two consecutive semesters to understand if the didactic curriculum impacts dietary practices of the students. 

**Design, Setting and Participants:** Seventeen students enrolled in the first two courses of the nutrition major participated in the study. Ten students followed up during the subsequent semester, when they were enrolled in clinical nutrition classes.

**Outcome Measures and Analysis:** Three samples of 24-hour urine were collected from each student and analyzed for sodium content by the dipstick method. The accuracy of the dipstick method for sodium estimation was verified by testing a third of the samples by flame photometry. Averages were calculated and compared with the RDA.

**Results:** The average 24-hour urinary sodium during the first semester was estimated at 2395 mg; repeat analyses during the subsequent semester estimated the average 24-hour urinary sodium at 2456 mg respectively. There was no significant impact of the didactic curriculum on urinary sodium levels over two semesters.

**Conclusions and Implications:** Our findings indicate that despite didactic exposure to the effects of high sodium intakes, students’ sodium intake did not decrease during the span of one semester and were higher than the maximum RDA. Since urinary sodium contents reflect dietary sodium intake, the affordable dipstick method exemplifies a practical method for nutrition educators to help students measure their own urinary sodium intake and assess practical implications of their didactic knowledge.

**Funding:** PSC-CUNY.

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**P144 Assessment of Knowledge, Attitudes and Behaviors Associated With Legume Intake by Parents and Their Children**

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**Objective:** To develop a survey instrument that assessed factors in the home environment that affect legume consumption by parents and their children.

**Design, Setting and Participants:** Legumes, such as dry peas, lentils, and chickpeas, are staple crops grown throughout the world. According to national dietary intake data (2001-2004), most U.S. school-aged children (98.4-99.6%) are not meeting the minimum recommendations for intake of legumes. A survey instrument was developed in Qualtrics using validated questions identified from the literature and findings from our previous focus groups with children. Social Cognitive Theory provided the theoretical framework for question development. A convenience sample of parents from a summer afterschool program (n=14) completed the pilot online survey on two separate occasions 10-14 days apart. The final survey was administered using tablets to parents (n=284) with children aged 5-12 recruited from the University of Minnesota “Driven to Discover Research Building” at the 2014 Minnesota State Fair.

**Outcome Measures and Analysis:** Descriptive statistics to assess knowledge, attitudes and behaviors that influence legume intake.

**Results:** Participants were primarily married white women (mean age = 41 years) with a 4-year college degree or greater who did not follow a vegan/vegetarian diet. Preliminary findings suggest participants have a high degree of likeability towards legumes (82%) and believe legumes confer many health benefits (91%); however only 13.5% of participants incorporated legumes into family meals served at home.

**Conclusions and Implications:** Additional testing of the survey instrument is needed with a larger diverse sample. Information learned will guide development of an intervention targeting school-aged children and their parents to increase liking and consumption of legumes.

**Funding:** Summer Scholars Program, Academic Professional Development Committee Grant, St. Catherine University.

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**P145 Relationships Between Nutrition-Related Knowledge, Self-Efficacy, and Behavior for Fifth Grade Students**

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**Objective:** To determine and compare the relationships between nutrition-related knowledge, self-efficacy, and behavior among students from low and high income schools in a Midwestern metro area.

**Design, Setting and Participants:** A previously validated survey was administered among 58 fifth grade students from randomly selected low income schools and 135 from randomly selected high income schools. The survey instrument measured nutrition-related knowledge, self-efficacy, and behavior factors.

**Outcome Measures and Analysis:** A t-test was used to assess differences between low income and high income groups. Linear regression analysis was used to determine the relationships between knowledge, self-efficacy, and behavior, and how they predicted each other.

**Results:** Results demonstrated no significant differences in most of the variables for knowledge, behavior, and self-efficacy between the two groups. The low income group had lower summary scores for knowledge (P=0.001) and behavior (P=0.051) compared to the high income group. Both self-efficacy (β=0.44, P=0.000) and knowledge (β=0.22, P=0.001) strongly predicted behavior; however, only self-efficacy remained significant in the low income group (self-efficacy, β=0.52, P=0.000; knowledge, β=0.07, P=0.590).

