



UNIVERSITY OF
South Carolina

NUTRITION CONSORTIUM
ARNOLD SCHOOL OF PUBLIC HEALTH
USC NUTRITION SYMPOSIUM: SHARE, DISCOVER, CONNECT
USC ALUMNI CENTER
MARCH 23rd, 2023

- 8:15-8:45 Posters to be placed on display in Ballroom Two
- 8:30 am **Registration Opens**
- 9:00-9:05 **Welcome Remarks**
Dean Thomas G. Chandler, MSc, PhD
- 9:05-9:15 **Introduction and State of the Consortium**
Christine Blake, PhD, RD
- 9:15-9:45 **Session 1: Recent Advances in Nutrition Science at USC**
- 9:15-9:30 Sara Wilcox, PhD
The Health In Pregnancy and Postpartum (HIPPA) Trial – Weight Versus Behavioral Outcomes
- 9:30-9:45 Edward Frongillo, PhD
Assessing and Monitoring Healthy Diets in the US and Globally
- 9:45-10:20 **Session 2: Ongoing Nutrition Research Updates**
- 9:45-9:50 Brie Turner McGrievy, PhD, RD
What's going on in the Behavioral Research in Eating Lab? Where we are and where we hope to go!
- 9:50-9:55 Susan Steck, PhD, RD
Dietary intake of advanced glycation end products and risk of cancer
- 9:55-10:00 Elizabeth Adams, PhD
Veggie Vouchers – Increasing knowledge and use of the SNAP Healthy Bucks program
- 10:00-10:05 Nick Younginer, PhD
Evaluation and Implementation of the South Carolina SNAP-Ed Program
- 10:05-10:10 Christine Blake, PhD, RD
Applying Understanding of Drivers of Food Choice to Promote Sustainable Healthy Diets in LMIC
- 10:10-10:15 Abbie Lane, PhD
Physical activity, lactation, and cardiometabolic risk in parous women

10:15-10:20 Jim Thrasher, PhD

Evaluating nutrition labeling policy changes in the US and Mexico: Emerging research from the International Food Policy Study

10:20-11:15 **Poster Presentations/Open Meet and Greet**

11:15-11:45 **Session 3: Introducing Our Newest Faculty Affiliates**

11:15-11:30 Hala Ghattas, PhD

Food security, nutrition and health inequities in the context of protracted crises

11:30-11:45 Katie Hirsch, PhD, EP-C, ISSN

Nutritional supplementation to support exercise, metabolism, and healthy aging across the female lifespan.

11:45-12:35 **Session 4: Building Capacity in Nutrition by Investing in our Human Capital**

11:45-12:00 Christa Demment-Gonzalez, MSN

Teaching Kitchens for Improved Health Outcomes

12:00-12:15 Angela Liese, PhD

Cultivating a more diverse, equitable and inclusive campus culture: The NIH FIRST FIIRRE initiative

12:15-12:30 Teresa Moore, PhD, RD, LDN

ACEND Demonstration Program Application for M.S. in Performance Nutrition and Dietetics

12:30-12:35 Audrey Richards, Student Nutrition Group Representative

Spring 2023 for the Student Nutrition Group

12:35-12:55 **Facilitated Discussion: Moving Forward as a Collaborative Consortium**

Christine Blake, PhD, RD

12:55-1:00 **Closing Remarks and Student Poster Prizes**

Christine Blake, PhD, RD

ORAL PRESENTATIONS

The Health In Pregnancy and Postpartum (HIPP) Trial – Weight Versus Behavioral Outcomes

In this presentation, Dr. Wilcox will briefly summarize the previously published findings on the impact of a lifestyle behavior change intervention that targeted physical activity, diet, and weight self-monitoring on gestational weight gain and postpartum retention. She will then present results from a recently published paper that examined changes in physical activity and dietary behaviors in pregnancy as well as our current analyses on postpartum physical activity and dietary behavior. She will emphasize the lack of congruence, at times, between the weight outcomes, where the intervention effects were stronger (especially for postpartum weight retention) and the behavioral outcomes, where the intervention effects, although at times consistent with the weight outcomes for some variables, were modest and generally not statistically significant.

Sara Wilcox, PhD, Professor, Department of Exercise Science

Bio: Dr. Wilcox's research is focused on promoting physical activity and dietary change in adult underserved populations, particularly in African Americans, women, and older adults. She started at USC in 1999, and since that time, has worked with community and clinical organizations to develop, implement, and evaluate behavioral, theory-based interventions that are delivered via community- and clinical-based settings. For example, she has been conducting research and publishing in the area of faith-based health behavior interventions since 2002. Multiple studies have used a community-based participatory approach to meet the needs of under resourced communities. Dr. Wilcox also has experience conducting large-scale evaluations of health behavior change interventions. She has both current and completed projects funded by the National Institutes of Health, Centers for Disease Control and Prevention, Department of Defense, and the Robert Wood Johnson Foundation. She teaches courses in areas

that overlap with her research emphases – while at USC, she developed and has taught EXSC 410, Psychology of Physical Activity and EXSC 710, Behavioral Aspects of Physical Activity.



Assessing and Monitoring Healthy Diets in the US and Globally

Healthy diets are critical for achieving global nutrition targets and the Sustainable Development Goals, including ending malnutrition in all its forms. Despite the importance of healthy diets for population health and well-being, no instrument exists that measures the healthfulness or quality of diets. Without an appropriate and universal measure, we cannot track countries' commitments and progress towards improving diets. In recognition of the need for consensus and action, the World Health Organization, the United Nations Children's Fund, and the Food and Agriculture Organization of the United Nations have joined to chart a way forward via the *Healthy Diets Monitoring Initiative*. In the US, the Department of Agriculture is engaging in parallel work to assess and monitoring healthy diets as part of an effort to assess and monitor nutrition security of the US population.

