P27 (continued)

existing public transit options (eg, more routes, more promotion of how public transit systems work).

Conclusions: SNAP-Ed implementers should: engage with SNAP-Ed participants to inform them of transportation options in their area and identify their transportation gaps and build relationships with multi-sector transportation stakeholders to share the experiences of SNAP-Ed participants and work towards changing policy, systems, and environments to improve transportation systems. Outcome evaluations are needed to determine if strategies implemented improve food security and dietary intake among participants.

Funding: Supplemental Nutrition Assistance Program - Education.

P27 Contextual Factors Influence Childcare Providers' Barriers for Serving Healthy Meals to Preschool Children.

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Background: The Child and Adult Care Food Program (CACFP) and other national policies recommend serving healthy foods and beverages in childcare settings to promote healthy eating behaviors and prevent childhood obesity. However, childcare providers have reported several barriers to serving healthy foods and beverages to the children. To address the barriers, more evidence is needed regarding the contextual factors associated with the childcare providers' tendency to report specific barriers.

Objectives: To examine contextual factors (geographic location, participation in CACFP, type of childcare program, mealtime practices, and personnel responsible for menu planning) that are related to childcare providers' perceived barriers to serving healthy foods and beverages to preschool (2 to 5-year-old) children.

Study Design, Setting, Participants: Cross-sectional study with a self-reported survey completed by childcare center (CCC) directors (n = 336) and family childcare home (FCH) providers (n = 1154) from licensed childcare settings (n = 1490) across urban and rural Nebraska.

Analysis: Descriptive statistics and multiple logistic regression analyses.

Results: Rural childcare providers were more likely to report not having enough money to purchase healthy foods and limited storage space as barriers as compared to their urban counterparts. CACFP-funded settings reported not having enough money, not knowing which recommendation to follow, unsure which foods can be reimbursed through CACFP, and lack of availability of healthy foods as compared to the non-CACFP settings. Participants reporting lower frequency of professional development on nutrition were more likely to report barriers of not having enough money and not knowing which recommendation to follow. Barrier regarding lack of availability of healthy foods was associated with

providers' residing in food deserts, receiving less professional development and being CACFP-participants. Lack of time was reported as a barrier when FCCH providers and CCC owners or directors were responsible for menu planning.

Conclusions: Considering contextual factors influencing providers' barriers can improve healthy food availability in childcare.

Funding: USDA.

Nutrition Education Research Methods

P28 Validation of an Observational Measure to Capture Feeding Practices in Child Care Centers

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Background: Current feeding practice measures are either not validated for use in childcare centers or do not include key constructs that influence children's eating.

Objective: To describe the development and validation of the 'Mealtime Observation in Child Care' (MOCC) toolkit (manual, coding checklist, scoring sheet, training videos) to measure teachers' feeding practices with preschool (3-5 years) children.

Study Design, Setting, Participants: An observational measure to assess mealtime environment and feeding practices was developed based on existing literature and measures, expert collaboration, and external reviews. Trained observers coded 41 lunchtime videos in 10 childcare centers.

Measurable Outcome/Analysis: Face validity of the tool was assessed by sending the toolkit to 4 external expert reviewers for feedback. Four trained coders watched and coded a video separately in order to assess inter-rater reliability calculating a Kappa statistic. Convergent validity was evaluated by relating the MOCC items to previously validated measures including EPAO-Extended Feeding Practices (EPAO-EFP), Table Talks (TT), and Feeding Behavior Coding System (FBCS). The same videos were coded with TT, EPAO-EFP and FBCS and the scores for relevant items were used for comparison with MOCC score. Pearson's, bivariate correlations were calculated between MOCC items and items matched with other measures.

Results: Expert reviewers provided feedback related to including additional verbal examples, clarifying the difference between unable to observe and not applicable and improving the formatting of the checklist. Interrater reliability was high (Fleiss's Kappa, K = 0.85). The convergent validity of the MOCC tool was high, among 9 subscales 8

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P28 (continued)

were significantly associated to previous measures ($r = 0.40$ [$P < .01$] to 0.87 [$P < .001$] & $\beta = 0.4$; $P = .001$). Teachers' response to food refusal subscale was not significantly related because children did not refuse foods in >50 lunchtimes.

