



Nutrition Consortium

Arnold School of Public Health

UNIVERSITY OF SOUTH CAROLINA

15TH ANNUAL NUTRITION SYMPOSIUM: SHARE, DISCOVER, CONNECT

KOGER CENTER GALLERY ROOM, 2ND FLOOR

MARCH 20th, 2025

8:15-8:45 Posters to be placed on display in Mezzanine

8:30 am **Registration Opens**

9:00-9:10 **Welcome Remarks**

Daniela Friedman, PhD, Interim Associate Dean for Research

Christine Blake, PhD, RD

9:10-9:55 **Keynote Presentation**

Moderator: Edward Frongillo, PhD

9:10-9:15 Edward Frongillo

9:15-9:45 Joanne Guthrie, PhD, Former Senior Research Nutritionist, ERS

Future Directions for Policy-Oriented Nutrition Research: Issues, Challenges, Opportunities

9:45-9:55 Q&A

9:55-10:05 Coffee Break

10:05- 11:10 **Panel Discussion: Lessons Learned and Future Directions for Successful Nutrition Research Funding Programs**

Moderator: Susan Steck, PhD, RD

10:05-10:07 Susan Steck

10:08-10:15 Brie Turner-McGrievy, PhD, RD

Tips and Tricks to Managing Multiple Nutrition-related NIH Grants and Staying Funded

10:16-10:23 Angela Liese, PhD

Impressing grant reviewers: The strengths of NIH competing renewal applications

10:24-10:31 Shawn Arent, PhD, CSCS*D, FISSN, FACSM, FNAK

The Science of Success: Current Trends in Performance Nutrition

10:32-10:39 Edward Frongillo, PhD

Experiences, Strategies, and Challenges Funding Global Nutrition Research

10:40-11:10 Panel discussion/Audience Q&A (plus Joanne)

11:10-11:20 Coffee Break

11:20-12:05 **Research Updates and Future Funding**

Moderator: Nandita Perumal, PhD

11:20-11:23 Nandita Perumal, PhD

11:23-11:33 Leila Larson, PhD

Early life nutrition interventions and effects on child and adolescent development

11:33-11:36 Q&A

11:37-11:47 Hala Ghattas, PhD

Vulnerability and resilience of newborns and young children in the face of conflict, climate and economic crises

11:47-11:50 Q&A

11:51-12:01 Katie Hirsch, PhD

Characterizing the female hormone profile: An innovative approach to improve the feasibility and quality of women's health and nutrition research

12:01-12:05 Q&A

12:05-12:15 Coffee Break

12:15-2:15 Poster/Rapid-Fire Presentations, Lunch, and Open Meet and Greet

12:15-12:30 Rapid-Fire Oral Presentations 1

12:30-1:15 Poster Presentations 1

1:15-1:30 Rapid-Fire Oral Presentations 2

1:30-2:15 Poster Presentations 2

2:15-3:00 New Affiliate and Poster/Rapid-Fire Presentation Prizes

Moderator: Christine Blake, PhD, RD

2:15-2:17 Christine Blake

2:17-2:24 Danielle Kroboth, PhD

Assessing the Influence of Policies, Systems, and Environments on Nutritional Health Disparities among US Children and Families

2:25-2:35 Scott Taylor, PhD

Development of Food Security Curriculum

2:35-2:38 Q&A

2:39-2:49 Atena Pasha, PhD

Emotion Regulation Mediates the Impact of Personality Traits on Body Image in Individuals with Rheumatoid Arthritis: Implications for Health Promotion

2:49-2:52 Q&A

2:52-3:00 Christine Blake

Poster Prizes & Closing Remarks

ORAL PRESENTATIONS

Future Directions for Policy-Oriented Nutrition Research: Issues, Challenges, Opportunities

The presenter will provide an overview of nutrition issues highlighted by the Dietary Guidelines 2025 Advisory Committee Report and the establishment of the Make America Healthy Again (MAHA) Commission. She will consider challenges and opportunities for relevant research and evaluation, drawing on examples from past research as appropriate.

Joanne Guthrie, PhD, Former Senior Research Nutritionist, Economic Research Services, USDA

Bio: Joanne Guthrie holds a doctoral degree in Human Nutrition and a Master of Public Health degree in Public Health Nutrition. She was formerly a Senior Research Nutritionist in the Food Assistance Research Branch of the Food Economics Division of the Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA). She began her Federal service career as a student employee at the USDA Beltsville Agricultural Research Center. In addition, she worked with several other Federal agencies, including the USDA's Center for Nutrition Policy and Promotion and the U.S. Food and Drug Administration before coming to ERS. She is also a former Peace Corps Volunteer. Over her 40-year career as a nutrition professional, she has authored or co-authored numerous articles in peer-reviewed journals as well as U.S. government reports and other publications. She is a member of the American Society of Nutrition and the Society for Nutrition Education and Behavior.



Tips and Tricks to Managing Multiple Nutrition-related NIH Grants and Staying Funded

This presentation will provide an overview of securing and maintaining funding for nutrition research from the NIH over the past decade. The presentation will discuss an overview of past, present, and future research in the Behavioral Research in Eating Lab and what agencies funded the work.

Brie Turner-McGrievy, Professor, HPEB

Bio: Growing up in Alabama helped shape Dr. Turner-McGrievy's passion for identifying and implementing creative strategies to improve dietary quality in the South. Since joining the Arnold School, she has been committed to working with the community on culturally appropriate dietary interventions to improve health outcomes, particularly among African American adults. Dr. Turner-McGrievy has over 180 publications and has secured more than \$13 million in grant funding. Dr. Turner-McGrievy's research focuses on behavioral nutrition interventions for the prevention and treatment of chronic diseases including the use of emerging technologies and plant-based dietary approaches.



Impressing grant reviewers: The strengths of NIH competing renewal applications

Competing renewal applications have a built-in advantage over other NIH R01 applications because of the abundance of "preliminary data" available. This presentation will share strategies and lessons learned from two independent lines of nutrition-related research funded, the SEARCH Nutrition Ancillary Studies and the SEARCH Food Security Cohort Studies.

Angela Liese, Professor, EPID

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 with diabetes.



The Science of Success: Current Trends in Performance Nutrition

In the ever-evolving field of performance nutrition, new research continues to shape how we fuel, recover, and optimize human performance. This talk will touch on the current state of scientific advancements and practical applications in nutrition for athletes and active individuals. From emerging trends in nutrient timing and personalized fueling strategies to the role of microbiome health and cutting-edge supplementation, we'll discuss how the field is working to bridge the gap between research and real-world practice.