Edward Frongillo, PhD, Professor, Department of Health Promotion, Education, and Behavior

Bio: Dr. Edward A. Frongillo conducts research globally to learn how to improve the growth, development, feeding, care, and survival of children, and leads research on child, adult, and household food insecurity. His research program also aims to understand how to advance policy and programs for improving food security, nutrition, and development. He has several global and national leadership roles in developing nutrition science and monitoring nutrition of populations.



What's going on in the Behavioral Research in Eating Lab? Where we are and where we hope to go!

This presentation will provide an overview of the four recent major projects that are active in the BRIE Lab group. This includes the NEW Soul study, the DG3D study, the mLife study, and the NEW Soul Dissemination and Implementation study. We'll also discuss ideas we have for moving forward.

Brie Turner-McGrievy, PhD, RD, Professor, Department of Health Promotion, Education, and Behavior

Bio: Dr. Turner-McGrievy's research focuses on discovering ways to help people eat healthier, lose weight, and prevent chronic disease. To achieve this goal, she explores ways to use emerging technology to assist with dietary self-monitoring, physical activity tracking, and provision of social support. In addition, her research focuses on dietary approaches that do not require dietary self-monitoring, such as the vegan and vegetarian diets.



Dietary intake of advanced glycation end products and risk of cancer

Advanced glycation end products (AGEs) are bioactive metabolites produced by glycation of proteins or lipids with reducing sugars. They are formed endogenously but can also be consumed in the diet, with higher levels found in foods that have been processed or cooked at high temperatures. AGEs promote oxidative stress and inflammation and thus, may be associated with increased risk of cancer though this has been rarely studied in humans. Dr. Steck will present results from completed work showing positive associations between intake of AGEs and breast cancer risk and mortality, and describe plans for future work related to prostate cancer

as a subcontract PI on a recently funded R01 from the National Cancer Institute.

Susan Steck, PhD, RD, Professor, Department of Epidemiology and Biostatistics

Bio: Dr. Steck's research focuses on epidemiologic, clinical, and laboratory-based investigations to examine the role of nutrition in cancer prevention and control. Her work explores ways to reduce or eliminate health disparities related to some of the more common cancers, such as breast, prostate and colorectal cancers, with a particular focus on how diet interacts with the genome and microbiome to affect cancer risk.



Veggie Vouchers – Increasing knowledge and use of the SNAP Healthy Bucks program

In this talk, Dr. Adams will provide a brief overview of her current pilot study - Veggie Vouchers. This study established a clinic-to-community model to provide vouchers that increased awareness and incentivized use of the SNAP Healthy Bucks program for families experiencing food insecurity.

Elizabeth Adams, PhD, Assistant Professor, Department of Exercise Science

Bio: Elizabeth Adams research includes the promotion of healthful dietary patterns to prevent pediatric obesity and reduce health inequities. Her work investigates parenting and family-based influences on children's obesogenic behaviors to prevent the intergenerational transmission of obesity. She also conducts investigations on federal policies (e.g., National School Lunch Program, Child Tax Credit) to ensure children from all income levels have access to healthful nutrition for chronic disease prevention.



Evaluation and Implementation of the South Carolina SNAP-Ed Program

This presentation will showcase the current implementation and evaluation efforts of the Arnold School of Public Health's SNAP-Ed Implementing Agency across South Carolina.

Nicholas Younginer, PhD, Research Assistant Professor, Department of Health Promotion, Education, and Behavior

Bio: Dr. Nicholas Younginer is a Co-Investigator for University of South Carolina's SNAP-Ed program and Research Assistant Professor in the Department of Health Promotion, Education, and Behavior in the Arnold School of Public Health. He has worked with the SNAP-Ed program for approximately 7 years.



Applying Understanding of Drivers of Food Choice to Promote Sustainable Healthy Diets in LMIC

The purpose of the Drivers of Food Choice (DFC) program was to facilitate, synthesize and disseminate research to provide a deep understanding of the drivers of food choice among the poor in low-and-middle-income countries (LMIC) in South Asia and Sub-Saharan Africa. Agrifood systems face formidable poverty reduction, climate change and environmental challenges in providing an adequate and affordable supply of diverse foods required for a sustainable healthy diet. Social, economic, and geographic inequalities create barriers from production to consumption, as the poor consume increasing amounts of unhealthy food. A major contribution of the DFC program is increased recognition of the importance of food choice in efforts to promote healthy food choice in sustainable food systems. The DFC team is involved in multiple ongoing collaborations to extend DFC program work, including contributions to the

International Food Policy Research Institute (IFPRI) initiative to Transform Agriculture and Food Systems in South Asia (TAFSSA). We recently helped develop and deliver a workshop in Bangladesh to inform development of analytic plans for analysis of existing data and identification of priorities for future research. We are also developing a repository of methods and measures to assess food choice and food environments that will have broad applications in food systems research. The DFC team is working with IFPRI, TAFSSA, and other partners to address emerging food choice research priorities with emphasis on understanding dietary practices and determinants of foods choice behaviors to develop and test innovations that support consumption of sustainable healthy diets.

Christine Blake, PhD, RD, Associate Professor, Department of Health Promotion, Education, and Behavior

Bio: Christine Blake is a public health nutrition scientist with extensive experience designing and implementing studies on food choice, food parenting, child feeding, food insecurity, nutrition policy, food environments and food systems, in both rural and urban populations in multiple countries. Her work provides understanding of contextual and cognitive factors that drive food choice with an emphasis on people and organizations that shape these behaviors in families and children. Dr. Blake has conducted both qualitative and quantitative studies on the drivers of food choice in diverse populations and is the principal investigator of the Drivers of Food Choice Competitive Grants Program funded by the Bill & Melinda Gates Foundation and UK FCDO.



