P91 Assessing Undergraduate Performance on General Education Natural and Mathematical Science Competencies in an Introductory Nutrition Course

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Objective: To demonstrate how well student learning in an introductory nutrition course meets general education natural science and mathematical competencies, to identify learning skills that may need more emphasis in instruction, and to determine whether skills varied by major or gender.

Target Audience: One hundred and twenty-two undergraduate students enrolled in human nutrition.

Theory, Prior Research, Rationale: At a Midwestern university, students may take an applied science course (Human Nutrition) to fulfill general education natural and mathematical sciences requirements. Such courses allow students to explore these fields while gaining important skills, with content and activities that have connections to their daily lives. This study assesses how well a nutrition course provides students with basic scientific competencies.

Description of Course and Curriculum: Traditional nutrition course (lecture/16 weeks/meet 1-3x/week; activities covered: dietary guidelines, meal planning, digestion/absorption, carbohydrates, protein, lipids, diet/chronic diseases, energy balance, weight control, sport nutrition, and food safety.

Evaluation: A previously-developed 10-item quiz with 7 tables was administered to measure competencies of interpreting/evaluating data, solving problems, and using rigorous analytic thinking. Participants were 62% women. There was no difference in overall performance by gender (independent t test, mean score men 7.1±1.6 SD, women 6.5±1.8, P=0.09) or major (one-way ANOVA with natural sciences, nutrition science/dietetics, other applied sciences; P=0.21). Examining subscores by competency, women scored lower than men for rigorous analytical thinking (P=0.014), but not problem solving (P=0.64) or interpreting/evaluating data (P=0.21).

Conclusions and Implications: Overall scores indicate that instructors should better align activities to these competencies, to improve performance in these areas. Students’ major did not affect performance, but the difference in subscores by gender for analytical thinking needs further investigation.

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P92 Athlete Heroes Program to Promote Fruits and Vegetables in Indiana Schools Was More Effective for Girls Than Boys

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Objective: To identify community needs for nutrition education and physical activity in counties at high risk for obesity

Design, Setting, Participants, and Intervention: Extension in a southern state received Centers for Disease Control and Prevention (CDC) funding to provide community level interventions to promote healthy lifestyles in four counties with adult obesity rates over 40%. Using the socioecological framework, interventions were expected to promote individual level behavior change by changing environmental and societal levels through policies, point-of-purchase prompts, environmental...
enhancements and other changes. Focus groups with community members were conducted in each county to collect feedback and input about what their communities needed to encourage healthy lifestyles. Thirteen focus groups were conducted with 132 adult participants (68% women, 36% African American and 64% White).

Outcome Measures and Analysis: Data were analyzed using NVivo and themes were identified.

Results: Across the four counties, participants identified nutrition education classes as the greatest need in their communities to promote healthy lifestyles. They identified the need for classes that focused on cooking and teaching hands-on skills. Furthermore, participants identified social support as a top facilitator to encourage physical activity and participants suggested conducting group activities as an effective method for providing group support to encourage healthy lifestyles. Participants stated that direct education was needed to inform residents about environmental changes that were being made as well as other community resources.

Conclusions and Implications: Nutrition education is perceived as an important method for helping with community level interventions by community members. Practical classes that educate about cooking and provide support for physical activity were identified as two top needs.

Funding: Center for Disease Control and Prevention

P94 A Delphi Study to Identify Barriers, Facilitators and Training Needs for Policies, Systems and Environmental Interventions in Nutrition Education Programs

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Objective: To identify barriers, facilitators and training needs related to public health approaches for the Supplemental Nutrition Assistance Program Education (SNAP-Ed).

Design, Setting, Participants, and Intervention: SNAP-Ed has focused on direct nutrition education but now programs are expected to incorporate interventions that target policies, systems and environments (PSE). The Regional Nutrition Education Center of Excellence-PSE Change Center (RNECE-PSE) conducted a Delphi study to determine top barriers, facilitators and training needs related to PSE implementation in SNAP-Ed. The Delphi method is an iterative, cost-effective method for collecting input from experts in different locations. Three rounds of surveys were conducted with 33 SNAP-Ed professionals from across the country including Extension, health departments, nonprofit organizations, state agencies and regional representatives.

Outcome Measures and Analysis: Qualitative and quantitative data were analyzed. For round one, open-ended statements were analyzed using NVivo to look for patterns and themes. For round two, participants rated the importance of each theme. Mean scores were calculated for the third round, themes were listed in order by group mean scores and participants were asked to review this ranking and to justify any changes if needed.

Results: Evaluation was identified as the top training need and lack of evaluation resources was rated as a top barrier for incorporating PSEs in SNAP-Ed. Partnerships were identified as a barrier (some partners only wanted direct education) and a facilitator for implementing PSEs (some partners viewed this as an opportunity to expand their work and reach).

Conclusions and Implications: The Delphi method is useful way to identify training and technical assistance needs and to prioritize needs based on target audience input.

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P95 Mealtime Behaviors Determined by Parents of Chinese American Children With Autism Spectrum Disorder

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Objective: Children with autism spectrum disorder (ASD) often have difficulties at mealtimes. Research is needed to better understand feeding difficulties in diverse populations to improve intervention strategies and parent education programs tailored to particular cultures and contexts. The purpose of the study was to assess parents’ perceived mealtime behaviors of their children with ASD, particularly in Chinese American population.

Design, Setting, and Participants: Thirty one Chinese American parents residing in New York City participated in this cross-sectional survey study.

Outcome Measures and Analysis: A validated assessment tool, the Brief Autism Mealtime Behavior Inventory (BAMBI) questionnaire with 18 items, was used to measure mealtime behaviors typically displayed in children with ASD. The questionnaire was provided both in English and Chinese languages. Higher scores represent increased problematic mealtime behaviors. Descriptive statistics and correlation coefficients were calculated.

Results: Mean scores ranged from 1.3 to 3.8 on a 5-point scale. Top 5 behaviors identified as a problem by Chinese American parents were: 54%, only prefers “crunchy” foods; 48%, not willing to try new foods; 46%, does not remain seated at the table until the meal is finished, 44%, dislikes certain foods and won’t eat them, and 39%, does not accept or prefer a variety of foods. There was a significant association between food refusal and aggressive behaviors at mealtime (r=0.693; p<0.01).

Conclusions and Implications: Chinese American parents identified problematic mealtime behaviors of their children with ASD. Chinese Americans often eat differently than do typical Americans. Our findings may aid in developing appropriate intervention strategies and educational resources tailored to Chinese American populations.

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