Nutrition Assistance Program Education in the Central Valley."**

Health care providers could help achieve the necessary shift to healthy eating and active living; however, lack of coverage or reimbursement, lack of time, and limited information about appropriate interventions are some of the documented barriers. This report highlights the potential for Supplemental Nutrition Assistance Program Education (SNAP-Ed) implementation in the relatively nontraditional setting of Federally Qualified Health Centers (FQHC) based on the experience of the Central Valley Health Network's (CVHN) Nutrition Education Demonstration Project. The report provides a brief overview of the primary prevention role(s) suggested for health care providers, relevant SNAP-Ed policies, how SNAP-Ed has been implemented in FQHC settings and recommendations for similar efforts.

**Stone, Matthew. 2011. "Enhancing Delivery of Supplemental Nutrition Assistance Program Education (SNAP-Ed) through Geographic Information Systems."**

This paper describes common uses of the *Network for a Healthy California* GIS by contractors, as well as demonstrating the possibilities of GIS as a useful tool for public health programs and audience targeting in general. Narrative examples supported with graphics describe how 1) Network contractors use the GIS to identify eligible census tracts to carry out their work, 2) the GIS can map neighborhood assets in eligible census tracts throughout California, 3) the GIS can map health

behavior data to the county level throughout California, and 4) the GIS can map selected indicators of healthy neighborhood food environments in low-income areas of California.

**Sugerman SB, Foerster SB, Gregson J, Linares A, and Hudes M. "California adults increase fruit and vegetable consumption from 1997-2007."**

This paper demonstrates that fruit and vegetable consumption among California adults significantly increased from 1997 to 2007. Data were from biennial telephone surveillance surveys of California adults' dietary practices. California adults significantly increased mean daily servings of fruits and vegetables from 3.8 servings in 1997 to 5.2 servings in 2007.

**Sugerman, Sharon, Desiree Backman, Susan B. Foerster, Alyssa Ghirardelli, Amanda Linares, Amy Fong. Low-Income California Immigrant Adults: Opinions on Nutrition, Physical Activity, and Obesity.**

This paper describes an opinion poll of low-income, limited-English-speaking Hispanic, Chinese, Vietnamese, Hmong, and Korean immigrants for formative research in a social marketing campaign. Nineteen questions on obesity prevention-related topics were embedded into a larger random digit dial survey investigating the effects of language and cultural barriers on health care access. Latinos report receiving most information from television; Hmong from radio. Hispanics, Koreans, and Vietnamese think diabetes is the greatest California health. Among Hmong, 83% think FV are too expensive; 49% of Vietnamese think good quality, affordable fresh FV are too hard to find. Identifying characteristics and opinions that distinguish these ethnic immigrant populations better enable the Network to develop culturally relevant social marketing campaigns and materials.

**\*Voorhees, Julia, Keiko Goto, Stephanie Bianco-Simeral, Cindy Wolff. Impact of the Harvest of the Month Program on Low-income Hmong and White Middle School Students.**

The purpose of this evaluation was to examine the impact of the Harvest of the Month (HOTM) program on fruit and vegetable attitudes, preferences, and consumption patterns among low-income Hmong and White middle school students. Positive changes in attitude and preference translated into improved fruit and vegetable consumption for Hmong students over the course of the intervention, the same did not consistently occur among White students, who reported that their vegetable consumption decreased pre to post. There were no changes pre to post in attitudes, preferences, or consumption patterns for the control students.

**\*Wood, Lara, Cindy Wolff, Stephanie Bianco-Simeral, Keiko Goto. Changes from a K-8 Nutrition Education Program on Student, Teacher, and School-wide Practices: Impact of Harvest of the Month™**

The Sierra Cascade Nutrition and Activity Consortium (SCNAC) evaluated their adaptation of the Network for a Healthy California's Harvest of the Month program (HOTM) over three years, 2006-2008, with 297 K-8 teachers in 33 low income schools. High implementing teachers were more likely to agree that students were motivated to improve eating habits and were less interested in soda compared to low implementers. Teachers thought the program was well-received by students. Teachers also reported healthier classroom snacks and the adoption of a classroom food policy. Overall, teachers reporting higher level of implementation also reported higher levels of program impact.

\*local contractor