Shawn Arent, Professor, EXSC

Bio: Dr. Shawn M. Arent is Professor and Chair of the Department of Exercise Science at the University of South Carolina, which houses one of the top-ranked PhD and sport science programs in the nation. He is also the Director of the USC Sport Science Lab. His research focuses on the relationship between training, nutrition, and stress and the implications for health, performance, and recovery. Dr. Arent is a Certified Strength and Conditioning Specialist with Distinction, and a Fellow in the American College of Sports Medicine (ACSM), the International Society of Sports Nutrition (ISSN), and the National Academy of Kinesiology (NAK). He is also a past-president of the ISSN and currently chairs the Military Settings Sector of the National Physical Activity Plan. He was recognized as the 2017 Outstanding Sport Scientist of the Year by the NSCA, was awarded a Lifetime Service Recognition by the US Army 3-314th Field Artillery Thunder Battalion (the first such award given to a civilian), and he received the 2016 Directors Award for Scientific Excellence. He has received grant funding from the DoD, USMC, NIH, RWJF, and various industry sources. Additionally, he has worked with USSOCOM as well as teams and athletes with the NHL, MLB, NBA, NFL, USOPC, US Ski & Snowboard, the US Soccer Federation, and several teams at the youth, high school, and collegiate levels. A former Division I college athlete and national champion, he refuses to believe he's washed up even though his body likes to remind him otherwise.



Experiences, Strategies, and Challenges Funding Global Nutrition Research

Funding global nutrition research is challenging, especially amidst shifting political tides and priorities of donors. Some experiences, strategies, and implications for the current funding climate will be discussed.

Edward Frongillo, Professor, HPEB

Bio: Professor Edward A. Frongillo conducts research globally to learn how to improve maternal and child nutrition and development. He leads research on household, adult, and child food insecurity. His research program also aims to understand how to advance policy and programs for improving nutrition and development. He has been co-chair of the WHO-UNICEF *Technical Expert Advisory Group on Nutrition Monitoring* and currently co-coordinates the United Nations *Healthy Diets Monitoring Initiative*.



Early life nutrition interventions and effects on child and adolescent development

In today's funding environment, it is critical to demonstrate study feasibility, potential for impact, and strong partnerships. Using examples from her recent grant proposals, Dr. Larson will discuss how she has developed these critical aspects of her research in the context of early life nutrition interventions to improve child and adolescent development.

Leila Larson, Assistant Professor, HPEB

Bio: Leila Larson is an Assistant Professor in the Department of Health Promotion, Education, and Behavior in the Arnold School of Public Health. Dr. Larson has a PhD in Nutrition and Health Sciences from Emory University, USA and a MPH in Environmental Health from Columbia University, USA. Dr. Larson's work in the fields of nutrition and global health seeks to understanding the intersection of prenatal and postnatal exposures, including climate change, nutrition, and psychosocial stimulation, on maternal and child health and development, and develop and evaluate integrated interventions to improve early child development and child health in resource-limited settings. She has worked

on several nutrition trials in pregnancy and childhood in countries such as Liberia, India, Bangladesh, and Malawi.



Vulnerability and resilience of newborns and young children in the face of conflict, climate and economic crises

Given the increasing global convergence of conflict, climate and economic crises, Dr. Ghattas will present a novel framework for understanding nutrition and health interventions as tools for promoting resilience in the face of such crises. She will discuss how an interdisciplinary team contributed to the development of a research proposal to study individual, household and community resilience and adaptations to mitigate adverse health outcomes in newborns and young children. Her presentation will also highlight the importance of long-term investments in strong partnerships and contextual understanding for developing collaborative global research projects.

Hala Ghattas, Associate Professor, HPEB

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.



Characterizing the female hormone profile: An innovative approach to improve the feasibility and quality of women's health and nutrition research.

In recent years, the demand for female specific health and nutrition recommendations has skyrocketed. With it, has come a call to action for research that includes and is specific to women. While this call to action has been met with great enthusiasm, characterization of the female hormonal profile remains a significant source of questions and a barrier to conducting high-quality female research, adding real or perceived complication, time, and expense to research studies. This presentation will address some of the limitations and barriers being faced across research when it comes to accounting for the female hormonal profile and present original data on the utility and feasibility of daily urine hormone analysis as an alternative approach; highlighting insights into female physiology that this method has started to provide and discussing considerations for application and implementation in nutrition research.

Katie Hirsch, Assistant Professor, EXSC

Bio: Dr. Katie Hirsch is an Assistant Professor in the Department of Exercise Science. As an exercise physiologist and sport nutritionist, her research focuses on the practical application of exercise and nutrition to strengthen and sustain body composition, metabolic health, and exercise performance across the lifespan, with an emphasis on female physiology and women's health.



Assessing the Influence of Policies, Systems, and Environments on Nutritional Health Disparities among US Children and Families

This presentation will provide an overview of my nutrition-related research interests and highlight two current projects that I am working on to foster new collaborations. The first project assesses the role of structural racism in relation to adolescent cardiometabolic health outcomes in a longitudinal cohort. The next is a mixed-methods study examining how policies and environments influence racial and ethnic enrollment rates in the WIC program.

Danielle Krobath, Assistant Professor, EPID

Bio: Dr. Danielle Krobath's research aims to prevent nutrition-related chronic disease disparities among children and families by addressing intersecting forms of social oppression in the U.S. Broadly, her work uses community-engaged methods to examine the impact of discriminatory policies, systems, and environments on physical and mental health inequities. Dr. Krobath's current projects focus on (1) expanding access to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and other social safety net programs equitably across racial and ethnic groups, and (2) identifying the mechanisms linking multiple forms of racism with the risk of type 2 diabetes, obesity, and hypertension in youth. She has received research support from the National Institutes of Health and the Robert Wood Johnson Foundation.



Development of Food Security Curriculum

This presentation highlights the goals of a grant project that is being completed through partnership with the University of Tennessee and Montana State University. The project's focus is to develop food security curriculum utilizing the Food4VOLS program at UTK as a model for an experiential learning laboratory course. Through this course and the larger initiatives of the grant and research team we aim to reduce potential food waste at USC by recapturing and upcycling food into ready-to-eat meals that are distributed for free at the Gamecock CommUNITY Shop.

Scott Taylor, Assistant Professor, HRSM

Bio: Scott Taylor, Jr., Ph.D., an alumnus of the School of Hospitality and Tourism Management at the University of South Carolina, works as an assistant professor and graduate program director in HTMT while also serving as the Wine & Beverage Institute assistant director and International Institute for Foodservice Research and Education associate director. Before returning to South Carolina, Taylor worked at the Hilton College of Global Hospitality Leadership at the University of Houston. Prior to his career in academia, he spent 15-plus years in the food, beverage and retail industries, including management-level positions with DMK Restaurant's,

Francesca's Restaurants and Gap Inc. Taylor has authored or co-authored 30-plus peer-reviewed journal articles and conference proceedings. He has also served as a chef instructor for the South Carolina State Farmer's Market Produce Safety University and is an active member of the Carolinas College SNAP Work Group & the College Food Insecurity Subcommittee.



Emotion Regulation Mediates the Impact of Personality Traits on Body Image in Individuals with Rheumatoid Arthritis: Implications for Health Promotion

This presentation examines the role of emotion regulation in shaping body image perceptions in individuals with rheumatoid arthritis (RA). RA and its treatments often impact weight, body image, and emotional well-being, influencing food choices and adherence to nutritional recommendations. Using Structural Equation Modeling, this study highlights how adaptive emotion regulation strategies can support healthier dietary behaviors, while maladaptive strategies may contribute to poor nutrition and body dissatisfaction. These findings underscore the importance of integrating emotion regulation-based interventions into nutrition counseling and health promotion strategies for individuals with chronic conditions like RA.

