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Conclusions and Implications: Food shopping/preparation key message is very relevant when discussing other related nutrition concepts. The practice of skills learned in this key message might be mediating other healthy behaviors. Implication for practice will be discussed during the conference.

Funding: Supplemental Nutrition Assistance Program - Education.


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Objective: The purpose of this study was to investigate the effects of a nutrition education program with pamphlet focused on personalized daily energy requirements and a food exchange system for diabetic elderly at a community health center.

Theory, Prior Research, Rationale: Effective nutrition education program and materials are needed for diabetic elderly at a community health center.

Study Design, Setting, Participants, and Intervention: We developed nutrition education program and pamphlet for 4 lessons (2 hours/lesson /week, 4 weeks), and provided nutrition education with developed program and pamphlet to 26 diabetic elderly subjects (55-75 yrs). The 1st lesson “Introduction: management of diabetes mellitus,” the 2nd lesson was “6 Food groups of Food Exchange Table,” the 3rd lesson “Individual daily energy requirements and food exchange units,” and the 4th lesson was “Food choice for diabetic mellitus”.

Outcome, Measures and Analysis: We assessed the changes in anthropometric characteristics, biochemical characteristics, and nutrient intakes using 24-hour recall method.

Results: Weight and body mass index (BMI) was significantly decreased. Fast blood sugar (FBS), total cholesterol and LDL-cholesterol were significantly decreased. In the evaluation of nutrient intakes by Dietary Reference Intakes for Koreans (KDRI), riboflavin, niacin, calcium, phosphate, and zinc were shown to affect significantly positive changes in the distribution of subjects according to intake level. The index of nutrition quality (INQ), nutrition adequacy ratio (NAR) and mean nutrition adequacy ratio (MAR) were significantly increased.

Conclusions and Implications: The developed nutrition education program with pamphlet focusing on exchange units using a Food Exchange System pamphlet for diabetic elderly at the community health center may improved the symptom of diabetes mellitus.

Funding: None.

P179 Effect of School Gardens on Food Behavior of Children

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Objective: The purpose of this work was to systematically review the published literature regarding school gardens to determine the effect, if any, on food behavior.

Theory, Prior Research, Rationale: School gardens provide children with first-hand experiences with food but funding may be leveraged with evidence of behavioral change.

Study Design, Setting, Participants, and Intervention: Using the key words “school gardens AND evaluation AND child nutrition” as well as “school gardens AND interventions AND child nutrition,” multiple bibliographic databases including PubMed were searched for studies published within the past 5 years. Ten peer-reviewed articles reporting 8 different school garden projects were identified.

Outcome, Measures and Analysis: Studies were reviewed with respect to study participants, design, program components, outcome measures, and results.

Results: Seven of the 8 studies included a control group; 3 studies included both a garden-based nutrition education group as well as nutrition education only group in addition to control. Studies varied in duration from 10 weeks to 1 year. Program components related to gardening included hands-on activities such as planting, weeding, harvesting; nutrition education components included classroom lessons incorporating food preparation and taste testing. Outcome measures varied across studies but could be classified into 3 assessment categories: nutrition knowledge, food preference, and fruit/vegetable intake. Notably, increased fruit/vegetable preference was reported in 7 of the 8 studies; increased fruit/vegetable intake (or variety) was reported in 4 of 5 studies assessing this outcome.

Conclusions and Implications: This review provides evidence of the impact of school garden projects on food behaviors and may serve as the basis for developing best practices including program evaluation protocols.

Funding: None.

P180 Food Consumption Among Pastoralists’ Children Aged under Five Years in Marsabit, Kenya

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Objective: To determine the foods consumed by children under age 5 in Marsabit County, Kenya

Theory, Prior Research, Rationale: Nutrition status among children in pastoralist communities is compromised by limited variety in the foods consumed.

Study Design, Setting, Participants, and Intervention: Descriptive design using a 24-hour dietary recall was used to obtain data on a sample size of 828

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children aged 6 to 59 months. Cluster sampling was used to select the sample. Data were collected by trained enumerators.