Physical activity, lactation, and cardiometabolic risk in parous women

Physical activity and lactation both individually benefit cardiometabolic health. Joint associations have not been described in midlife, parous women. Data from the Coronary Artery Risk Development in Young Adults Study will be presented to address this research gap.

Abbie Lane, Assistant Professor, Department of Exercise Science

Bio: Dr. Lane's research is focused on understanding the processes underlying the increased long-term heart disease risk in women who have had certain complications in pregnancy, such as preterm birth, high blood pressure in pregnancy, or preeclampsia.



Evaluating nutrition labeling policy changes in the US and Mexico: Emerging research from the International Food Policy Study

This presentation will describe recent research from our NIH-funded project that involves an interrupted time series design to evaluate Mexico's innovative policy of "stop sign" warnings on the front of packaged foods that are high in calories, sodium, sugar, or fat, as well as on products with added caffeine or sweeteners. This study includes large oversamples of Mexican Americans, whose data are also central to our ongoing research and will be highlighted in this update.

Jim Thrasher, PhD, Professor, Department of Health Promotion, Education and Behavior

Bio: Dr. Thrasher's research focuses on how media and policies influence tobacco- and nutrition-related perceptions and behaviors. His projects are generally international in scope and often assess the consistency of media and policy effects across different sociocultural contexts. He teaches courses on public health policy, advocacy, and communications.



Food security, nutrition and health inequities in the context of protracted crises

This presentation will give a brief overview of my research trajectory and interests focusing on work

conducted with refugees and vulnerable sub-populations in the Middle East. It will give examples from studies that focused on food insecurity and its nutritional and health correlates in children and in older adults, and describe intervention research and new ongoing longitudinal studies in these settings.

Hala Ghattas, PhD, Associate Professor, Department of Health Promotion, Education, and Behavior

Bio: Dr. Ghattas' research centers on the links between inequity, food insecurity, nutritional status and health. Her work explores the social and structural determinants, and health consequences of both under and over-nutrition in the contexts of the global nutrition transition, and regional conflicts in the Middle East. She has developed novel tools to measure food environments and food insecurity experience in low and middle-income settings. Dr. Ghattas has also led the nutrition and health components of multidimensional poverty surveys and vulnerability assessments, and designed and evaluated public health programs to address the overlapping burdens of food insecurity, malnutrition and chronic diseases particularly in refugee populations.



Nutritional supplementation to support exercise, metabolism, and healthy aging across the female lifespan.

Females experience many different hormonal changes throughout the lifespan that impact they way they look, feel, exercise, and eat. This presentation will focus on how nutritional supplementation and nutrient timing strategies can be used to support exercise adaptation, performance, metabolism, and body composition throughout the three primary hormonal stages all women experience throughout the lifespan - pre, peri, and postmenopause.

Katie Hirsch, PhD, EP-C, CISSN, Assistant Professor, Department of Exercise Science

Bio: Dr. Katie Hirsch is an Assistant Professor in the Department of Exercise Science at the University of South Carolina, Arnold School of Public Health. Her research focuses on the effects of exercise and nutrition on body composition, muscle and protein metabolism, cardiometabolic health, and performance, with a focus on sex differences and women's health across the lifespan. Dr. Hirsch completed postdoctoral research training in the Center for Translational Research in Aging & Longevity at the University of Arkansas for Medical Sciences. She completed her PhD in Human Movement Science and MA in Exercise Physiology at the University of North Carolina at Chapel Hill and BS in Exercise Science at Truman State University. She is a Certified Exercise Physiologist with the American College of Sports Medicine and Certified Sports Nutritionist with the International Society of Sports Nutrition.



Teaching Kitchens for Improved Health Outcomes

In this presentation, you will learn about FoodShare's culinary medicine programs, including curriculum for medical professionals, the Veggie Rx program, and classes for community health. Opportunities for research partnerships and teaching kitchen programs in development will be presented.

Christa Demment-Gonzalez, MSN, Director of Culinary Medicine

Bio: Christa Demment González joins FoodShare as the Director of Culinary Medicine after teaching and cooking in California, Maine, and the Caribbean. With a Master's degree in Nutrition and over 15 years of experience cooking in unique and challenging environments, she finds new ways to translate nutrition science into simple, mouth-watering recipes.

Whether it's teaching the culinary medicine elective to medical students or designing recipes for Foodshare's bi-weekly recipe card, Christa brings evidence-based science, enthusiasm, and approachability to the Food Is Medicine movement. She believes culinary confidence

and multi-disciplinary collaboration are the keys for treating and preventing chronic illness.



Cultivating a more diverse, equitable and inclusive campus culture: The NIH FIRST FIIRRE initiative

Aligned with the University of South Carolina's Strategic Plan, Priority #4: "Cultivate a more diverse, equitable, and inclusive campus culture," USC's Faculty Initiative for Improved Recruitment, Retention, and Experience (FIIRRE) launched in fall 2022 with funding from NIH FIRST. The NIH FIRST program aims to transform the culture of the health sciences, as well as the organizational culture of the funded institution, toward inclusive excellence. This presentation will describe the national structure of this multi-center research study. It will highlight several of the University of South Carolina-based activities intended to facilitate institutional culture change and to recruit, nurture, and retain a cohort of ten new tenure-track Assistant Professors who are committed to inclusive excellence and conduct health disparities and equity research. Lastly, it will offer an overview of the evaluation plan as it pertains to the faculty recruitment cohort model.