Atena Pasha, Postdoctoral Fellow, HPEB

Bio: Dr. Atena Pasha is a Post-Doctoral Fellow at the Department of Health Promotion, Education and Behavior, Arnold School of Public Health, University of South Carolina. She specializes in clinical and health psychology and has extensive experience as a psychotherapist. Her research investigates the intersection of mental and physical health in individuals with chronic diseases, focusing on the biopsychosocial factors that influence their overall well-being. Through her work, she aims to develop innovative, technology-driven, and personalized interventions to enhance both mental and physical health in vulnerable populations.



POSTER PRESENTATIONS: SESSION ONE GRADUATE STUDENT PRESENTATIONS

Berthe Abi Zeid, MPH, HPEB

Food, water and healthcare access insecurities of older adults in the context of economic crisis: A nested-cross sectional study

Martine Elbejjani (PhD), Carlos Mendes de Leon (PhD), Hala Ghattas (PhD)

Objective: To examine the association between impact of economic crisis and individual and multiple material need insecurities among older adults in Lebanon.

Methods: Data were collected from 2551 older adults (≥ 60 y) from Oct 2023-Sep 2024. Self-reported impact of economic crisis was categorized as minimal, mild, moderate and severe. The Household Food Insecurity Experiences Scale and short-form Household Water Insecurity Experiences Scale categorized participants as food insecure (FI) and water insecure (WI) at scores ≥ 4 . Healthcare insecurity (HI) refers to the inability to see a doctor or be hospitalized when needed. Logistic regression models assessed the association between the impact of crisis and FI, WI, HI, and ≥ 2 insecurities, adjusting for socioeconomic and demographic variables. The interaction between wealth and impact of crisis was tested.

Results: Older adults who reported being severely impacted by crisis had higher odds of FI (adjusted OR: 4.9[95%CI: 2.6-9.2], WI (1.9[1.1-3.5], HI (3.4[2.1-5.4], and ≥ 2 insecurities (4.8[2.3-9.8]). Odds of FI and ≥ 2 insecurities in the poorest quintile of participants experiencing severe impact of crisis were 86.2[11.4-648.2] and 4.3[2.6-6.9] compared to the wealthiest reporting minimal impact of crisis. Even among the wealthiest, those severely impacted by crisis had elevated odds of FI (19.4[2.5-147.6]), but not of ≥ 2 insecurities.

Conclusion: Reported impact of crisis was most strongly associated with FI in older adults with large disparities by wealth. While the poorest households fared worst on individual and multiple material need insecurities, a subset of the wealthiest who reported being impacted by

crisis also had elevated odds of FI but not of multiple insecurities.



Afsaneh Fallahi, PhD, EPID

Association between Energy-adjusted Dietary Inflammatory Index (E-DII) Score and Dementia Incidence in Older U.S. Adults

Matthew Lohman, PhD; James R Hébert, ScD.

Objectives: To investigate the association between DII and EDII with Alzheimer's disease and dementia among US older adults, using data from the Health and Retirement Study (HRS).

Methods: Data from the 2013 HRS Health Care and Nutrition Study (HCNS) were used to calculate DII and EDII scores for the first time for 8,035 older adults. Information on Alzheimer's disease and dementia history was obtained from the 2018 HRS Core dataset, including 6,505 individuals for Alzheimer's disease and 6,419 for dementia. Logistic regression models, both unadjusted and adjusted for demographic, socioeconomic, and chronic health conditions, were conducted using SAS software.

Results: DII scores ranged from -6.72 (anti-inflammatory) to +6.25 (pro-inflammatory), while EDII scores ranged from -5.92 to +5.91, showing a narrower range and a moderate positive correlation with DII ($r = 0.5745$, $p < 0.0001$). For Alzheimer's disease, EDII showed no significant association in either unadjusted (OR = 1.028, 95% CI: 0.973–1.084, $p = 0.3413$) or adjusted models (OR = 1.008, 95% CI: 0.954–1.066, $p = 0.7736$). Similarly, DII showed no significant association in unadjusted (OR = 0.980, 95% CI: 0.892–1.033, $p = 0.2709$) or adjusted models (OR = 1.008, 95% CI: 0.954–1.066, $p = 0.7736$). For dementia, EDII was significantly associated in both unadjusted (OR = 1.164, 95% CI: 1.083–1.252, $p < 0.0001$) and adjusted models (OR = 1.143, 95% CI: 1.059–1.235, $p = 0.0006$), while DII showed no significant association in unadjusted (OR = 1.028, 95% CI: 0.973–1.084, $p = 0.3413$) or adjusted models (OR = 1.008, 95% CI: 0.954–1.066, $p = 0.7736$).

Conclusions: Higher EDII scores, reflecting a pro-inflammatory diet, were significantly associated with

increased dementia risk among older adults. However, no significant association was found between pro-inflammatory dietary patterns and Alzheimer's disease, indicating the need for further investigations. These findings emphasize the role of dietary inflammation in cognitive decline and the potential for dietary interventions to reduce dementia risk.



Sarah Given, MPH, CHES, HPEB

Implementation of nutrition-related policy, systems, and environmental changes in non-traditional community settings to improve food access among SNAP eligible populations throughout South Carolina

Objectives: Define policy, system, and environmental (PSE) changes that are used to address food security. Demonstrate how PSE's can be implemented in non-traditional settings as a nutritious food resource.

Activities: Food access is limited in rural communities throughout South Carolina. Nutrition-related policy, systems, and environmental (PSE) strategies were undertaken to increase healthy food access for community members. In partnership with Clemson University Learning Institute SNAP-Ed program, projects such as seed libraries, community gardens, and food pantry supports were implemented in community-based settings such as health clinics, libraries, town halls, etc. throughout the Upstate and Western counties of South Carolina. Lending systems were modified to include checking out seeds, gardening tools, and resource materials for residents to start their own gardens or plant in a shared communal garden space. Produce was harvested at the end of growing season. Any seeds from the produce were returned to the seed library.

Outcomes: From October 2023 to September 2024, 12 seed libraries, 15 community gardens, and 7 food pantry supports were implemented in 12 counties. Nearly 14,300 community members benefited in food access from the PSE projects.

Reflection: Working alongside non-traditional community partners allowed implementers to learn what prior systems were available and could be leveraged to augment food access. If a system is in place

to provide residents access to other resources, it can be modified through innovation and education to include healthy food alternatives.



Gahssan Mehmood, MPhil, HPEB

Agri-food System Transformation and Youth Nutrition: A Scoping Review

Morgan Boncyk, MPH; Emma Kenney-Madsen, MPH; Edward A. Frongillo, PhD; Jasmin Pro-Munoz; Christine E. Blake, PhD

Objectives: Adequate nutrition during youth (15-24y) supports lifelong health and economic potential. Food availability, access, and choice are shaped by agrifood system (AFS) transformation, defined as the fundamental restructuring of purposes, rules, and power structures. This scoping review aimed to provide a conceptual understanding of how youth are affected by AFS transformation.

