Schools as Hubs of Health: A Case Study of Comprehensive Nutrition Education Program Delivery

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Abstract
During the 2014-2015 school year, UC CalFresh Nutrition Educators with the University of California Cooperative Extension Program in Santa Barbara County, piloted a comprehensive nutrition education program delivery model at Bruce Elementary School in Santa Maria, California. This model focused on the elementary school as a hub for increasing the health of not only the elementary school students, but also the families, school personnel, neighbors, and other residents of the community. This included interventions in school staff training, classroom education, lunchroom environment, garden-enhanced nutrition education, parent education, food demonstrations, youth engagement, and school-wide events.

Objectives
1) To pilot a comprehensive nutrition education and obesity prevention program delivery model at one school site over the 2014-2015 school year, targeting low-income elementary school students, school staff, parents, and collaborating community organizations.

2) To build the foundation of strong community partnerships and relationships in order to expand and strengthen the program delivery model in future years.

3) To evaluate the pilot for short-term health outcomes.

4) To evaluate the program delivery model in terms of feasibility, including program funding, staff time and resources, school acceptability, sustainability of evaluation protocol, etc.

Theoretical Framework
To build a comprehensive obesity prevention service delivery model this program incorporated the following theoretical frameworks:

1) Positive Youth Development: Stemming from Positive Psychology, the Positive Youth Development (PYD) Framework emphasizes that development of hard and soft skills are essential to youth’s successful transition to adulthood and increase the likelihood that they will be healthy and well; therefore, opportunities to increase youth’s developmental assets were integral components of the delivery model, including youth engagement in health and wellness advocacy, leadership, and program delivery.

2) Experiential Learning: Incorporating educational theories that emphasize experience as central to learning, this delivery model focused on education that was learner-centered, inquiry-based, and experiential.

3) Social-Ecological Model: Research consistently shows that implementing changes across multiple levels of the Social-Ecological Model can improve eating and physical activity behaviors, so this delivery model was developed to target multiple levels, including individual, environmental, and social & cultural norms/values levels.

Evaluation
Evaluation activities for this program delivery model were varied and extensive, including evaluation for each of the intervention methods. Evaluation included:

- Tracking the number of participants and activity duration for all interventions, including students, teachers, staff, parents, and community members.
- Collecting retrospective observational data of student nutrition and physical activity behaviors from all participating teachers.
- Conducting a community partnership assessment survey to gather information related to partner communication and perceptions of program delivery.
- Collecting participant feedback (youth and adult) to assess levels of satisfaction and make improvements to future program delivery for both nutrition.
- Education, food service and garden-based education.
- Tracking fidelity to curriculum through observation and teacher reporting.

Innovative Program Contributions
Lisa Paniauga, Nutrition Educator II, Melissa LaFreniere, Nutrition Educator II,

Collaborations
UC CalFresh Nutrition Education Program in San Luis Obispo & Santa Barbara Counties, UC CalFresh Nutrition Education Program State Office, UC Davis Center for Nutrition in Schools, Robert Bruce Elementary School, Santa Maria-Bonita School District, & THRIVE! Santa Maria Healthy School Pantry
Method

School staff training interventions: 1) Modeling nutrition education lessons, food safety, and curriculum delivery in kindergarten through sixth grade classrooms school wide; 2) Garden-enhanced nutrition education delivery and modeling lessons from the school garden; and 3) District-wide training in Garden-Enhanced Nutrition Education, Smarter Lunchrooms Movement, and Social Ecological Model concepts and application.

Classroom education interventions: 1) Grade-level appropriate nutrition education curricula, including: Good For Me & You, Eating Healthy From Farm to Fork, It’s My Choice...Eat Right! Be Active!, PowerPlay!, and Happy Healthy Me; 2) “No-prep” Nutrition Education kits were developed and provided to participating teachers for each curriculum; 3) UC CalFresh Nutrition Educators provided 4 in-class nutrition education model lessons and food demonstrations in each participating classroom; and 4) In the final four months of the school year, in two classrooms (one 4th grade and one 6th grade), UC CalFresh Nutrition Educators implemented the Shaping Healthy Choices Program, delivering 28 classroom lessons, garden lessons, and food demonstrations using Discovering Healthy Choices and Cooking Up Healthy Choices.

Lunchroom environment interventions: 1) Training staff and youth leaders in Smarter Lunchroom Movement strategies, which have been shown to increase the nutritional quality of school food selected and consumed by students; 2) District-wide training of cafeteria managers and provision of environmental supports and materials for healthy site changes, including signage and creative labeling to promote entrees and salad bar items; 3) Youth leaders led lunchtime tastings of featured produce items using Harvest of the Month materials and Fruit & Vegetable Produce Cards, promoted lunchroom environment interventions in interviews with local media, and created artwork and signs posted in and around the cafeteria to promote school meals.

Garden-based education interventions: 1) At the beginning of the school year, UC CalFresh staff worked with the school principal, staff, students, and parents to plan and break ground on a new school garden; 2) The garden was used throughout the year to offer garden-enhanced nutrition education and garden open house days where classroom teachers could sign-up to bring their students to the garden for a grade-level appropriate nutrition lesson; and 3) Student leaders maintained the garden and provided tours to younger students.

Parent education and communication interventions: 1) Bilingual nutrition education newsletters were developed and sent home to parents for all participating classrooms, featuring recipes that were demonstrated and tasted in the classroom, and nutrition messaging in support of the learning classroom objectives; 2) Shaping Healthy Choices Newsletters were sent home to parents whose 4th and 6th grade students participated in program; 3) UC CalFresh Nutrition Educators offered parents bilingual nutrition education classes in the evening, utilizing the Plan, Shop, Save, Cook curriculum; and 3) UC CalFresh Nutrition Educators demonstrated healthy recipes utilizing food items that families received from the Food Bank at the monthly Healthy School Pantry.

Additional youth engagement activities: 1) A small group of sixth grade youth leaders conducted a school environment assessment and identified and prioritized interests related to improving their school health environment; 2) Developed and implemented a plan to train youth leaders in health, nutrition, food safety, and culinary knowledge and skills; and 3) Implemented fun and healthy student-led activities to create positive changes in the school environment and promote student leadership skills, including youth practicing food safety and culinary skills during hands-on food demonstrations and tastings; youth led, promoted, and implemented Harvest of the Month tastings in the school cafeteria; and a youth-led Zumba station at a school wide event.