Angela Liese, PhD, Professor, Department of Epidemiology and Biostatistics

Bio: Angela D. Liese, PhD, is Professor of Epidemiology at the University of South Carolina's Arnold School of Public Health. Dr. Liese received her PhD in Epidemiology from the University of North Carolina at Chapel Hill and her MPH from the University of Massachusetts at Amherst. Dr. Liese is a diabetes and nutrition epidemiologist. Her current research focuses on surveillance of youth-onset diabetes and the impact of food insecurity and other social needs on the health and well-being of persons who with diabetes. Together with Professor Coretta Jenerette from the College of Nursing, she serves as the MPI of USC'S FIRST FIIRRE initiative.



ACEND Demonstration Program Application for M.S. in Performance Nutrition and Dietetics

In this talk, you will learn about efforts being led by EXSC to implement a demonstration Program using the ACEND Future Education Model Standards in an M.S. in Performance Nutrition and Dietetics at USC.

Teresa Moore, PhD, RD, LDN, Clinical Associate Professor, Department of Exercise Science

Bio: Teresa Moore is a Registered Dietitian Nutritionist and earned a Ph.D. in nutrition/exercise and sport science from the University of North Carolina, Chapel Hill. For 15 years, she taught courses and served as the undergraduate director at USC. Today she continues to teach and mentor undergraduate students and develop a unique research program looking at the ergonomics of kayaking.



Wellness Chair for Changing Carolina Peer Leaders, and the Student Engagement Coordinator for the Nutrition Consortium.



Spring 2023 for the Student Nutrition Group

This presentation will introduce the Student Nutrition Group and give the audience a brief overview on the group's purpose and goals. The speaker will share upcoming activities and ways to get involved and become a member!

Audrey Richards, Student Nutrition Group Representative

Bio: Audrey is a McNair Scholar at the University of South Carolina pursuing a Bachelor of Science degree in Public Health and a Minor in Economics. She is the current President of the Student Nutrition Group, the General

POSTER ABSTRACTS

Victoria Adebisi, MPH, Health Promotion Education and Behavior

Is the duration of child participation in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) associated with child food security, general health, and housing condition?

Gazi Sakir Mohammad Pritom, MBBS, MPH; Longgang Zhao, MSc; Jihong Liu, Sc.D.

Objective: The impact of WIC on food security has only been examined in terms of participation and not the duration of participation. This study assessed the relationship between the duration of children's participation in WIC and child food security, general health condition for children, and household housing characteristics.

Methods: We included children less than 5-year-old who participated in WIC from the 2015-2018 National Health and Nutrition Examination Survey (NHANES) datasets. Duration of child participation in WIC was assessed in months. Outcomes studied included child food security in the past 12 months, general health condition, and housing characteristics. Multivariable logistic regression adjusting for age, gender, race/ethnicity, income, considering the survey weighting was used to estimate the odds ratio (OR) and 95% confidence intervals (CI) for association between WIC participation and outcomes of interest.

Results: Of the 1710 children, 57% were between ages 2 and 5 years and 30.2% were enrolled in WIC for 7-12 months. Compared to the child who participated in WIC for less than 6 months, child participation in WIC for longer duration was associated with higher odds of living in households with more than 3 rooms (Adjusted OR =3.21, 95% CI: 1.16, 8.92, p=0.03 for 13-18 months and OR= 1.97, 95% CI: 1.03, 3.76, p=0.04 for 19-24 months). The prolonged WIC participation was not significantly associated with improvement in child food security and general health condition.

Conclusions: Participation in WIC for longer than one year may influence housing characteristics, demonstrating non-food impacts of WIC participation.



Meghan Bastyr, MS, Exercise Science

A Thematic Analysis of Pediatrician and Parent Discussions around Infant Feeding at Well-Child Visits

Melanie Bean PhD, Laura Caccavale PhD, Romesh Wijesooriya MD, Olivia Finnegan MS, Sarah Burkart PhD, Bridget Armstrong PhD, Michael Beets PhD, Glenn Weaver PhD, Elizabeth Adams PhD

Objective: To characterize pediatrician guidance and parent questions/concerns on infant feeding during well-child visits to understand information parents receive and identify potential gaps for interventions.

Methods: Mother-infant dyads (N=20) and pediatricians (N=5) were enrolled. Well-child visits at 2, 4, and 6 months of age were audio recorded and transcribed. Grounded theory methods of qualitative analysis were used to derive emergent themes around infant feeding. Conversations were labeled as pediatrician-initiated guidance, parent-initiated questions/concerns, or general updates. Themes were compared across ages. Pediatricians and mothers completed a survey evaluating their desire for additional guidance after the 6-month visit. Responses were analyzed using descriptive statistics.

Results: Resultant themes included: 1) introducing solid foods; 2) feeding amount and timing; 3) feeding in specific situations; 4) breast milk/formula preparation. At each visit, pediatricians initiated introducing solid foods with few parent questions/concerns until 6-months. Parents initiated discussion around feeding in specific situations at 4-months. Parents initiated conversation around breast milk/formula preparation at 2-months, while pediatricians initiated guidance at 4- and 6-month visits. Surveys indicated that parents desired additional guidance on transitioning to solids (42.1%), introducing allergen foods (31.6%), and

nighttime feedings (36.9%). Pediatricians (80%) felt the amount of guidance to deliver during visits was too much, and all (100%) mentioned time as a barrier. Most pediatricians (80%) felt that providing guidance in ancillary visits would be valuable.

Conclusions: The frequency and detail of discussions varied leaving a need for more guidance. Therefore, adjunctive interventions could further support parents by providing supplementary guidance within a clinical setting.



Alexis Bell, MPH, Health Promotion Education and Behavior

The association between obesity and asthma among adults aged 18 years and older in the United States

Mechelle Claridy, PhD, MPH; Stephanie Miles-Richardson, DVM, PhD; Gemechu Gerbi, PhD, MSc

Objectives: This study assessed the association between obesity and asthma among adults ≥ 18 years old in the United States (US).