Methods: The review was registered and followed PRISMA guidelines. Search across seven databases yielded 4,538 articles; 54 meet eligibility criteria. Two reviewers dual-screened, extracted data into a structured matrix, and assessed the quality of included studies. Inductive analysis was used to identify types of AFS transformation, the mechanisms of influence on youth nutrition, and nutrition outcomes from AFS transformation.

Results: Studies represented three orientations, response to (n=17), perceptions of (n=29), and actions driving (n=9) ASF transformation. Nine types of transformation were identified: population shifts (n=13), financial dynamics (n=8), culture and demand changes (n=31), technological innovations (n=3), access and availability (n=10), policy interventions (n=4), environmental sustainability (n=28) and climate adaptation (n=5). AFS transformation influenced youth nutrition through system-level (e.g., expanded access) and consumer-level (e.g., food preference) mechanisms, with consumer-level changes being more pronounced. AFS transformation had mixed impacts on youth nutrition, with positive (e.g., increased fruit and vegetables) and negative (e.g., limited dietary diversity)

outcomes. Economic barriers, cultural resistance, and market-driven exposure to ultra-processed foods emerged as persistent challenges.

Conclusions: This review clarifies what is known about how AFS transformation affects youth nutrition. Findings highlight the need for additional research on policies and interventions that ensure AFS transformation equitably supports youth nutrition.



Chinyere Obiora, SOW

Project NAIJA: Exploring the interplay of acculturation experiences, cigarette smoking, and food culture among Nigerian immigrants

Trado Mayson, MD, Adebimpe Oduwole, Godwin Mbamalu, PhD, James R. Hebert, ScD, and Cheryl Armstead, PhD

Objective: Nigeria is the largest source of African immigration to the United States. This immigrant population's rapidly growing chronic disease prevalence appears to be related to increases in smoking and obesity. Naija is a term used to express Nigerian national identity and cultural pride. Project Naija is a qualitative investigation focused on identifying pathways by which acculturative stress impacts food culture, smoking, and secondhand smoke exposure among Nigerian immigrants. The objective of this study is to explore complex beliefs and experiences regarding acculturative stress, cigarette smoking, and a shift from traditional Nigerian food culture.

Methods: Questions about perceived interactions and contexts of smoking and nutritional were developed based on suggestions from an expert panel of Nigerian academics and grounded theory methods. Project Naija is based on a pilot sample of Nigerian immigrants recruited through snowballing methods for virtual semi-structured focus group participation. Group discussions were transcribed, coded, and analyzed. Expanded focus groups addressing smoking, acculturative stress, and nutrition are in progress.

Results: In this preliminary thematic analysis of semi-structured focus group discussions, participants emphasized acculturative and personal stress-based

reasons for smoking and obesity. They offered traditional dietary insights related to health promotion. Urbanicity was viewed as a facilitating factor for increased smoking, obesity, and maladaptive dietary choices. Economic stressors and decreased social support were viewed as important contributors to a nutritional lifestyle conflicting with traditional health practices.

Conclusions: Our findings may be useful in creating maximally effective, culturally tailored smoking prevention and nutritional health promotion efforts for Nigerian immigrant populations.



Meghan Savidge, MS, EXSC

Efficacy of Free Summer Programming on Elementary-Aged Children's Food and Beverage Consumption: A Randomized Clinical Trial

Sarah Burkart, PhD; Christopher Pfladderer, PhD; Elizabeth Adams, PhD; R Glenn Weaver, PhD; Bridget Armstrong, PhD; Keith Brazendale, PhD; Xuanxuan Zhu, PhD; Brian Chen, JD, PhD; Alexander McLain, PhD; Michael Beets, PhD

Purpose: This study examined the impact of receiving free summer day camp (SDC) versus summer as usual (SAU) on food/beverage consumption among children from low-income families.

Methods: Parent-child dyads (N=422; age: 8.2±1.5 yrs; 48% female; 51% Black) were recruited over 3 years (2021-2023) from schools serving low-income families. Children were randomized to receive 8-10 weeks of free SDC (intervention) or SAU (control). Parents completed daily diaries for 14 days during school (April/May) and summer (July) which captured consumption of healthful (e.g., fruit, milk) and unhealthful (e.g., soda/pop, fast food) foods/beverages. Mixed-effects intent-to-treat (ITT) models examined the odds of consuming foods/beverages during summer, controlling for school year consumption, in the SDC group compared to SAU. Secondary as-treated analyses examined the impact of attending structured summer programming versus not attending on the odds of consuming foods/beverages during summer.

Results: A total of 4,038 daily diaries were completed for intervention (n=231) and control (n=204). ITT analyses showed the SDC group was less likely to consume frozen desserts (OR 0.67, 95%CI 0.49-0.91), compared to SAU. As-treated analyses showed children were more likely to consume fruit (1.68, 1.23-2.28), milk (2.00, 1.48-2.71), desserts (1.34, 1.07-1.68), and non-carbonated flavored beverages (1.58, 1.18-2.11) on days they attended structured programming, compared to days when they did not attend.

Conclusions: Providing free SDC may not impact dietary intake. However, children who attended structured programming had higher odds of consuming fruit and milk, but also less healthful foods/beverages. Research is needed to further understand child dietary influences and effective summer interventions.



Sarmin Sultana, EPID

Diabetes Management During Hurricane Helene: Patient Experiences and Coping Strategies in South Carolina

Megan E. Austin, Rachel E. Davis, Traci A. Bekelman, Jason Mendoza, Matthew Pruitt, Molly Parker, Angela D. Liese

Objective: This study examines the experiences of young adults with youth-onset diabetes during and immediately after Hurricane Helene.

Methods: Thematic analyses were conducted on data obtained from interviews with 9 participants in the ongoing SEARCH Food Security 2 Cohort study (7 participants with type 1 diabetes, 2 with type 2 diabetes, 7 classified as food insecure) from September to December 2024.

Results: Some of the participants were unprepared for the storm's severity. The resulting power outages, property damage, limited access to food and medication challenged their diabetes self-management. One challenge mentioned by participants was a decreased importance of a nutritious diet since they were in "survival mode," which led to unregulated blood sugar levels from limited eating or eating processed, unhealthy foods. Another challenge identified was difficulty

monitoring their blood sugar levels and adjusting insulin since some participants did not have means to charge the technology they relied on for regular management. They were relying on bodily symptoms to identify blood sugar abnormalities. The final key challenge mentioned by participants was the ability to access and store medication since power was out and there was not cold storage easily available. This limited the amount of insulin participants were willing to administer, and one of the participants ran out of insulin and was unable to access more since pharmacies were closed.

Conclusion: This study highlights the vulnerabilities of people with diabetes during a hurricane. Emergency preparedness planning involving patients, clinicians, and the healthcare system may enhance diabetes management during crisis situations.

