P157 (continued)

their counseling skills. In a mock hospital room with a 2-way mirror, a theatre student acts out a patient scenario and nutrition students conduct a nutrition assessment. After the simulation, the theatre student and nutrition instructor provide feedback regarding counseling skills. A week after the simulation, students complete a nutrition care plan and reflect on the experience.

Evaluation Methods: An IRB-approved survey was sent by email to individuals who participated in Healthcare Theatre. Before distribution, the survey was pilot tested for face validity and content. The final version of the survey included 19 questions which asked respondents to evaluate their confidence in counseling skills, give feedback for improving the program as well as provide demographic information.

Results: Of the 121 respondents, 110 (91%) were female, 102 (84%) were white/Caucasian and 92 (76%) were between 21-26 years of age. After participation, 99 (82%) reported feeling more confident in rapport building skills and 112 (93%) stated receiving immediate feedback was helpful or very helpful. Respondents stated the experience improved their nutrition interviewing skills and ability to ask open-ended questions. To improve the program, students requested more opportunities to participate in Healthcare Theatre.

Conclusions: The Healthcare Theatre Program is an effective method for developing counseling skills in nutrition students.

Funding: None.

P158 Implementation of an I + PSE Technical Assistance Opportunity to Reduce Childhood Obesity: A Qualitative Evaluation of Facilitators, Barriers, and Outcomes

Amy Blom, BS, amykblom@rams.colostate.edu, Colorado State University, Colorado School of Public Health, 106 Gifford Building, Fort Collins, CO 80523; Dena Herman, PhD, MPH, RDN, UCLA Fielding School of Public Health, Department of Community Health Sciences; Angie Tagtow, MS, RD, LD, Akta Strategies, LLC; Leslie Cunningham-Sabo, PhD, RD, Colorado State University, Department of Food Science and Human Nutrition

Background: Childhood obesity is disproportionately higher among low-income women and children, racial and ethnic minorities, and rural populations. To effectively promote sustainable change, healthy eating and active living (HEAL) initiatives are beginning to apply an individual + policy, systems, and environmental (I + PSE) framework for change.

Objective: Development of strategic plans to include I + PSE into 4 states' nutrition programming.

Study Design, Setting, Participants: Four, State Department of Public Health, Title V, maternal and child nutrition leaders participated in a 12-month technical assistance (TA) opportunity to develop strategic plans to include I + PSE into each state's nutrition programming. TA was delivered through a combination of online

modules, community of practice group meetings, and individual coaching sessions.

Measurable Outcome/Analysis: Semi-structured, in-depth interviews were conducted post TA delivery with the 4 state nutrition leaders. Interviews were audio-recorded and transcribed verbatim. Two independent coders used qualitative content analysis to analyze the data characterizing themes and sub-themes.

Results: Facilitators to implementing I + PSE in state program planning included having education delivered through online modules, a community of practice to discuss ideas and issues that arose, individual coaching to address local barriers to implementation and supervisor support. Barriers identified were time and funding limitations, working in isolation, and lack of self-efficacy and infrastructure. Co-learning helped TA participants to overcome stagnancy and promote development of creative solutions. Participants recognized relationship-building as integral to systems development.

Conclusions: The TA identified factors that drive improved nutrition programming utilizing I + PSE in the planning process. Inclusion of both upstream and downstream influences is key to achieving optimal impact to improve HEAL in individuals and communities.

Funding: Health Resources Services Administration, Maternal and Child Health Bureau.

Nutrition Education Research Methods

P159 Participant Characteristics in a Community-Based Diabetes Education Program for South Asians

Nurgul Fitzgerald, PhD, MS, RDN, nurgul.fitzgerald@rutgers.edu, Rutgers, The State University of New Jersey, Department of Nutritional Sciences, 26 Nichol Ave, Room 229B, New Brunswick, NJ, 08901; Shailja Mathur, MS, RDN, M.Ed., Rutgers Cooperative Extension, Department of Family and Community Health Sciences; Shuchismita Dutta, PhD, Rutgers, The State University of New Jersey, Institute for Quantitative Biomedicine

Background: Type 2 diabetes is highly prevalent among South Asians/Asian Indians (AI) in the US, but standard Diabetes Self-Management Programs (DSMP) do not address AI's cultural characteristics. There is a gap of knowledge about AI's nutrition- and healthcare-related behaviors that are likely to influence diabetes outcomes.

Objective: To describe nutrition and diabetes care-related characteristics of AI who participate in DSMP.

Study Design, Setting, Participants: Cross-sectional baseline data were collected through group-administered surveys among 40 AI adults prior to participating in community-based DSMP in New Jersey in 2019. Anthropometric data were measured by trained research staff.

Measurable Outcome/Analysis: DHQ III semi-quantitative food frequency questionnaire and Healthy Eating Index 2015 (HEI) were used to measure dietary quality; Asian food preference at home was also collected. Diabetes

Continued on page S92

P159 (continued)

care behaviors included measures such as 10-item diabetes self-efficacy scale, 4-item health distress scale (range: 0-5), 3-item scale for communications with doctors (range: 0-5), and 4-item social role-diabetes interference scale (range: 0-4). Body weight/height (BMI) and waist circumference (WC) were used to characterize weight status. Descriptive results were calculated using IBM SPSS Statistics.