Methods: Data were analyzed from the 2019 Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS assessed health-related behaviors, chronic health conditions, and preventive services usage among US adult residents. Using SAS version 9.4, multivariable logistic regression analysis was used to estimate adjusted odds ratios (AORs) and 95% confidence intervals (95% CIs) to assess the association between obesity and asthma among adults ≥ 18 years in the US (N = 416,759).

Results: After adjusting for age group, race, sex, education level, income level, healthcare plan, region, and body mass index (BMI) and comparing to those who did not report having asthma, being an other race (AOR: 1.38; 95% CI, 1.32 - 1.46); those with an annual household income of less than \$25,000 (AOR: 1.71; 95% CI, 1.66 - 1.76); \$25,000 to \$49,999 (AOR: 1.17; 95% CI, 1.13 - 1.20); and \$50,000 to \$74,999 (AOR: 1.06; 95% CI, 1.03 - 1.10); and BMI of underweight (AOR: 1.14; 95% CI, 1.05 - 1.24); overweight (AOR: 1.17; 95% CI, 1.13 - 1.20);

and obesity (AOR: 1.69; 95% CI, 1.65 - 1.73) were significantly more likely to report having asthma.

Conclusion: Results indicate that other races, income levels, and BMI among individuals who self-reported having asthma increases the risk of obesity in adults ≥ 18 in the US. These findings can be applied to improve health and eliminate health disparities within populations.



Morgan Boncyk, MPH, Health Promotion Education and Behavior

Content analysis of food and beverage television advertisements in urban Accra, Ghana.

Krystal K. Rampalli, PhD, MPH; Marian Winters; Muskaan Makkar; Christine E. Blake, PhD, MS, RD

Objective: Body image aspirations are important sociocultural drivers influencing food choices, especially in Africa. Adolescents' body image aspirations are particularly sensitive to influence of advertisements. This study aims to describe how television food and beverage advertising portray body image in Accra, Ghana.

Methods: Between February and May 2020, 486 programming hours were recorded. Content analysis of food and beverage advertisements with a full body view of at least one and up to five actors included coding for product promoted (healthy or unhealthy using INFORMAS), actor characteristics (gender, body size using Ettarh's silhouettes), and promotional techniques. Results: Across 607 advertisements, the majority promoted unhealthy (69%, n=419/607) versus healthy (38%, n=228/607) products. Unhealthy advertisements were more frequent on weekends (74%, n=137/185) versus weekdays (67%, n=282/422). A total of 2043 actors (3.4/advertisement), were evenly distributed by gender (51% males, n=1034/2043). The majority were underweight (73%, n=1484/2043) versus normal weight (20%, n=416/2043) or overweight/obese (7%, n=147/2043). Underweight actors promoted more unhealthy products (75%, n=1118/1484). Underweight

actors were majority male (58%, n=867/1484), while normal weight were majority female (73%, n=303/416). Few (6%, n=35/607) used discount offers, mostly promoting unhealthy products (8%, n=35/419 versus 2% healthy, n=4/228) and used actors who were female, underweight, or overweight/obese. Half (50%, n=301/607) used promotional characters, with most of these advertisements promoting unhealthy products, during afternoons and with male actors.

Conclusions: Most advertisements promoted unhealthy products with underweight actors, portraying unrealistic body expectations. Ghana needs body positivity interventions and regulations for realistic food and beverage promotions.



Emily Farrell, Epidemiology and Biostatistics

Shift-Working Investigation of Fasting and Timing (SHIFT) Study: Assessing nurses' dietary quality, fasting duration, and feasibility of completing a 7-day dietary recall

Robin M. Dawson PhD, RN, CPNP-PC; Gabrielle M. Turner-McGrievy Ph.D., RD; Michael D. Wirth MSPH, PhD
Objectives: To assess nurses' diet quality and timing, diet tracking feasibility, and anticipated barriers and facilitators to a time-restricted feeding (TRF) protocol.

Methods: The cross-sectional SHiftworking Investigation of Fasting Time (SHIFT) and Diet Study was conducted among nurses (n=123) in the US working 3+ days per week. Diet was tracked for up to 7 days using the ASA24 to determine Energy-density Dietary Inflammatory Index (E-DIITM) scores, Healthy Eating Index (HEI), and fasting duration. Self-reported demographic, psychosocial (i.e., stress and depression), and TRF anticipated barrier and facilitator questionnaires were administered prior to dietary recalls. Least square means analyses were conducted to compare night/rotating and dayshift nurses.

Results: The SHIFT Study population had a mean age of 34.1±10.0 years, mean BMI of 27.3±5.6, and were

primarily white (86%) and female (95%). Most participants (75%) expressed interest in a TRF protocol, and the most common anticipated barriers to TRF included hunger (59%), family obligations (36%), and maintaining energy on a long shift (30%). Night/rotating shift nurses' diet was associated with a more anti-inflammatory diet than dayshift (adjusted E-DII: 0.19 vs. 1.21, p=.04 respectively). Night/rotating shiftwork was associated with a lower fasting duration on workdays (adjusted hours: 8.86 vs. 11.48, p<.01, respectively), but higher fasting duration on off days (adjusted hours: 13.67 vs. 12.25, p=.02, respectively), compared to dayshift.

Conclusions: Nurses have unique barriers to improving weight and health behaviors. Since most nurses indicated interest in a TRF intervention, TRF may hold potential as a key dietary approach to such improvements.



Rajat Das Gupta, MD, MPH, Epidemiology and Biostatistics

Association between Abdominal Obesity and Hypertension among South Asian Adults: Findings from Nationally Representative Surveys

Md Nasim Saba Nishat, BSc, MSc

Objectives: This study aims to demonstrate the association between abdominal obesity and hypertension among South Asian adults (aged ≥18 years).

