P15 (continued)

Study Design, Setting, Participants, Intervention: A descriptive cross sectional survey was conducted among 1,610 undergraduates using multistage sampling in five universities, South East, Nigeria.
Outcome Measures and Analysis: A self-administered lifestyle questionnaire was used to collect information on demographics and MCVRFs such as physical inactivity, alcohol intake, smoking and consumption of unhealthy foods (≥3 times a week). Other CVD risk factors such as waist circumference (WC), waist hip ratio (WHR) and blood pressure were assessed using standardized instruments. MCVRFs were defined as obesity (BMI ≥ 30 kg/m2), overweight (BMI 25–29.9 kg/m2), abdominal obesity using World Health Organisation (WHO) cut offs for WC ≥94 cm in men and ≥80 cm in women and WHR >0.90 in men and 0.85 in women and hypertension (systolic/diastolic blood pressure ≥140/90 mmHg). Chi square was used for comparison of proportions between males and females.
Results: The age range was 18–22 years (51.9%). Prevalence of MCVRFs were obesity 20.6%, overweight 13.4%, WC 15.8%, WHR 8.9%, hypertension (SPB = 7.3%; DPB = 10.9%), consumption of unhealthy foods (≥3 times per week) (58.1%), low fruit and vegetable intake (73.8%), physical inactivity (40,2%), alcohol intake (48.9%) and smoking (47.6%). Diastolic blood pressure (55.7% vs. 44.3%; $P = .007$) and smoking (57.7% vs. 2.3%) were significantly higher in males. Females had significantly higher BMI (70.2% vs. 29.8%; $P = .001$), WC (94.% vs. 5.6%; $P = .001$), WHR (92.9% vs. 7.1%; $P = .001$) and consumption of unhealthy foods (57.5% vs. 42.5%; $P = 0.001$).
Conclusions and Implications: The high rate of MCVRFs among the undergraduates underscores the need for CVD prevention programs that focus on improving healthy lifestyle to reduce burden of the disease in later life.
Funding: None.

P16 Perception of Weight Status is Associated with Consumption of Fruits and Vegetables by Adolescents

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Background (Background, Rationale, Prior Research, and/or Theory): Childhood obesity is a major concern in the United States with 20.6% of all children aged 12–19 years considered obese in 2017. Adequate consumption of fruits and vegetables is considered protective against childhood obesity.
Objective: To determine whether adolescents' perception of their weight status is associated with the frequency of consumption of fruits and vegetables.
Study Design, Setting, Participants, Intervention: A cross-sectional study was conducted with 1,072 adolescents (12–17 years) participating in the Family Life, Activity, Sun, Health, and Eating (FLASHE) Study, an internet-based survey study sponsored by the National Cancer Institute.
Outcome Measures and Analysis: Adolescents reported their perception of their weight status on a 5-point scale from "very overweight" to "very underweight". In addition, the adolescents reported the frequency with which they consumed common fruits and vegetables in the seven days preceding the study on a 6-point scale ranging from "none in the seven days" to "more than 3 times a day." Analysis of Variance (ANOVA) statistics were used to identify significant differences in the frequency of consumption of fruits and vegetables between the different weight categories. Significance was $P < .05$.
Results: Sixty-two point one percent of the adolescents reported perceiving their weight as "just right", 9.6%, 22.4% and, 4.7% perceived their weight to be "underweight", "a little overweight", and "very overweight" respectively. Those who perceived their weight status as "just right" also reported consuming significantly more fruits and vegetables than those who perceived their weight as "underweight" or "overweight" (mean 2.45 ± 0.03 vs. 2.28 ± 0.06 in underweight and 2.26 ± 0.04 in overweight). The frequency of consumption for both underweight and overweight groups was not significantly different.
Conclusions and Implications: Although adolescents who perceived their weight to be "just right" consumed fruits and vegetables more frequently than their underweight and overweight counterparts, the average consumption was very low in all weight status groups. Interventions should focus on identifying and managing barriers to consumption of fruits and vegetables by adolescents regardless of the weight status.
Funding: None.