UNDERGRADUATE STUDENT PRESENTATIONS

Kayla Davenport, EPID

Prevalence and Lived Experience of Mental Health Concerns in Diabetes Care

Megan Austin, MPH, PhD-C; Emmanuel Julceus, MD, MPH; Angela Liese, PhD, MPH; Traci Bekelman, PhD, MPH; Molly Parker; Matthew Pruitt; Rachel Davis, PhD, MPH

Objectives: Mental health challenges are common among individuals with diabetes. However, mental health often receives less attention compared to other aspects of routine diabetes care. This study explores the prevalence of mental health concerns and perceptions of mental health resources among individuals with youth-onset diabetes.

Methods: A quantitative analysis was conducted using survey data from the ongoing SEARCH Food Security Cohort Study 2, which included 41 young adults (YA) (30 with Type 1, 11 with Type 2 diabetes, all participants were food-secure) from Colorado, South Carolina, and Washington. Mental health symptoms were ascertained using the Center for Epidemiologic Studies Depression Scale and the Generalized Anxiety Disorder Scale. A thematic analysis of qualitative interviews from a subset

of 9 participants provided additional insights into experiences with diabetes and mental healthcare needs. Results: Among YA with diabetes, 24.4% reported moderate to severe anxiety, and 68.3% reported symptoms of depression. The 9 interviewed participants recounted various impacts of diabetes-related stressors on their mental health that were compounded by a lack of resources to address these challenges. Specific stressors included the daily responsibilities of managing a chronic condition, the financial burdens of diabetes care, and the inability to obtain supplies through insurance.

Conclusions: The frequency of anxiety and depression among individuals with diabetes and the experiences of a subset of these participants suggests that there are unmet needs for mental healthcare in routine diabetes management. Future efforts should focus on comprehensive care models that prioritize mental health screening and support for individuals with diabetes.



Ella Gustafson, EPID

Association between Dietary Patterns and Mental Health Outcomes among Breast Cancer Survivors: A Systematic Review

Susan Steck, PhD, MPH, RD; Anna Marie Pavy

Objectives: Previous literature has examined the association between dietary patterns and breast cancer outcomes, but the relationship between diet quality and mental health among breast cancer survivors is less well-established. We performed a systematic review of human studies examining associations between dietary patterns and mental health outcomes among breast cancer survivors.

Methods: PubMed was searched through June 26, 2023. Search terms included breast cancer, dietary patterns, mental health, and quality of life. Using established eligibility criteria, reviewers conducted an initial screening using title and abstract, with a full-text review of remaining articles. To evaluate the quality of observational studies, the reviewers utilized the Newcastle Ottawa Scale (NOS). Studies with a total score of greater than or equal to seven were considered 'high

quality' studies, while any score below seven was considered 'low quality'.

Results: Out of 655 articles identified from the initial search, 11 articles were included in the final review. The studies included seven cross-sectional studies, three cohort studies, and one randomized controlled trial. Food frequency questionnaires (FFQ), 24-hour dietary recalls, and food records were used to measure dietary intake and various dietary patterns were calculated. The majority (n=9) of studies reported a positive association between higher diet quality, particularly among studies using the Healthy Eating Index, and better mental health outcomes in breast cancer survivors. All studies were graded as high quality based on the NOS.

Conclusion: The systematic review suggests a potential link between diet quality and mental health among breast cancer survivors.



Emily Hunter, HPEB

Animal Source Food Beliefs, Perceptions, and Dietary Intake among Mothers and Children in Kenya Informal Settlements

Morgan Boncyk, Emily N. Hunter, Christine E. Blake, David Prieto-Merino, Aurelia Lepine, Salome A. Bukachi, Mariah Ngutu, Suneetha Kadiyala, Paula Dominguez-Salas

Objective: To explore how beliefs and perceptions about animal-source foods (ASFs) influence mother and child dietary intake in Nairobi, Kenya.

Methods: Cross-sectional surveys assessed ASF beliefs and perceptions in informal settlements from 7 wards with high ASF activity in Nairobi, Kenya in Sept-Oct 2019. A random sample of 304 low-income mothers with children 6-59 months reported how much ASFs they and their child should consume per week and likelihood of getting sick or fat from ASFs. ASF intakes were collected with 24-hour recalls. Open-ended responses on sickness causes and mitigation were thematically analyzed. Logistic regressions assessed associations between ASF beliefs and perceptions with intake, stratified by 6-23 24-59 child mo of age, gender, and maternal primary education.

Results: Most mothers (88%) and children (91%) consumed ASF, mainly milk (81%, 88%). Mothers believed they should consume one more egg than children, but similar amounts of meat, fish, and milk. Belief in higher milk and meat intake increased odds of intake in girls (OR: 1.51 [95% CI: 1.21,1.88]; 1.32 [1.003,1.74]) and older children (1.28 [1.05,1.58]; 1.30 [1.01,1.66]). Mothers perceived eggs, meat, and poultry led to weight gain (69%, 58%, 58%) and sickness (39%, 49%, 32%). Perceived weight gain from eggs reduced odds of intake in mothers older (0.97 [0.95,0.99]) and less educated (0.96 [0.94,0.99]). Sickness concerns from lack of processing raw milk (65%), overprocessing packaged milk (24%), animal health in poultry, organs, and red meat production (25%, 14%, 14%), and overconsuming eggs (45%). Mothers (77-97%) mitigated concerns by boiling milk, properly cooking poultry and organs, and reducing red meat and egg intake. General mitigation included trusted sources; proper hygiene, handling, preparation; and fresh consumption. Perceived sickness from eggs increased odds of any ASF intake in girls (1.02 [1.001,1.05]), while sickness from raw milk reduced odds of any ASF intake in younger children (0.96 [0.93,0.99]). All other associations were insignificant. Conclusion: ASF beliefs and perceptions influence diets, particularly for older girls and older, less educated mothers. Individual-level mitigation addressed food safety concerns along the supply chain.



Maddie Miller, HPEB

Age of Introduction to Animal Source Foods and its Association with Child Growth Indices in Low-income Informal Settlements of Nairobi, Kenya

Morgan Boncyk; Madeline E. Miller, Christine E. Blake, Ph.D., RD; David Prieto-Merino, Salome A. Bukachi, Mariah Ngutu, Aurelia Lepine, Suneetha Kadiyala, Paula Dominguez-Salas

Objective: Animal-sourced foods (ASFs) contain essential nutrients for human growth, maintenance, and repair. This study quantifies the relationship between the age of ASF introduction and later child growth indices in low-income Kenya informal settlements.

Methods: A two-stage sampling method selected seven wards with high ASF value chain activity in Nairobi, Kenya, and randomly sampled 304 mother and child (6-59 months) dyads from low-income households in September to October 2019. Mothers completed a cross-sectional survey that assessed breastfeeding duration, exclusive breastfeeding for six months, and age of introduction of animal milk, poultry, red meat, and eggs. Child anthropometrics were collected. Linear regressions examined associations between breastfeeding and complementary feeding practices with child growth indices, adjusting for maternal age, education, household size, and income, stratified by child age in years.