Methods: The nationally representative data of WHO STEPwise approach to surveillance survey data consisting 24,519 participants from Afghanistan (n=3,351), Bangladesh (n=6,952), Bhutan (n=5,164), Nepal (n=4,894), and Sri Lanka (n=4,158) were analyzed. Abdominal obesity was defined as waist circumference (WC) > 90 cm among males and WC > 80 cm among females. Body Mass Index (BMI) was categorized into 4 groups using Asian BMI cutoff: underweight (<18.5 kg/m²), normal weight (18.5-22.9 kg/m²), overweight (23-27.5 kg/m²), obesity (≥27.5 kg/m²). Logistic

regression was used to demonstrate the association between abdominal obesity with hypertension after adjusting for covariates, survey and cluster effects.

Results: Abdominal obesity was independently associated with hypertension after adjusting for BMI [Afghanistan: adjusted odds ratio (AOR):2.05;95% confidence interval (CI):1.27-3.31; Bangladesh: AOR:1.55;95% CI:1.18-2.04; Bhutan: AOR:1.31;95% CI:1.03-1.66; Nepal: AOR:1.69;95% CI:1.31-2.18; Sri Lanka: AOR:1.55;95% CI:1.23-1.95]. The odds of hypertension progressively increased among the individuals who are 'abdominally obese and overweight'(Afghanistan: AOR:2.75;95% CI:1.75-4.34; Bangladesh: AOR:2.53; 95% CI:1.90-3.37; Bhutan: AOR:2.22;95% CI:1.64-3.00; Nepal: AOR:2.08;95% CI:1.54-2.81;Sri Lanka: AOR:2.29;95% CI: 1.77-2.98) and 'abdominally obese and obese' (Afghanistan: AOR:6.94;95% CI:4.68-10.30; Bangladesh: AOR:2.95;95% CI:2.19-3.97; Bhutan: AOR: 3.02;95% CI:2.23-4.09; Nepal: AOR:4.40;95% CI:3.05-6.34; Sri Lanka: AOR:3.96;95% CI:2.94-5.32) compared to the individuals with 'no abdominal obesity and normal BMI'.

Conclusions: Abdominal obesity is both independently and combined with high BMI is associated with hypertension among South Asian adults. Both BMI and WC should be controlled for in any analysis assessing the risk factors of hypertension.



Shudan Huang, Journalism and Mass Communication
Motivation to Purchase Organic Foods, Message Clarity, and Information Processing from a Heuristic-Systematic Perspective

Max Bretscher, MA

Objectives: This study seeks to understand differences in perceptions of "organic" across a population of people who may or may not already be organic purchasers, to equip marketers to not only advertise to existing customers but to win new ones as well.

Methods: A 2*2*2 between-respondents fixed factor design online experiment was conducted. Construal frames ("Organic" VS organic traits) were tested as experimental factors. Other factors, Involvement (high vs low) and skepticism (high vs low) were tested with the scales. Qualtrics, an online survey platform was applied to collect data. 136 valid results were collected from the undergraduate students of a large, southern public university in the U.S.

Results: A MANOVA was conducted to test the different effects of each of the independent variables, as well as all possible interactions of independent variables, on the three dependent variables. Skepticism was a significant predictor of Attitude towards advertising (Aad) ($p < .000$) and purchase intention ($p = .065$) but not Attitude towards brand (Abr) ($p = .132$). Frame was a significant predictor of all three IV's; Aad ($p < .000$), Abr ($p = .011$), and purchase intention ($p = .047$).

Conclusions: Skepticism will have negative effects on participants' cognition and acceptance of organic food. And frames were found to be a significant predictor of ad attitude, brand attitude, and purchase intention. Participants unilaterally preferred the low-construal condition, which stated that the pizza was free from pesticides, antibiotics, and GMO's instead of just stating "organic". Therefore, buzz words like "organic" alone may not be enough.



Sejla Isanovic, MPH, Health Promotion Education and Behavior

How do policies address food safety? Evidence from policy document analyses in three African countries.

Shiva Bhandari, PhD; Sharraf Samin, MPH; Emma Kenney, MPH; Edward A. Frongillo, PhD; & Christine E. Blake, PhD

Objectives: Access to safe food is a challenge in many African countries, with a rise in food safety hazards from climate change and urbanization. Countries in Africa continue to see high morbidity and mortality rates from

consuming unsafe foods, despite government agencies' attempts to ensure food safety through policies. Using document analysis and in-country experts, we examined how food safety is being addressed in policies across three nations, Ghana, Kenya, and Tanzania, to determine how these issues are framed, which stakeholders were involved in developing and operationalizing policies, and to what extent multisectoral coordination is being implemented to ensure food safety.

Methods: We conducted a thematic policy analysis of 153 policy documents (Ghana=47, Kenya=54, and Tanzania=52) that were systematically sampled using FAOLEX and WHO databases and government websites. In-country experts reviewed and identified additional policies (Ghana=5, Kenya=5, and Tanzania=9). Policies were screened for eligibility and included in the analysis if they provided information on food production, processing, consumption, food safety, food, nutrition, or consumer food choice.

Results: Issues related to food safety were framed in seven categories: 1) sanitation, hygiene, and waste management, 2) agriculture contamination and diseased livestock, 3) infrastructure and technology, 4) coordination, 5) adulteration, 6) education, and 7) regulation. Actors involved during the policy development and operationalizing process were government agencies, unions and advocacy groups, private enterprises, international non-profit organizations, and expert technical working groups. Academic institutions were involved in developing the policies but not the operationalizing process. Media groups were only involved during policy dissemination. Although the role of multiple sectors in implementing the strategies was recognized, the methods for conducting coordinated efforts across sectors were not well-documented. To attain policy objectives, governments opted for information (i.e., education, reporting) and authority (regulations, licenses) instruments more than economic (subsidies, program funding) or organizational (bureaucracies) instruments.

