O11 (continued)

Description: The curriculum was revised and repeated over three consecutive years with three different cohorts of students. Teaching style differed each year, beginning with cooperative extension and by the third year, peer education. Participants completed a pre/post program questionnaire to collect information related to demographics, self-efficacy (0–10 scale), and garden literacy.

Evaluation: The sample was divided into three subgroups according to the program year. Data was analyzed using Microsoft Excel and interpreted by percent change calculations. The first year showed that pre/post program quiz scores showed an average percent increase in garden literacy by 21% and confidence in teaching sustainability concepts by 63%. Confidence outcomes for teaching diverse populations (e.g. children, adult, elderly, and low-income) increased by 23.5% in the second year. Third-year results included an increase in garden literacy at 20%, participant gardening self-efficacy at 139%, and participant cooking confidence at 17%.

Conclusions and Implications: Each year's teaching style and related curriculum resulted in different participant outcomes. The first and third year had the most impact on garden literacy changes but the second year resulted in the highest participant efficacy for teaching diverse populations. This program could guide the incorporation of garden-based education into undergraduate nutrition and dietetic internship programs while improving garden literacy and confidence in nutrition education among future nutrition professionals.

Funding: None.

O12 Innovative Approaches to the Evaluation of Hands-on Cooking Skills with Youth

Jessica Metcalfe, MPH, jarick2@illinois.edu, University of Illinois, Urbana-Champaign, 904 W Nevada Street, MC-081, Urbana, IL 61801; Barbara Fiese, PhD; Ruyi Liu, BS; Emilie Emberton, BS; Jennifer McCaffrey, PhD, MPH, RD

Objective: Evaluate the effectiveness of the Illinois Junior Chefs (IJC) program through pre- and post-intervention surveys and hands-on cooking skills assessments.

Target Audience: SNAP-Ed eligible youth (n = 419) aged 8–14.

Theory, Prior Research, Rationale: Experiential Learning Theory and Social Cognitive Theory suggest that educational experiences that allow for hands-on practice of skills such as cooking result in increased skill development. Past research with IJC and other culinary education programs shows that they can be effective in improving dietary attitudes and behaviors, but hands-on cooking skills themselves are rarely assessed, especially with youth populations. These types of assessments are crucial to determining whether participants in hands-on cooking programs actually improve their tangible culinary skills.

Description: IJC is a statewide culinary and nutrition education program that was implemented during summer 2017 by the University of Illinois Office of Extension and Outreach. Each of the five 2-hour IJC lessons has a food

group focus (e.g. fruits), paired with an associated culinary skill (e.g. knife skills) and hands-on recipe preparation (e.g. fruit salsa). IJC was implemented in a variety of community settings, such as summer camps, Extension offices, and community centers.

Evaluation: Pre- and post-intervention surveys indicated that participants experienced significant improvements in cooking self-efficacy ($t(417) = 14.60, P < .001$), cooking attitudes ($t(411) = 5.88, P < .001$), fruit and vegetable preferences ($t(402) = 3.27, P = .001$), self-efficacy for selecting and eating healthy foods ($t(397) = 5.12, P < .001$), and cooking behaviors ($t(392) = 2.12, P = .035$). Assessments of hands-on cooking skills also indicated that participants experienced increases in skills including measuring, cracking eggs, peeling, grating, and mixing techniques.

Conclusions and Implications: Participants in IJC experienced positive changes in cooking skills as well as dietary attitudes and behaviors. These findings will be used to build the evidence base for IJC and inform curriculum modifications in preparation for wider dissemination of the program.

Funding: Supplemental Nutrition Assistance Program—Education.

O13 Exploring Food Waste at a Residential Youth Summer Camp

Susan Chen, BS, schen518@vt.edu, Virginia Tech, 121 Lucas Drive, Blacksburg, VA 24060; Elena Serrano, PhD

Background (Background, Rationale, Prior Research, and/or Theory): Up to 40% of all edible food is wasted in the U.S., mostly from consumer waste. Research on food waste is in its infancy, particularly among youth. Summer camps offer a unique setting for food-based education with the opportunity to reach large numbers of youth.

Objective: The purpose of this study was to assess food waste in a youth camp setting; and determine if an educational program would reduce food waste.

Study Design, Setting, Participants, Intervention: The research team and camp staff developed and adapted experiential-based activities on food waste that aligned with the camp environment. This cross-sectional study included 864 residential campers, aged 9–13. Participants attended one of the four weekly sessions that were offered. All participants attended the same summer camp.

Outcome Measures and Analysis: Waste from three meals (breakfast, lunch, and dinner) was collected over a 24-hour cycle, before and after the program. Food waste was collected using the direct weighing method. Waste was separated into two categories, consumer and production waste.

Results: Although a decrease in consumer food waste was observed, results were not significant ($P = .06$). Total consumer waste for all four weeks before and after the intervention was 76.5 lb and 57.3 lb, respectively. Total production waste decreased from 441.5 lb before to 390.6 lb after the intervention. Production waste also decreased throughout the course of the four weeks.

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