Results: Over 99% of children were breastfed (duration mean \pm SD = 19 \pm 6 months), and 35% were still breastfeeding at the time of assessment. Exclusive breastfeeding lasted 4 \pm 3 months, with 58% of children exclusively breastfed for six months. Breastfeeding duration was not associated with child growth indices. Mothers introduced animal milk at 6 \pm 3 months, poultry and red meat at 8 \pm 5 months, and eggs at 9 \pm 5 months. Later introduction to ASFs (in months) was associated with higher weight-for-age z-scores among children aged 24-36 months: animal milk β =0.07 [95% CI=0.01,0.12]; poultry β =0.04 [0.003,0.08]; red meat β =0.04 [0.002,0.08]; eggs β =0.05 [0.001,0.09]. Age of introduction to ASFs was not associated with weight-for-age in any other age group or with length-for-age, weight-for-length, or BMI z-scores across all age groups. Conclusion: In Nairobi, Kenya's informal settlements, we found that most children were breastfed, with over half exclusively breastfed for the first six months. Mothers typically introduced animal milk first, followed by meat and eggs. Results suggest that in these low-income settlements where average age of introduction to ASFs is in line with current feeding recommendations, age of introduction to ASF was not significantly associated with child growth indices.



Rithi Ramamurthy, EPID

A Qualitative Study of Comorbidities and Their Effect on Diabetes Management for Young Adults

Megan Austin MPH, PhD-C, Angela D. Liese PhD, MPH, Traci Bekelman PhD, MPH, Rachel Davis MPH, PhD

Objectives: Comorbidities, or the presence of more than one medical condition, can compound the difficulties in managing both conditions. Diabetes management typically focuses on maintaining optimal blood sugar (BS) levels which are affected by various factors, including mood, diet, and other diseases. This study aimed to understand how diabetes management is influenced by the presence of other chronic conditions.

Methods: Descriptive data were computed on demographics and insurance status from an online survey of young adults with youth-onset diabetes. Thematic analysis was completed on qualitative interviews with a subset of 7 survey participants (South Carolina-n=3, Washington-n=2, Colorado-n=2).

Results: Most survey participants have private or Medicaid insurance with those interviewed being majority private (67%). Interviewed participants had various other chronic conditions such as Hypothyroidism, fibroids, celiac disease, and chronic hives and pain. Participants expressed many challenges with managing their diabetes and other chronic conditions, including difficulty regulating sugar levels, medications causing unforeseen outcomes, diet struggles, and financial strain. Participants noted how medication given to treat one chronic condition led to fluctuation in their BS levels, and compensating with their insulin or diabetes medication. Four participants mentioned surgical procedures for other conditions affecting their diet and sugar levels. Additionally, navigating insurance coverage and the financial strain of having to consult multiple specialists to manage their conditions weighed on participants.

Conclusion: Understanding the challenges of managing multiple chronic conditions from this study can encourage physicians to not only acknowledge but provide guidance on the effect of other chronic conditions on diabetes.

POSTER PRESENTATIONS: SESSION TWO GRADUATE STUDENT PRESENTATIONS

Ali Alfalki, PhD, EPID

Do depressive symptoms mediate the relation of household food insecurity with Hemoglobin A1c among Youth and Young Adults with Youth-Onset Type 1 Diabetes?

Emmanuel F. Julceus, MD; Faisal Malik, MD; Traci A. Bekelman, PhD; Anwar Merchant, PhD; Jason A. Mendoza, MD; Angela D. Liese, PhD

Objective: We explored whether and how depressive symptoms in youth and young adults (YYA) with youth-onset type 1 diabetes (T1D) mediate the effects of household food insecurity (HFI) on hemoglobin A1c (HbA1c).

Methods: Cross-sectional data from the SEARCH for Diabetes in Youth Study (2016-2019) included 1,093 YYA with T1D. We applied causal mediation modeling to estimate the effects of HFI (measured with the Household Food Security Survey Module) on HbA1c (measured from whole blood samples) mediated by depressive symptoms (measured with the Centre for Epidemiologic Studies Depression Scale).

Results: Overall, HFI was associated with a one percentage point higher average HbA1c (mean HbA1c, HFI 9.91% vs. 8.88%) and 19% of this association was mediated by depressive symptoms. Irrespective of level of confounder adjustment, both the direct effect (range 0.43-0.69) and the indirect effect (range 0.12-0.17) remained significant and the percent mediation ranged from 18 to 21%.

Conclusion: These results highlight the importance of depressive symptoms as a key pathway between HFI and HbA1c, with consistent direct and indirect effects observed even after adjustment for factors as clinically relevant. Future studies should examine whether mental health interventions are an effective strategy to mitigate the effects of HFI on HbA1c. **Keywords:** Type 1 Diabetes, Household Food Insecurity, Health Disparities, Depressive Symptoms, Hemoglobin A1c



Alexis Bell, MPH, HPEB

Healthy Eating, Physical Activity, and Stress in African American Adults: A Review of Ecological Momentary Assessment Studies

Brie Turner-McGrievy, PhD, MS, RD, PhD, MS, RD; Enid Kesseko, MS; Chih-Hsiang "Jason" Yang, PhD

Background: Healthy eating and physical activity (PA) both have bidirectional relationships with stress. Healthy eating can lower the impacts of stress, while stressors can cause an increased consumption of unhealthy foods. Likewise, PA participation can reduce stress, while increased stress can cause less PA participation. One method that has been used to examine real-time associations between stress and health behaviors is ecological momentary assessment (EMA). However, research on the associations between these variables among African American (AA) adult populations using EMA methods are limited. Focusing on these associations in AAs are important, because this race faces disparities related to unhealthy food consumption, decreased participation in PA, and increased levels of stress when compared to their counterparts.

Purpose: The current study examined the associations between healthy eating, PA, and stress, and the directionality of the associations within AA adult populations in a review of previously published literature that utilized EMA methods.

Methods: PubMed and Web of Science databases were searched for articles that met inclusion criteria. Search terms related to diet, PA, stress, and AAs were used. Two searches were conducted for each database. The first search focused on healthy eating and stress. The second search focused on PA and stress. To minimize bias and ensure that all potential articles were included, a second reviewer was used. Discrepancies were addressed and divided decisions were collectively addressed for inclusion or exclusion.

Results: A total of 53 articles were found through the four searches. Only four studies met inclusion criteria (n=1 examined diet, n=2 examined PA, and n=1 examined diet and PA). All studies included five prompts

sent for seven days, and they found that increased stress was associated with increased daily unhealthy eating, stress was associated with less daily PA participation, and increased PA participation was associated with less daily stress. No studies examined the impact of healthy eating on stress or how healthy eating and PA can simultaneously impact stress.

Conclusions: The findings demonstrate the use of EMA to examine how stress impacts healthy eating and PA, and how PA can impact stress. Future studies should examine how healthy eating impacts stress and the combined impacts of healthy eating and PA on stress among AA populations to reduce the disparities they face.



Morgan Boncyk, MPH, HPEB

Rural heat islands in South Asian food markets in relation to food availability, price uncertainty, price rises, and spoilage

Edward A. Frongillo, Cuizhen Wang, Ramya Ambikapathi, Samuel Scott, Timothy J. Krupnik, Ishika Gupta, Christine E. Blake

Objectives: Climate change affects food security through availability, affordability, and safety. Most South Asians rely on outdoor food markets where dense infrastructure, limited green space, and customer congregation may precipitate heat island effects, with markets warmer than nearby areas. We quantify heat islands in rural outdoor food markets and assess associations with food scarcity and spoilage and price uncertainty and rises.