Conclusions: Food safety was identified in almost every food-related policy in Ghana, Kenya, and Tanzania. The results highlight each nation's broader goals of achieving

food safety. Implementing effective food safety policies requires intersectoral collaboration. Food safety issues are multi-sectoral and require integrated efforts to prevent negative consequences. Different sectors must coordinate to develop and implement policies to curb challenges posed by food safety issues.



Sejla Isanovic, MPH, Health Promotion Education and Behavior

Perceptions of Food Choice and Climate Change Among Students at the University of South Carolina

Alexis Bell, MPH; Anna Chupak, BS; Jasmin Parker-Brown, MS

Objectives: This study aimed to understand how students make decisions around food consumption, how they perceive climate change, and whether their perceptions influence their food choice decision-making. **Methods:** Students were recruited using flyers. Eligible students needed to attend the University of South Carolina and live off-campus. In-depth interviews were conducted with students about food choice decision-making and perceptions of climate change and food choice. Interviews were transcribed and coded using the NVivo 12 software. Data were analyzed using a qualitative thematic analysis.

Results: Eight students were interviewed and were, on average, twenty-six years of age (SD +/- 2.8). Seventy-five percent identified as female (n=6), and fifty percent (n=4) reported originating from a country outside the U.S. Seven themes emerged from the interviews: climate change characteristics, climate change beliefs, and attitudes, climate change exposure, risk perceptions associated with climate change, food choice behaviors, connections between climate change and food choice, and climate change as a value in determining food choice.

Conclusion: Students shared a common understanding of climate change but differed in their beliefs on the impact of food choice on climate change. Most students

recognized the connection between food choice and climate change but did not prioritize climate change when deciding which food items to consume. Only two students directly associated the impact of food choice on climate change.



Emmanuel Julceus, MD, MPH, Epidemiology and Biostatistics

Child-Reported Food Security in Children with Type 1 Diabetes: Association with Glycemic Control and Mental Health Symptoms Independent of Household Food Security

Edward A. Frongillo, PhD; Jason A. Mendoza, MD, MPH; Katherine A. Sauder, PhD; Faisal S. Malik, MD; Elizabeth T. Jensen, PhD; Lawrence M. Dolan, MD; Anna Bellatorre, PhD; Dana Dabelea, MD, PhD; Beth A. Reboussin, PhD; Kristi Reynolds, PhD, MPH; Catherine Pihoker, MD; Angela D. Liese PhD, MPH

Objectives: Typically, caregivers report on household food security (FS), but children's experiences may differ from caregiver reports. We assessed if child-reported food insecurity (FI) was associated with glycemic control, acute complications of diabetes, depressive symptoms, and disordered eating in children with type 1 diabetes (T1D), independently from household FS.

Methods: In a cross-sectional analysis of the multicenter SEARCH for Diabetes in Youth Study (Phase 4, 2016-2019), including 601 children age 10-17 years with T1D, household FS and child-reported FS were assessed using the 18-item Household Food Security Survey Module and the six-item Child Food Security Assessment questionnaire. Age-stratified (10-13, 14-17) regression models were performed to estimate independent associations, adjusting for sociodemographic and clinical factors and household FS.

Results: FI was reported by 13.1% (n=79) of children and 15.6% (n=94) of caregivers. Among child-caregiver dyads, 82.5% (n=496) of reports were concordant and 17.5% (n=105) discordant, Cohen's kappa = 0.3. Child-reported FI was not independently associated with hemoglobin

A1c, diabetic ketoacidosis, and hypoglycemia, including in age-stratified analyses. Child-reported FI was independently associated with elevated odds of depressive symptoms (OR 3.6, 95% CI 1.3-10.3) and disordered eating (OR 2.5, 95% CI 1.4-4.6) compared to FS; these associations remained in both age groups for disordered eating and in the older group for depressive symptoms.

Conclusions: Children with T1D may experience FI differently than caregivers. Child-reported FI was independently associated with depressive symptoms and disordered eating and thus may be an important attribute to assess in addition to household FS in children with T1D.



Hailey Karns, Exercise Science

Survey of diet and supplement strategies to manage menstrual pain

Dawn K. Wilson, Ph.D.; Allison M. Sweeney, Ph.D. Catherine Saenz, PhD, RD; Trisha A. VanDussesdorp, PhD; Katie R. Hirsch, PhD

Objectives: Approximately 80% of women experience menstrual pain during their cycle. Associated pain can be from dysmenorrhea or other medical conditions. Nutrition is one method that can provide pain relief, but there is a wide variety of strategies and supplements that have the potential to be effective. **Purpose:** To characterize current diet and supplement strategies women use to manage their menstrual pain.

Methods: One-hundred eighty-nine women (Mean \pm SD; age: 31.7 \pm 8.9 years) with self-reported menstrual pain completed a web-based survey of nutritional strategies for menstrual pain management. A portion of the survey was analyzed, focusing on questions that asked about implementation of dietary strategies (specific diets, foods, food groups), dietary or herbal supplements (vitamins, minerals, herbal, nutritional), and reasons for not including nutritional strategies to manage menstrual pain on a day-to-day basis.

Results: Approximately 24% of the sample reported implementing a dietary strategy. Most common changes

included altering vegetable consumption (n=15) and reducing dairy consumption (n=9). Approximately 21% reported using some form of supplementation. Most common supplements were herbal teas (n=10) and magnesium (n=8). Most common reasons for not using nutrition as a strategy to manage menstrual pain included, not knowing what to buy or try (70.3%), had never tried (23.3%), and being unsure about supplements (21.7%).