Outcome, Measures and Analysis: Data was analyzed using Statistical Package for Social Sciences version 17.0

Results: About 78.0% of children aged 6 to 23 months consumed milk and milk products, 62.5% consumed sugary foods and drinks and 59.6% consumed cereals. Many children aged 24 to 59 months, 88.0%, consumed cereals, followed by milk and milk products by 76.8%, sugary foods and drinks by 67.4%. Fruits and vegetables are consumed in low amounts among all the age groups. Legumes and seeds are consumed by 44.5% for ages 24 months to 59 months while children aged 6 to 23 months did not consume any legumes and seeds. Eggs, fish, meat and poultry are consumed in very low amounts across all the age groups.

Conclusions and Implications: Children aged 6 to 59 months in pastoralist community in Marsabit consume minimal animal products although the households keep livestock. Fruits and vegetables are rarely eaten and there is low dietary diversity consumption among children under 5 years old. Promotion of consumption of animal products, legumes and seeds; fruits and vegetables among pastoral families is required to contribute towards improving children’s nutrition

Funding: Center for Disease Control and Prevention, Food for the Hungry.

P181 Take Time for Kids: Perceptions of the Parental Role in Supporting Healthy Child Activity and Eating Behaviors

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Objective: To understand staff perceptions of low-income families’ barriers to healthy eating and activity, families’ related behaviors, and strategies employed by nutrition educators.

Theory, Prior Research, Rationale: Over 30% of U.S. children are overweight. Promising prevention strategies should include families, the targets of programs like the Expanded Food, Nutrition, and Education Program (EFNEP) and Supplemental Nutrition Assistance Program-Education (SNAP-Ed). Understanding educators’ perspectives and practices related to their work with parents and children are imperative to improving program impact.

Study Design, Setting, Participants, and Intervention: One-time semi-structured interviews (n=91) with EFNEP and SNAP-Ed paraprofessional educators (n=50) and supervisors (n=41) were conducted in 7 states, representing the West, Midwest, Northeast, and Southeast.

Outcome, Measures and Analysis: Content categories and open coding guided analyses to identify emergent themes. Codes and themes were peer-reviewed iteratively.

Results: Educators and supervisors feel parents have strong potential to positively influence their children by 1) providing guidance for healthy physical activity and eating behaviors, 2) role modeling behaviors, and 3) being involved with children in behaviors. In practice, educators’ activities appear to correspond with their perceptions of the parental role. Respondents reported practices that increase parental knowledge and skills, suggest specific strategies parents can use with children, and encourage behavior change as a family unit. Respondents did not report incorporating parenting practices per se.

Conclusions and Implications: Nutrition educators reported focusing on parents’ role in child nutrition and physical activity behaviors. This approach aligns with government and organizational recommended targets for preventing and reducing childhood obesity through the family. Whether educators have skills and curriculum available to support parenting practices consistent with child behavior change needs further investigation.

Funding: USDA.

P182 Cognitive Interviewing in Survey Development

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Objective: To use cognitive interviewing to assess student understanding of newly developed items designed to assess college students’ perceptions of their campus environments.

Theory, Prior Research, Rationale: Cognitive interviews, based in Cognitive Theory, are essential to assure that participants interpret survey questions as researchers intended.

Study Design, Setting, Participants, and Intervention: Cognitive interviews (n=100) were conducted with 10 males and 10 females from 5 universities. Participants, 18 to 24 years old, completed each item then completed a structured interview including what they thought the survey question was asking, if there were any changes needed, what their initial thoughts were after reading the question, and the meaning of their answer.

Outcome, Measures and Analysis: Two research assistants at one institution independently coded interviews and determined whether participants’ correctly understood the item as well as whether they thought the questions were clear, somewhat confusing, or very confusing. The coding was compared and a third researcher addressed any coding discrepancies.

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