Methods: Shop vendors randomly sampled within five districts—Rajshahi and Rangpur in Bangladesh, Nalanda in India, and Banke and Surkhet in Nepal—reported scarcity, price uncertainty, price rises, spoilage, and shop characteristics from February to June 2023. Infrastructure and food quality were observed. Landsat 9 thermal bands calculated land surface temperature (LST) nearest to survey dates. Heat island intensity was the difference between vendor and district mean LST. Hotspots were ≥ 2 SD above district mean LST. Logistic regressions assessed associations of heat island intensity with scarcity, price uncertainty, price rises, and spoilage,

adjusted for vendor type, harvest season, district clusters, and sample weights, with LST and hotspot proximity sensitivity analyses.

Results: Of 3,808 vendors, 70% used semi-permanent structures and $\geq 30\%$ sold refined grains, processed foods, or pulses. Spoilage and price uncertainty were highest during harvest season. Heat island intensity ($+2.6^{\circ}\text{C}$) was associated with lower fruit scarcity (OR: 0.90 [95% CI: 0.82,0.99]) and 4-14% higher odds of scarcity for roots, pulses, eggs, milk, and refined grains. Hotspot proximity—9% of vendors in hotspots, 24% within 500m—had inverse associations. Price uncertainty and price rises were associated with hotspot proximity for vegetables, eggs, and fish but not heat island intensity or LST. Heat island intensity and LST were associated with 5-10% lower odds of spoilage for fruits, leafy vegetables, and refined grains, while hotspot proximity was associated with higher spoilage for fruits (1.16 [1.03,1.30]) and pulses (1.94 [1.78,2.12]).

Conclusions: Heat islands in rural food markets may exacerbate seasonal food insecurity. Remote sensing can help monitor heat islands and direct climate-smart strategies to improve access to sustainable healthy diets.



Samaneh Borji, IS

Unlocking Nutritional Insights: A Big Data Analysis of Social Media's Role in Public Health

Christine Blake, Jiaxuan Zhang, Amirreza Kalantari, Ehsan Mohammadi

Objectives: This study analyzes engagement metrics, sentiment trends, audience demographics, and themes of nutrition-related posts to assess whether popular content aligns with evidence-based nutrition or contributes to misinformation. The goal is to improve strategies for disseminating accurate nutrition information.

Methods: We consulted nutrition literature to identify eight nutrition-related categories and their corresponding subcategories. Using Quid Monitor and these subcategories as keywords, we retrieved nutrition-related posts in English from X, YouTube, Reddit, forums

and blogs. The dataset covers a 27-month period, ending on December 6, 2024.

Results: A total of 201,981,643 posts were retrieved, with potential impressions of 46,556.1 billion. The top platforms were X (133,490,535 posts), Reddit (14,722,439 posts), and YouTube (11,461,608 posts), with additional data from blogs, news, reviews, and comments. The net sentiment was a positive 78. Age distribution showed 12% of posts were from users under 18, 16% from 18-24, 17% from 25-34, 15% from 35-44, and 13% from 45-54. The most liked and commented post, "Homemade Milk Chocolate," received 1,119,876 likes and 5,690 comments, while the most viewed post, "Food Lover vs. Ball Lover," had 29,565,424 views. Popular posts included humor, DIY recipes, cultural cuisine, product promotions, and motivational content.

Discussion: Social media presents both opportunities and risks for nutrition communication. High engagement found in this study, reflects public interest, but viral trends, DIY recipes, and product promotions often lack scientific accuracy. The high positive sentiment suggests trust in social media content, raising concerns about misinformation acceptance. Younger audiences dominate discussions, highlighting the need for targeted digital health communication. The popularity of cultural cuisine offers a chance for inclusive, evidence-based messaging. Future research should assess misinformation spread and explore collaborations between health professionals, influencers, and platforms to promote credible nutrition content.



Sejla Isanovic, MPH, HPEB

Developing a Food Safety Consumer Experience Scale: Qualitative Insights from Bangladesh, Ethiopia, and Vietnam

Silvia Alonso, PhD; Edward A Frongillo, PhD; Aklima Parvin, MSc; Lina Gazu, PhD; Phuong Nguyen, PhD; & Jef L Leroy, PhD

Objective: Unsafe food contributes to 600 million cases of foodborne illness and 420,000 deaths annually. Existing methods used to evaluate food safety risks overlook consumers' perspectives coming from their

everyday experiences that influence their food choices. Our objective was to develop a cross-culturally appropriate and user-friendly scale to assess consumers' experiences related to food safety in low- and middle-income countries. This study identified the constructs that constitute the experiences of food safety that the scale should reflect.

Methods: In-depth interviews were conducted with urban households in Bangladesh (n=51), Ethiopia (n=50), and Vietnam (n=41). Eligible households had children aged 2–5 years and members serving as primary food purchasers, preparers, and caregivers. Interviews explored attitudes, perceptions, and lived experiences related to food safety. Data were analyzed using a constant comparative method.

Results: Respondents expressed awareness of biological and chemical contaminants in foods. Concerns about chemical additives and food adulteration were common, fueled by beliefs that these hazards cause chronic illnesses. Personal and familial experiences with foodborne illness reinforced caution when buying foods. Religious and cultural beliefs shaped how respondents explained and responded to food safety concerns, with some attributing illness symptoms to spiritual causes. Trust in food vendors was rooted in reputation, visible cleanliness, and willingness to rectify issues (e.g., exchange items). Respondents differentiated their extent of scrutinizing safety based on food type: staples such as rice and pulses were assessed more by vendor credibility, whereas perishables such as fish and meat underwent direct, detailed inspections. Low transparency in food sourcing and how vendors prepared foods were persistent concerns.

Conclusions: Trust, perceived transparency, risk perceptions, and past incidents shaped consumers' mental representations and behaviors related to food safety. Interviews underscored the centrality of context and sensory-based quality indicators, suggesting that scenario-based assessments are more appropriate than generic risk-reduction items.



Hadi Rashidi, PhD, EPID

Association Between Dietary Intake of Advanced Glycation End-Products and Aggressive Prostate Cancer Among Black and White Men in the North Carolina-Louisiana Prostate Cancer Project

David P Turner, PhD; Joseph Su, PhD; Lenore Arab, PhD; Jeannette Bensen, PhD; Ebonee N Butler, PhD; Laura Farnan, PhD; Victoria J Findlay, PhD; James L Mohler, MD; Tyler-Stukes, Gayle, PhD; Susan E Steck, PhD

Background: Prostate cancer is the most common cancer and second leading cause of cancer-related mortality among men in the United States. Advanced glycation end-products (AGEs) are reactive metabolites formed endogenously but also consumed in processed and high-temperatures cooked foods. While evidence from experimental animal studies show that AGEs are related to pathogenesis of various chronic diseases including cancer, their association with aggressive prostate cancer remains unexplored.

