**Fung Uy (continued)**

(n=129) and follow-up (n=59) surveys with demographic questions, questions about food assistance use, and the Household Food Security Survey Module (HFSSM). Participants that were food insecure and sought food assistance prior to COVID-19 were invited to participate in two, in-depth interviews: one at baseline (n=18) and one after three months (n=16).

**Measurable Outcome/Analysis:** Wilcoxon Signed Rank Test compared HFSSM scores at baseline and follow-up, and bivariate analysis examined associations for improved food security scores. Applied thematic analysis was conducted to identify emergent themes.

**Results:** Quantitative results showed improvement in HFSSM scores (higher food security) at follow-up (p < 0.001). The seven emergent themes described processes and challenges in which people experiencing food insecurity must manage to ensure their families have enough food (eg, frequency of pantry visits varied; juggling between food pantries, SNAP, and/or food purchasing; not all pantries are worth going to).

**Conclusion:** Study findings show that the multidimensional approach to food security is promising to guide nuanced food security measurement. Quantitative and qualitative changes across each food security dimension reveal aspects that can be used to tailor programs to address specific needs in food availability, access, utilization, and stability over time.

**Funding:** University of South Florida College of Public Health, Feeding Tampa Bay

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**Barriers and Enablers to Supplemental Nutrition Assistance Program Participation, Access, and Reach: A Systematic Review**

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**Background:** Although the Supplemental Nutrition Assistance Program (SNAP) is the largest federal food assistance program, it remains underutilized. However, no studies have systematically examined the factors contributing to the varying levels of program eligibility, enrollment, and usage.

**Objective:** To synthesize evidence of barriers and enablers to the participation, access, and reach of SNAP and SNAP-related programs from the perspectives of participants, eligible non-participants, and stakeholders.

**Study Design, Settings, Participants:** Qualitative, quantitative, and mixed methods studies that examined perspectives from participants, eligible non-participants, or stakeholders, based in the United States, peer-reviewed, and published between 2000 and 2021 were included. The following databases were searched in February 2021: MEDLINE (PubMed), PsycINFO (EBSCO), the Cochrane Library, Web of Science Core Collection, and Scopus. Forward and backward reference searches were completed subsequently. Screening and data extraction were conducted using Covidence. The Mixed Methods Appraisal Tool was used for quality assessment.

**Measurable Outcome/Analysis:** SNAP-eligible individuals’ perceptions and characteristics related to program participation and access, and stakeholders’ perspectives on program reach were extracted and synthesized narratively.

**Results:** A total of 59 articles were included. Most studies focused on SNAP participation, benefit redemption at farmer’s markets and online, and implementation of SNAP-related programs. A major barrier to SNAP participation is related to the application process. Barriers to shopping at farmer’s markets include limited hours of operation and transportation challenges; enablers include a sense of community and high quality of produce. Barriers to accepting SNAP at farmer’s markets from stakeholders’ perspective include a lack of financial and staffing resources; enablers include increased sales and community support. Results on the implementation of SNAP-related programs varied widely and included implementing policy, systems, and environment programs, SNAP-Ed, and stocking standards at food outlets.

**Conclusion:** Barriers and enablers to SNAP vary substantially depending on the settings given its broad reach. The results could inform multi-level strategies to reduce the burden related to enrollment and to encourage SNAP participants to fully leverage the benefits they are qualified for.

**Funding:** None.

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**Changes in School Use of USDA Foods Program Funds Following Changes in School Meal Nutrition Standards**

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**Background:** Updates in nutrition standards for USDA’s National School Lunch Program (NSLP) in 2012 required that meals include more fruit and vegetables. Most foods served in school meals come from commercial sources, but USDA also offers foods to schools through the USDA Foods Program. Through this program, states can use entitlement funds provided by USDA’s Food Nutrition Service (FNS) to obtain a wide range of foods including meat, poultry, cheese, fruits and vegetables (primarily canned or frozen), purchased on their behalf by USDA’s Agricultural Marketing Service (AMS) for use in the NSLP. States can also use these funds to acquire fresh fruit and vegetables distributed by the U.S. Department of Defense (DoD) under the USDA DoD Fresh Fruit and Vegetable Program (DoD Fresh).