Conclusions: MOCC may be a comprehensive, valid and reliable tool to assess teacher feeding practices, informing professional development and evaluating intervention efforts.

Funding: USDA.

Nutrition Across the Life Cycle

P29 Association of a Healthy Dietary Habit with Dietary Practices for Lifestyle Disease Prevention and with Health Awareness

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Background: In Japan, a well-balanced diet consisting of cereal grains (shushoku), protein foods (shusai), and vegetables (fukusai) is recommended. However, a large proportion of people aged 20 to 49 years skip breakfast and have insufficient vegetable intake.

Objective: To comprehensively identify the factors associated with a healthy dietary habit.

Study Design, Setting, Participants: The subjects were 723 respondents (331 males, 392 females) of the 2016 Hyogo Diet Survey, aged 20 to 49 years.

Measurable Outcome/Analysis: A healthy dietary habit was defined as eating breakfast regularly, eating 5 or more vegetable dishes daily, and having a well-balanced meal at least twice daily. Factors associated with a healthy diet were defined as regular dietary practices for lifestyle disease prevention (controlling energy intake, controlling fat intake, restricting salt intake, controlling sugar intake, eating large amounts of vegetables, and eating fruit), health awareness (regular exercise, healthy weight maintenance, use of nutrition facts labels), and the habit of eating out infrequently. These variables were used to develop a hypothetical model for covariance structure analysis.

Results: The hypothetical model had acceptable goodness of fit (male: GFI = 0.962, AGFI = 0.936, CFI = 0.969, RMSEA = 0.033; female: GFI = 0.959, AGFI = 0.929, CFI = 0.962, RMSEA = 0.04). Dietary practices for lifestyle disease prevention was associated not directly, but indirectly via health awareness, with a healthy dietary habit, with standardized total effects of 0.421 in males and 0.438 in females. In males, a significant negative path from relatively high frequency of eating out to a healthy dietary habit was observed, with a standardized estimate of -0.16 .

Conclusions: Acquisition of a healthy dietary habit by using dietary practices for lifestyle disease prevention is mediated by health awareness and may be negatively influenced in males by a high frequency of eating out.

Funding: None.

Food and Nutrition Policy

P30 Perceptions of Online Grocery Shopping Using the Supplemental Nutrition Assistance Program Electronic Benefit Transfer Card

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Background: There is formative legislation proposing to expand use of the Supplemental Nutrition Assistance Program (SNAP) Electronic Benefit Transfer (EBT) card to allow for online grocery store purchases. However, there are limited studies reporting SNAP recipients' perceptions of online EBT shopping, particularly among those in highest need of such a program (ie, limited-income caregivers of young children who face multiple external barriers (eg, time and money) to supporting healthy eating and meal patterns for their families). Without this information, it will not be possible to develop and implement a fully optimized online EBT policy and program.

Objective: The main objective of this qualitative study is to explore the general and contextual (ie, within family mealtime routines) perceptions of an online EBT program among caregivers with children enrolled in Head Start.

Study Design, Setting, Participants: This focus group study is ongoing. Two were completed in fall 2019 and additional focus groups will be conducted in winter 2020 until saturation is met. Participants ($n = 16$) are primarily non-Hispanic Black (88%) and 100% female. Mean (SD) is 40.7 ± 15.5 years and median income is \$42,302.

Measurable Outcome/Analysis: Main outcomes are general and contextual perceptions of online EBT shopping. Focus groups were recorded and transcribed verbatim. Data were independently coded by 2 researchers and analyzed for themes.

Results: On average, focus groups lasted 75 minutes. A preliminary theme includes mixed awareness of grocery delivery/curbside pickup but with an overall positive perception. Two participants regularly participate in online delivery and find it very convenient. The majority of participants did not feel that online grocery shopping would improve healthy eating and most had reservations about others picking out fresh produce and meats. When asked about using SNAP benefit/EBT card to purchase food online, participants who receive it believe it would encourage them to use this program.

Conclusions: Results of this study will form the design of a future online EBT pilot study tailored to the needs of Head Start families.

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