P116 Let's Grow Healthy: Evaluating the Effectiveness of Garden Enhanced Nutrition Education in Elementary School Children

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Objective: School gardens can provide a learning environment that enhances the students' knowledge and acceptance of healthy foods. The garden-enhanced nutrition education program, "Let's Grow Healthy", was developed to promote nutrition education in Los Angeles area public schools. The program consists of hands-on interactive gardening classes and nutrition curriculum.

Study Design, Settings, Participants: The project took place in two elementary schools where each class from second to fifth grade was selected to participate in the program. For six weeks, 210 children participated in the program on a weekly basis. In order to assess the change in gardening and nutrition knowledge, a pretest and posttest were given to the participants.

Outcome Measures and Analysis: The surveys were coded and analyzed in order to compare the difference between t-test mean value scores between pretest and posttest.

Results: Significant improvement was demonstrated in second, third, and fifth grade classes with the most change seen in fifth grade, as 92% of students at posttest, correctly identified the food groups in MyPlate with 44% of students improving ($t = -6.1$, $p = .021$).

Conclusions and Implications: The results support the hypothesis as it shows that gardening classes can increase and improve children's gardening and nutrition knowledge. This reinforces the importance of a school garden where children can learn more about healthy food. We hope for Let's Grow Healthy to expand to more schools, so children can benefit from this experience and improve their nutrition knowledge.

Funding: NIH

P117 Let's Grow Healthy: Garden Enhanced Nutrition Education

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Objective: The garden enhanced nutrition education program, "Let's Grow Healthy," was developed to promote nutrition education in Los Angeles area public schools. The program consists of hands-on interactive gardening classes and nutrition curriculum.

Theory, Prior Research, Rationale: School gardens can provide a learning environment that enhances the

students' knowledge and acceptance of healthy foods. Previous research has shown that children who plant and harvest their own fruits and vegetables are more likely to eat them (Morris, 2001).

Description: For six weeks, elementary school children grades K-5 will be engaged in a weekly 45 minutes class at the school garden. The lessons will include topics like components of soil, edible parts of the plant, MyPlate, servings of fruits and vegetables, and garden maintenance. The classes will be interactive with hands-on activities at the garden.

Evaluation: In order to assess the change in gardening and nutrition knowledge, a pretest and posttest are given to the participants.

Conclusions and Implications: Gardening classes can increase and improve children's gardening and nutrition knowledge. This reinforces the importance of a school garden where children can learn more about healthy food.

Funding: NIH

P118 Longitudinal Associations Between Family Breakfast Frequency During Adolescence and Their Dietary Behavior and Attitude at Young Adulthood

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Objective: This study focused on family breakfast frequency during adolescence, and examined its longitudinal associations with dietary behavior and attitude at young adulthood.

Study Design, Setting, Participants: Data for this longitudinal study were collected as part of "Sakado Shokuiku Study" in Saitama prefecture, Japan. Subjects completed a self-administered questionnaire twice, first in the 8th grade (Time 1; at school in 2009) and then at the age of 20 (Time 2: by mail in 2015-16). Valid matched data of Times 1 and 2 included 59 males and 67 females.

Outcome Measures and Analysis: Subjects were divided into two groups based on family breakfast frequency per week at Time 1: 4 times or more vs. 3 times or less. Differences of dietary behavior and attitude at Time 2 by the two groups were tested with Mann-Whitney U test using IBM SPSS Statistics 24.0.

Results: More than 80% of subjects were students, still live in Sakado-city, live with family, but none of them was married. A total of 23 males (39.0%) and 12 females (12.9%) had family breakfast 4 times or more at Time 1. Both males and females in this group were more likely to perceive the importance of family meals, and only females reported higher family dinner

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frequency at Time 2. Females in this group also reported higher frequencies of eating breakfast, eating a staple dish at breakfast, and eating a vegetable dish at breakfast.

Conclusions and Implications: This study implies that frequent family breakfast during adolescence is associated with better breakfast diet at young adulthood among females.

Funding: Ministry of Education, Culture, Sports, Science and Technology, Japan

P119 Managing Youth Recreational Sports to Promote Healthier Eating

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Objective: To examine snacking and eating behaviors among youth recreation participants.

Study Design, Setting, Participants: Youth recreational playing fields in central North Carolina. English speaking parents of participating children.

Outcome Measures and Analysis: Descriptive analysis of survey responses to four categories: importance of snacks provided at youth recreation events, reason for snack choice, snacks purchased most often, and family eating behaviors on game/practice nights.

Results: Parents (N=200) of primarily white males aged 8 years responded to the survey. More than half (56.5%) of the children play recreational soccer. Most parents (67.5%) reported that snacks are important at games. Taste (56%) and convenience (62%) were the two most important factors when deciding the type of snack to bring. Snacks provided mostly included: various chip types and juice boxes. About half of respondents reported that family eating behaviors change on games/practice nights with 62% reporting going out to eat.

Conclusions and Implications: Youth recreation provides an opportunity for children to participate in regular physical activity and promote good health; yet parents in this study report largely providing high fat, high sugar team snacks. Additionally, families often eat out on game/practice nights. Education should be provided to parents regarding the purchase of healthy snacks and strategies for maintaining healthy eating behaviors on game/practice nights. Nutrition educators should also work with departments of parks and recreation and team coaches to plan for ways to provide healthy snacks to their team participants. Policy changes regarding the management of game/practice schedules and team snack offering may help to better support healthy eating among youth recreation families.

Funding: None

P120 Meeting the Added Sugars Guideline: Impact on Whole Grains, Vegetables, Fruit, and Dairy Intakes of Children

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Objective: The 2015-2020 Dietary Guidelines for Americans recommend that added sugars intake not exceed 10 percent of total energy intake. The research compares the mean energy, whole grains, vegetables, fruit, and dairy intakes of children 2-19 years, grouped based on whether they met the added sugars guideline or not.

Study Design, Setting and Participants: What We Eat in America, National Health and Nutrition Examination Survey 2011-12, day 1 dietary data were used for the study. The study included 3132 children.

Outcome Measures and Analysis: Mean intake estimates of the two groups were compared; and a p-value less than 0.01 was considered significantly different.

Results: About 27 percent of them met the added sugars guideline. These children had significantly higher intakes of vegetables (1.1 ± 0.06 vs. 0.8 ± 0.03 cup eq.), fruit (1.4 ± 0.06 vs. 1.0 ± 0.07 cup eq.), and dairy (2.5 ± 0.11 vs. 2.2 ± 0.08 cup eq.) than the children who consumed more than 10 percent of calories from added sugars. No significant differences were noted in the whole grains (0.73 ± 0.03 oz. eq.) and energy (1983 ± 23 calories) intakes between the two groups. About 23 percent of non-Hispanic white, 25 percent of non-Hispanic black, 40 percent of non-Hispanic Asian, and 31 percent of Hispanic children met the added sugars guideline.

Conclusions and Implications: The study showed children not meeting the added sugars guideline had lower intake of nutritious foods. Dietary interventions aimed at children to increase their fruit, vegetables, whole grains, and dairy intake should simultaneously address choosing foods with little or no added sugars. This study findings are useful to nutrition educators, dietitians, and nutritionists working with children and their parents.

Funding: USDA

P121 Mixed Methods Evaluation of Growing Healthy Kids School Enrichment Kit Program

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Objective: To evaluate the Growing Healthy Kids School Enrichment Kit Program (SEKP).

Study Design, Setting and Participants, and Intervention: The SEKP is a Social Cognitive Theory-based,

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