P17 Promoting Farmers' Markets with Limited-Resource Audiences: The Impact of a Social Marketing Campaign

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Background (Background, Rationale, Prior Research, and/or Theory): Farmers' markets can increase access to locally-grown produce for limited-resource consumers. However, studies have identified several barriers for farmers' market patronage by these consumers. Social marketing campaigns have the potential to address these barriers. These campaigns are most effective when messages and materials are tailored to specific audiences.
Objective: To examine the impact of a farmers' market social marketing campaign on limited-resource consumers' intent to purchase and consume locally-grown produce and to examine potential differences in campaign impacts based on consumers' communities of residence (rural, suburban, urban).
Study Design, Setting, Participants, Intervention: In 2016, a farmers' market social marketing campaign was implemented in 33 counties at 39 farmers'

Continued on page S16

P17 (continued)

markets. The campaign consisted of marketing assets, six food demonstrations with recipes, and three children's activities. Participant surveys were conducted with a convenience sample of 15 farmers' markets located in 10 counties (three rural, four suburban, and three urban). Surveys were completed by 723 adults.

Outcome Measures and Analysis: Participants answered questions about intention to purchase and consume locally-grown produce. Frequencies were computed for campaign impacts on all participants. Rural, suburban and urban consumers' responses were compared using chi-square analyses with Monte Carlo simulation.

Results: Overall, most participants reported purchasing and consuming more locally-grown produce as a result of the campaign. There were differences, however, between rural, suburban, and urban consumers' responses with suburban consumers more likely to report increases in purchasing ($\chi 2$ (6) = 44.80, $P < .001$) and consuming ($\chi 2$ (6) = 35.73, $P < .001$) locally-grown produce.

Conclusions and Implications: While effective in increasing purchase intention and consumption of locally-grown produce with all consumers, there were differences in campaign impact among rural, suburban, and urban consumers. These findings suggest different social marketing approaches might be warranted when engaging rural, suburban, and urban limited-resource farmers' market consumers.

Funding: Supplemental Nutrition Assistance Program—Education.

P18 School Pantry Cook-Off: A Strategy to Create Food Insecurity Awareness and Develop Meal Planning and Cooking Skills in Teens

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Objective: To increase awareness of food insecurity in high school students; to provide basic understanding of nutrition, meal planning, and cooking skills using foods available in a school pantry.

Target Audience: Students attending a high school with more than 50% free or reduced-priced lunch (FRPL) participants.

Theory, Prior Research, Rationale: Social Learning Theory.

Description: The Eat Smart Idaho (ESI) program partnered with a Family & Consumer Sciences teacher to increase students' awareness of an on-site school food pantry through a cook-off. Nutrition education classes were taught by ESI Nutrition Advisors on MyPlate guidelines, food safety practices, basic cooking techniques, and meal planning skills. Eighteen teams (10th-12th grade) participated in the cook-off. Each team was given a food pantry mystery box to plan, prepare, and present a nutritious meal consisting of at least three food groups using the foods provided. A panel of three judges evaluated the teams based on MyPlate variety, food safety, teamwork, creativity, flavor, and meal presentation.

Evaluation: Post competition questionnaire results from 67 participants showed that 81% (n = 54) of participants were not aware of food insecurity in their local county or the presence of the school food pantry prior to the cook-off. After the competition, 93% (n = 62) of participants reported they would be willing to share information about the school food pantry and 90% (n = 60) would be willing to participate in a food drive for healthy food items. The majority of students reported they would plan before grocery shopping (n = 62, 93%), cook for themselves or their families (n = 62, 93%), and make healthier food choices (n = 60, 90%).

Conclusions and Implications: These positive results suggest that a mystery box cook-off can increase awareness of local food insecurity and support for school pantries in high school students. Students developed their abilities to plan and prepare healthy meals with limited resources.

Funding: Supplemental Nutrition Assistance Program—Education.

P19 What Do College Students' Think on Meat Consumption and Environmental Sustainability? An Exploratory Study

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Background (Background, Rationale, Prior Research, and/or Theory): Current health promotion trends encourage reduced meat consumption with a more plant-based diet to improve public health and promote sustainability.

Objective: To assess meat consumption trends, weight status and attitudes towards environmental sustainability among college students.

Study Design, Setting, Participants, Intervention: A convenience sample of 415 students from a Midwestern University in the U.S. participated in a cross sectional survey with a response rate of 92.6%. A 23-item paper questionnaire was administered to the participants in intact classrooms.

Outcome Measures and Analysis: Data were analyzed using descriptive statistics, chi squared and univariate statistics.

Results: Most participants were male (58.3%) and college freshmen (34.2%) or sophomores (35.4%). There was a significant gender difference observed in meat consumption frequency. Over half of the male students (50.3%) reported consuming meat everyday compared to females (19.8%). No significant associations were found between meat consumption frequency and BMI ($P = .645$). Students' reported most often-substituting meat with eggs,

Continued on page S17