**Objective:** To examine how State-level use of USDA Foods entitlement funds for AMS-purchased foods and DoD Fresh fruit and vegetables changed after changes in NSLP nutrition standards in 2012. We focus on how States making high/low use of DoD Fresh prior to revised nutrition standards changed afterwards.

*Continued on page 35*
Ollinger (continued)

Study Design, Setting, Participants: Values for total AMS-purchased food and DoD Fresh food were obtained from USDA, FNS. Measurable Outcome/Analysis: Descriptive data are used to describe food use changes over time nationally and by sub-groups of states. A fixed effects regression model is used to examine how states changed their orders after the 2012 update in NSLP nutrition standards. Results: Following the change in NSLP standards, use of USDA foods funds shifted towards fresh fruit and vegetables obtained through DoD Fresh, rising from 6 percent to 15 percent of total USDA Foods entitlement funds over 2012-2017 nationwide. Use of USDA Foods funds for AMS-procured foods vs DoD Fresh varied both across states and over time. Conclusion: Findings suggest DoD Fresh foods may have been helpful to school foodservices in meeting updated NSLP nutrition standards requiring more fruits and vegetables in school meals. Funding: USDA, Economic Research Service

Conceptual and Operational Definitions of Nutrition Security Across the Socioecological Model in the US: A Scoping Review

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Background: With the continual rise in nutrition-related chronic diseases among the United States (US) population, there have been recent calls in the public health nutrition field to shift program and policy priorities beyond food security to a nutrition security-focused lens. Although a definition of nutrition security has been widely applied to international settings, there has been limited research on the development and validation of terminology for nutrition security in the US. Objective: To examine the various conceptual and operational definitions of nutrition security across the socioecological model applied in the US. Study Design, Settings, Participants: A scoping review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) checklist. Using a priori inclusion criteria, two reviewers independently screened, selected, and extracted data from peer-reviewed studies and grey literature focused on the US and published in English between January 2010 and November 2022. Measurable Outcome/Analysis: Of the 3573 peer-reviewed studies and grey literature identified, 14 met the final inclusion criteria. Results: Different conceptual definitions of nutrition security were applied to various US populations that were diverse in age, origin, and geographic location across all levels of the socioecological model. However, preliminary results indicate a swift transition from studies citing the Food and Agriculture Organization (FAO) of the United Nations’ nutrition security conceptual definition to the newly presented terminology proposed by Mozaffarian and colleagues in a 2021 Journal of the American Medical Association viewpoint article. Measurement tools used in research and evaluation studies varied, and a majority measured a proxy for nutrition security indicating a lack of standard operational definitions. Conclusion: While there appears to be a quick adoption of the new terminology by many academics and government entities, there is a need for more empirical studies to ensure the widespread adoption of valid, reliable, and feasible nutrition security measurement tools to ensure robust evaluation data to compare effectiveness across and between federal food and nutrition programs and policies. Funding: University of Tennessee at Chattanooga

Critical Points and Complements of the Food Pantry According to Latin-American Ph.D. Students’ Experiences: A Case Study

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Background: Campus food pantries act as emergency food assistance for students who are struggling to get food. There is limited data available to describe college students’ awareness of existing food pantries and their usage for food acquisition and its benefit among international students who rely on the use of this service. Objective: To get a broader understanding using a case study with doctoral students from Latin-America, of the importance of the food pantry as a food resource facility on campus, drivers, and barriers to using this resource, and propose solutions to enhance the service quality. Study Design, Settings, Participants: The case study was approached from an interpretive paradigm consistent with an ontological domain. Semi-structured interviews were conducted during fall-2022. To maintain research quality, this study follows qualitative best practices (Big-Tent). Twelve Ph.D. students from Brazil, Colombia, Ecuador, El Salvador, Mexico, and Panama, were sampled using homogeneous sampling technique. For purposes of a case study, the interviews with Latin participants from master’s programs (n=5) were excluded. Measurable Outcome/Analysis: Interviews were transcribed verbatim. Data saturation occurred when no new themes emerged among all participants. A two-cycle coding was conducted: elemental technique (first phase), and cumulative coding technique (second phase). Results: Seven themes emerged in this research, four surrounding the food pantry service: 1) limited finances as a motivator to use the service; 2) churches as a complement

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