Results: Most (83%) of the participants' BMIs were in overweight/obese category (mean: 27.9 ± 4.7); 80% of participants had high risk WC. Mean HEI score (37.9 ± 13.7), intake of fruits ($1.1 \text{ cups} \pm 1.6/\text{d}$), vegetables ($1.5 \text{ cups} \pm 1.4/\text{d}$), and fiber ($14.9\text{g} \pm 13.8/\text{d}$) were below recommended levels; 80% of participants preferred mostly/exclusively Asian foods at home. Diabetes self-efficacy was moderately high (mean: 7.4 ± 1.9); means for health distress (1.5 ± 1.3) and social role interference (1.7 ± 2.6) scores were moderately low, and communication (with doctors) score was 2.9 ± 1.2 .

Conclusions: These results indicate a need to improve weight status and dietary quality, which are potential risk factors for type 2 diabetes. Future education programming should be tailored to address Asian dietary intake preferences and include strategies to improve health distress, social role interference, and communication with healthcare providers. Results will be used for culturally appropriate curriculum development and implementation for AI.

Funding: New Jersey Department of Health.

Nutrition Education Program Design Implementation and Evaluation

P160 Management of Obesity in Children with Asthma Using Nutrition Video Counseling

Diane Lindsay-Adler, MS, RDN, CDN, diane_lindsay-adler@bchphysicians.org, Boston Children's Health Physicians, Hawthorne, NY, Hawthorne, NY, 10532; Sankaran Krishnan, MPH, MD, New York Medical College; Karmen Au, MD, Maria Fareri Children's Hospital; Zachary Messer, MPH, New York Medical College; Allen J Dozor, MD, New York Medical College; LaToya Holness, Boston Children's Health Physicians

Background: Asthma and obesity in children are major public health concerns. Asthma makes obesity worse and obesity makes asthma worse. We report a pilot program integrating nutrition video counseling with routine office visits.

Objective: To determine if routine office visits plus nutrition video counseling improve body mass index (BMI), asthma, and obesity quality of life scores.

Study Design, Setting, Participants: Obese children ages 7-18 years old with persistent asthma were enrolled into a 6-month program that included 3 visits with a pediatric pulmonologist and a registered dietitian and 4 additional monthly free nutrition video visits using FaceTime, WhatsApp, or Skype. Motivational interviewing guided discussions about why and how to change behaviors such as skipping meals, binge eating, excessive screen time and

physical inactivity. Identifying whole foods, nutrition label reading, mindfulness and goal setting skills were taught. At each office visit, subjects underwent evaluation of anthropometric measures, respiratory and nutritional status, and validated quality-of-life measures for asthma (PAQOL) and obesity (Sizing Me Up [SMU] for 7 to 13 years; IWQOL-Kids for 14 to 18 years).

Measurable Outcome/Analysis: Participants were assessed for BMI, asthma control, and quality of life measures pre-, mid-, and post-intervention.

Results: Twenty-one subjects were enrolled; 14 (67%) completed all visits and procedures. Twelve of the 14 (86%) reported improvement in obesity quality of life scores. Median SMU score improved from 61 (IQR 56, 76) to 76 (IQR 72, 77), $P = .03$. Median IWQOL-Kids score was 95 at baseline, 97 at completion, $P = .20$. Seven of the 14 (50%) had a decrease in BMI; mean BMI decreased from 33.0 to 31.3, which was not significant. There were no significant changes in pulmonary function or PAQOL.

Conclusions: In this small pilot study, the addition of video nutrition counseling to enhance office visits showed promising results and allows for deep discussions on the complexities of behavior change. However, future studies should be longer, combined with other multidisciplinary approaches, and have larger sample sizes.

Funding: Stony Wold-Herbert Fund, Inc.

Nutrition Education Research Methods

P161 Digital Workbooks to Develop and Evidence Learning in a Flipped Nutrition Classroom in Higher Education

Sarah Burkhart, PhD, sburkhart@usc.edu.au, University of the Sunshine Coast, Locked Bag 4, Maroochydore DC, Queensland, Australia, 4556; Dana Craven, PhD, University of the Sunshine Coast

Objective: To evaluate student use and perceptions of a digital workbook in 3 undergraduate nutrition courses taught with a flipped classroom approach (FCA).

Use of Theory or Research: Within the FCA 3 phases of learning are aligned with Bloom's Taxonomy: prepare (self-directed pre-class activities: remember and understand); participate (facilitated in-class activities: apply and analyse) and recap (self-directed post class activities: evaluate and create). While technology can support the delivery of the FCA, there is little evidence for the most effective delivery of FCA learning experiences for nutrition students.

Target Audience: One hundred and sixty-two undergraduate nutrition students at a regional Australian University in Semester 1, 2019.

Course/Curriculum Description: PebblePad digital workbooks were used to deliver 3 FCA courses. Each digital workbook contained weekly workbook tabs with interactive pages based on the FCA phases. Students used the workbook to access and participate in learning experiences during each FCA phase.

Continued on page S93