Conclusion: Based on the results of this survey, women who experience menstrual pain are unsure about using diet and supplement strategies for their pain. Variety in supplement and diet type reported suggest that information regarding nutritional strategies for pain management is lacking.



Enid Keseko, MS, RD, Health Promotion Education and Behavior

Recruitment of African Americans Adults for a 3-month Restaurant Delivered Study on the Adoption of Vegan Diets

Alexis Bell, MPH; Claudia Sentman; John Bernhart, PhD; Gabrielle Turner-McGrievy, PhD.

Background: The Nutritious Eating with Soul study examined the effectiveness of an adoption of soul food-based diets (vegan and omnivorous) to reduce the risk of cardiovascular disease and obesity. In the dissemination and implementation stage (NEW Soul D&I), researchers are partnering with African American-owned vegan restaurants to deliver a community-based nutrition intervention.

Objectives: This abstract provides an overview of the recruitment procedures used and yields from each method for the first cohort of NEW Soul D&I, with recruitment goals of n= 38 African Americans adults with overweight or obesity, ages 18-65 years, with a goal of 30% men and 70% women.

Methods: The recruitment strategies leveraged for NEW Soul D&I cohort 1 included referrals from prior study participants, NEW Soul website, churches, community

events, radio ads, social media, referrals from friends and family, and targeted mailings using postcards. The recruitment timeline was from December 2022 to February 2023. Participants completed online screening forms to be considered for eligibility prior to enrollment. Results: A total of 25 male (32.1%) and 52 female (67.9%) African American adults were invited to a study orientation for the first cohort of NEW Soul D&I. These study participants were recruited by radio ads (77.9%), followed by referrals from friends or family (15.6%), social media posts (5.2%) and targeted mailing (1.3%).

Conclusion: The use of radio ads followed by referrals from friends and family were the most effective methods for recruitment. The NEW Soul D & I team will continue to recruit future cohorts using radio ads.



Jessica Sainyo, MS, Epidemiology and Biostatistics

Associations between Meat and Fish Intake and Aggressive Prostate Cancer in the North Carolina-Louisiana Prostate Cancer Project (PCaP)

L. Joseph Su, PhD, MPH; Lenore Arab, PhD; Jeannette T. Bensen, PhD; Elizabeth T.H. Fontham, MPH, DrPH; James L. Mohler, MD; Susan E. Steck, PhD, MPH, RDN, FAND

Objective: We examined the association between intake of meat and fish and aggressive prostate cancer in the North Carolina-Louisiana Prostate Cancer Project, a case-only study of Black and White men in the southern United States.

Methods: Diet in the year prior to diagnosis was assessed using an interviewer-administered modified version of the National Cancer Institute Diet History Questionnaire among 909 Black and 991 White men with a histologically confirmed diagnosis of prostate cancer. High aggressive prostate cancer (n=332) was defined as Gleason sum ≥ 8 , or PSA > 20 ng/ml, or Gleason sum ≥ 7 AND clinical stage T3-T4, and the comparison group was all other prostate cancer cases (n=1,568). Logistic regression was used to determine the multivariable adjusted odds ratios (OR) and 95% confidence intervals (95% CI) for high aggressive prostate cancer by tertile of meat and fish intake variables.

Results: We observed increased odds of aggressive prostate cancer among men in the second tertile compared to the first tertile for total red meat (OR:1.23. 95% CI: 0.91 – 1.68) and unprocessed red meat (OR:1.30. 95% CI: 0.96 – 1.76) and among men in the third tertile compared to the first tertile for processed meat (OR:1.27. 95% CI: 0.91 – 1.78). ORs for higher intake of fish and poultry were in the inverse direction but were weak and not statistically significant.

Conclusions: In this racially diverse case-only study, we observed weak positive associations between red and processed meat and aggressive prostate cancer, and little evidence of an association with fish or poultry intake.



Longgang Zhao, MSc, Epidemiology and Biostatistics

Ultra-processed food intake and risk of liver cancer in the UK Biobank

Alyssa Clay-Gilmour, PhD; Jiajia Zhang, PhD; Xuehong Zhang, ScD; Susan E. Steck, PhD

Objectives: Ultra-processed food (UPF) intake has been associated with increased risk of obesity and diabetes but few studies have examined associations with cancer. We evaluated the association between UPF intake and its subclasses and risk of liver cancer.

Methods: We used data from the UK Biobank, a prospective cohort study of participants aged 40-69 years at enrollment between 2006 to 2010. Dietary assessments were performed using repeated self-administered 24-hour dietary recalls. The UPF was defined according to the NOVA classification system and analyzed as energy (kcal) from UPF. Incident liver cancer was identified through linkage to cancer registries. We used Cox proportional hazard regression to estimate the hazard ratios (HR) and 95% confidence intervals (CIs) for liver cancer by different scales and subclasses of UPF intake.

Results: After a median of 8.9 (interquartile: 8.5-9.7) years follow-up, we documented 154 incident liver cancers among 175,530 participants. A positive association of higher UPF intake with liver cancer risk was observed in the age-adjusted model (HR Per 500 kcal/day

from UPF=1.20, 95% CI=1.01-1.43). However, no association was found after controlling for potential confounders (HR Per 500 kcal/day from UPF=1.02, 95% CI=0.81-1.29). Different scales of UPF (in servings or grams) yielded similar results. None of the subclasses of UPF were significantly associated with liver cancer risk.

Conclusion: We did not find strong associations between UPF intake and liver cancer risk in the UK Biobank. Future studies with more liver cancer cases and in other populations with diverse diets are needed to confirm these findings.