**Conclusions and Implications:** Findings demonstrate a significant disparity in nutrition knowledge and behavior predictors between students surveyed from low and high income schools. Results suggest that increased facilitation

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to improve children’s self-efficacy may be necessary for behavior change, particularly among low income students. Future research should be conducted to determine if these results are reproducible in a larger sample.

Funding: USDA.

P146 Availability of Nutrition and Health Education Resources for Service Providers to a Diverse Local Refugee Population

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Objective: In 2012, North Carolina ranked in the top ten for refugee resettlement. Newly arrived refugees are at risk for elevated food insecurity, nutrition related health conditions (chronic diseases, malnutrition) and have poor skills navigating the local food environment. The objective of this study was to examine availability of targeted, appropriate and/or translated nutrition and health resources to local providers serving refugees.

Design, Setting and Participants: Participants (n=19) included WIC nutritionists, registered dietitians, medical providers, and other regular service providers (ie: resettlement caseworkers).

Outcome Measures and Analysis: Semi-structured interviews were audio-recorded and transcribed verbatim. Themes were identified using content analysis.

Results: Very few (n=2) reported access to translated nutrition and health educational resources. Some (n=4) reported creating their own resources using online pictures and information. Access to resources was non-existent (n=3) or only “generalized” resources that were either not refugee specific or refugee specific but not related to health or nutrition (n=10). Most training focused on general diversity (n=4) with very few (n=2) receiving training specific to refugee ethnic group(s) health and nutrition concerns. Some providers reported educating themselves on refugee groups cultural background and needs (n=5) with online resources.

Conclusions and Implications: Service providers report few targeted, culturally appropriate or translated resources for specific refugee ethnic groups. Lack of resources likely limits the effectiveness of nutrition and health education and counseling. Findings are currently being used for a project titled “Our Voice, Our Health” with a local school for newcomers to: explore nutrition and health behaviors and barriers and develop nutrition and health promoting educational resources.

Funding: None.

P147 Impact of Federal, State, and Center Policies and Regulations on Nutrition Education in North Carolina Head Start Preschools

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Objective: The purpose of this study was to explore federal, state, and center-level policies and regulations and their affect on nutrition education in North Carolina-based Head Start preschools.

Design, Setting and Participants: Researchers conducted 63 semi-structured phone interviews with North Carolina Head Start teachers (n=32) and Health/Nutrition Coordinators (n=31).

Outcome Measures and Analysis: All interviews were transcribed and coded for emergent themes. Interrelated themes were condensed and aligned within a substantive-level grounded theory model. Researchers triangulated the findings by reading federal and state policies capable of impacting nutrition education; triangulation helped researchers distinguish between the actual policies versus participant perceived policies.

Results: Researchers identified four primary interrelated themes that impacted teachers ability to teach nutrition education including: classroom-based factors (e.g. federal education policies, state sanitation policies, teacher- and child-related factors), mealtime-related factors (e.g. federal mealtime requirements, quality of meals served, mealtime education), administrative-related factors (e.g. administrative priority, oversight), and policy perceptions (e.g. job-related responsibilities, policy interpretations, policy changes). Findings indicated that the provision of quality nutrition education is impacted by a multitude of policies and regulations; state-and center-level policies posed the greatest barriers for teachers and administrators. For instance, some teachers could not follow federal recommendations of educating children through hands-on food activities because of local sanitation and safety regulations.

Conclusions and Implications: Despite policies being in place to facilitate education, development, and child safety, the cumulative effect of multiple policies and regulations may impose unintended limitations on teacher’s ability to provide quality nutrition education to preschool children. Future research is needed to explore the origin and impacts of center-level policies on nutrition education.

Funding: None.

P148 Effectiveness of Nutrition Education Program Using Nutrition Quotient Evaluation Tools on Children in Community Child Center

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Objective: The aim of this study was to develop nutritional education programs for children in a Community Child Center, through investigation of sodium intake habits and dietary behavior using nutrition quotient (NQ) evaluation tools with five categories of balance, diversity, moderation, regularity and practice.

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