

## P35 (continued)

fruits and vegetables and physical activity; and choose less sweetened beverages, processed packaged snacks, fast food and recreational screentime); 2) Explore determinants/mediators (identified appropriate mediators for group based on literature and audience assessment); 3) Select theory and philosophy (combination of social cognitive theory and self-determination theory with a philosophy that takes a system-blame approach); 4) Indicate objectives (general objectives for each theory-based mediator and specific objectives for lesson activities); 5) Generate plans (23 lesson plans); 6) Nail down evaluation (developed protocol for measuring height, weight, and percent body fat, and instruments to measure changes in the targeted behaviors and theory-based mediators).

**Evaluation:** The DESIGN procedure resulted in a curriculum that, according to process evaluation data, had positive reviews by teachers and actively engaged students. Formative student pre to post data (n=146) showed positive outcomes on anthropometric, behavioral, and theory-based psychosocial mediators.

**Conclusions and Implications:** The value of systematic program development is often underestimated. Using a systematic process, such as the user-friendly DESIGN Stepwise Procedure, can lead to curricula that are tailored to the intended audience, theory-based, and more likely to be effective at changing behaviors.

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### P36 Spilling the Beans: A Preschool Gardening and Nutrition Education Curriculum to Increase the Use of Dry Edible Beans

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**Objective:** To increase children's knowledge of gardening, MyPlate concepts, and different varieties of dry edible beans; to improve knowledge of the health benefits associated with beans among parents or caregivers; and to improve the families' consumption of beans.

**Target audience:** Forty seven preschool children and their families in 2 preschool centers participated in the pilot project.

**Theory, Prior Research, Rationale:** Informed by social cognitive theory, this project builds on the potential of gardening as a means of teaching nutrition concepts.

**Description:** As part of an 8-lesson curriculum, preschool children listened to stories, planted and harvested a variety of beans, and participated in sensory evaluation of ten recipes. Parents were given a weekly nutrition newsletter sum-

marizing their child's activities, along with nutrition information, recipes and a can of beans.

**Evaluation:** Observations of children and pre/post surveys among parents were used to measure attitude, knowledge and behavior changes. Frequency data were analyzed using the SPSS computer program. Parents/caregivers significantly increased their knowledge of beans as a source of fiber and folate with potential health benefits. The use of canned beans among the families significantly increased ( $P < .05$ ). Children rated bean-containing recipes highly and consumed more beans during preschool. The recipes were incorporated in the menus. About 88% of the parents reported reading the newsletter, 69% said their child talked about beans, 83% reported that their child talked about the gardening, and 85% of the children talked about tasting bean recipes.

**Conclusions and Implications:** Children's literature and gardening were effective means of teaching children and their families about nutrition and dry edible beans.

**Funding:** USDA.

### P37 Missouri Eat Smart Guidelines for Child Care Promote Positive Changes in Menus, Feeding Environments and Food Policies

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**Objective:** Missouri Eat Smart Guidelines for Child Care program is designed to encourage child care facilities to adopt the 2010 Child and Adult Care Food Program (CACFP) recommendations. The goal is to instill healthful lifestyle behaviors in preschoolers and help prevent childhood obesity.

**Target audience:** The target audience was center-based child care facilities.

**Theory, Prior Research, Rationale:** Eating habits developed during preschool years influence lifestyle choices and weight throughout life. Missouri Eat Smart Guidelines for Child Care is based on the 2010 Dietary Guidelines and the Institute of Medicine's CACFP recommendations.

**Description:** The program is modeled on North Carolina's Nutrition and Physical Activity Self-Assessment for Child Care (NAPSACC) which includes: 1) Self-Assessment; 2) Action Planning; 3) Workshop Delivery; 4) Technical Assistance; and 5) Evaluate, Revise and Repeat. The program involved individualized coaching and training with center directors and staff to bring practices in line with Missouri's Eat Smart Guidelines for Child Care. Centers that met the guidelines applied for recognition as an "Eat Smart Child Care."

**Evaluation:** Since 2010, 71 individual child care centers and 4 Head Start agencies serving 36 sites participated in the program. As a result, child care centers made healthful changes in menus, feeding environments and food policies. Anecdotal reports indicate the program helped motivate and encourage center directors to complete the

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