Method: We analyzed data from the North Carolina – Louisiana Prostate Cancer Project (PCaP), a cross-sectional study including 1900 men, (901 Black and 991 White) diagnosed with prostate cancer. Aggressiveness was defined as “high” (n=332) or “low/intermediate” (n=1568) based on clinical stage, Gleason grade, and prostate specific antigen at diagnosis. Dietary intake of AGEs was estimated using the NCI-Diet History Questionnaire linked to the Uribarri dietary AGE database. Multivariable logistic regression was used to determine the adjusted odds ratios and 95% confidence intervals.

Result: Among dietary sources of AGEs, red meat products were major contributors, representing 23.4% of total AGE intake. In race-stratified analyses, a positive association between AGEs intake and high aggressive prostate cancer was observed for Black men (OR_{2nd vs 1st tertile}= 1.42; CI, 0.88-2.29 and OR_{3rd vs 1st tertile}=1.68; CI, 0.96-2.91) but not for White men (OR_{2nd vs 1st tertile} = 0.88; CI, 0.56-1.38, OR_{3rd vs 1st tertile} =0.75; CI, 0.39-1.41).

Conclusion: Higher dietary AGEs intake appears to be associated with increased odds of high aggressive

prostate cancer among Black men. Future prospective studies are warranted to confirm this finding.



Sharraf Samin, MPH, HPEB

Perceived Food Environments and Healthiness of Diets among Adolescents in Urban Bangladesh

Christine E. Blake, PhD, RD; Edward A. Frongillo, Jr. PhD; Hala Ghattas, PhD; Samuel Scott, PhD; Md. Khalequzzaman, PhD.

Objective: Adolescents' food-environment perceptions can play critical roles in their dietary behaviors and nutrition. This study explores how adolescents' perceived food environments relate to their healthiness of diets and how these relationships differ between adolescents living in urban non-slum (AD-NSL) and slum areas (AD-SL) in Bangladesh.

Methods: A cross-sectional study was conducted among adolescents (N=330; 10-15 years old) from urban NSL and SL areas in Dhaka, Bangladesh. A pre-tested semi-structured questionnaire measured food-environment perceptions of healthy and unhealthy foods, and dietary intake was assessed using the Global Diet Quality Score (GDQS) application. Risk of nutrient inadequacy (NI) was categorized based on GDQS score (low: >23, moderate: ≥ 15 and <23, high: <15). Ordered logistic regression models examined associations between food-environment perceptions and NI risk accounting for demographic variables and moderation effect of living areas.

Results: Adolescents perceived healthy foods to be more available than unhealthy foods, but unhealthy foods to be more accessible, affordable and convenient. AD-SL had higher moderate and high risks of NI (58.3% and 65.7%, respectively) compared to AD-NSL (41.7% and 34.3%, respectively). Food-environment perceptions of healthy foods were not associated with NI risk except for desirability after accounting for demographics. Moderation by living area (OR = 0.53, $p < 0.05$) meant that when perceived access to healthy foods was low, AD-NSL were more likely to have poorer diets compared to AD-SL. For unhealthy foods, perceived desirability was associated with higher NI risk ($p < 0.01$) while perceived

availability showed a negative association ($p < 0.05$). Living area showed no interactions for unhealthy foods. Conclusion: Food-environment perceptions are related to adolescents' healthiness of diets, with differences between slum and non-slum areas. Future adolescent-centered interventions considering the variations of food-environment perceptions in urban non-slum and slum areas can be designed to enhance access and desirability of healthy foods while limiting unhealthy food exposure to improve overall healthiness of adolescents' diets.



Ashley Thurber, HPEB

FoodShare SC: A Case Study of a Community-Based Approach to Food Equity

Haley Mulera; Lilly Allen; Kelly Duane; Omme-Salma Rahemtullah, MA

FoodShare SC is engaging in innovative community outreach strategies to promote food and nutrition security in Richland and Lexington Counties. Our Fresh Food Box program consists of biweekly produce boxes with recipe cards that emphasize accessibility of ingredients and techniques to increase participant self-efficacy to use the produce. As the only community-based organization in South Carolina designated by the USDA Food and Nutrition Service as an authorized SNAPonline retailer, FoodShare increases food access and equity across Richland and Lexington County through the availability of online payments for our customers utilizing SNAP EBT. At the community level, our Culinary Medicine elective teaches medical and PA students of the USC School of Medicine Columbia about the importance of nutrition and food security as social determinants of health and their impact on equitable health outcomes in their future patients. To address transportation barriers, the NeighborShare program delivers the Fresh Food Box to customers who are medically homebound. Boxes are also distributed through community partner organizations to ensure access to the Fresh Food Box across a wider geographic area. To measure the effectiveness of these strategies and existing community needs, we are conducting a

needs assessment and satisfaction survey in collaboration with students from the Arnold School of Public Health and the School of Medicine Columbia. Based on the findings of this evaluation, we will modify our programs to better fit the needs of the community.

UNDERGRADUTE STUDENT PRESENTATIONS

Kayla Davenport, SCHC

The Impact of Food Insecurity on Neurocognitive Development and Childhood Mental Health Outcomes

Nicholas Younginer, PhD

Objectives: In 2023, approximately 19.2% of children experienced food insecurity, which is linked to cognitive impairments, social deficits, and behavioral challenges. The non-nutritional impacts of food insecurity, such as chronic emotional stress and strained family dynamics, can also exacerbate mental health issues. This project explores the associations between food security and mental health outcomes in children and adolescents.

Methods: A quantitative analysis was conducted using data from the 2022 National Health Interview Survey (NHIS), including 5,494 children aged 5-17. Cross-tabulation analysis was used to assess correlations between four levels of household food security (Secure, Marginal, Low, and Very Low) and various mental health indicators. An adult respondent provided information about the sample child's intellectual disabilities, symptoms of anxiety and depression, and responses to the Strengths and Difficulties Questionnaire (SDQ).

Results: Children in low and very low food-secure households were more likely to exhibit indicators of poor mental health (anxiety, depression) and neurodevelopmental disorders (Autism, ADHD) than children in food secure households. 22.6% of children in very low food-secure households had a clinically relevant total SDQ score (≥ 17) compared to 4.0% of food-secure children. However, only 45.2% of low and very low food-secure households accessed SNAP benefits, and just 10.8% accessed WIC benefits.

Conclusions: Despite the prevalence of mental health concerns, many children in food-insecure households lack access to food assistance programs to address these

disparities. This analysis underscores the importance of policy interventions that adequately address the nutritional and non-nutritional impacts of food insecurity on childhood neurodevelopment and mental health.



Mallory Gedeon, HPEB

Menstrual Symptom Severity in Black/African American Women Participating in a Nutrition Intervention

John Bernhart, PhD, MPH, CHES

Objectives: The Nutritious Eating with Soul (NEW Soul) program teaches African American adults to follow a culturally tailored plant-based diet. This study explores how a plant-based diet impacts total menstrual symptom severity, irritability, cramps, and how diet quality impacts these symptoms.

Methods: In 2024, NEW Soul partnered with Soca Vegan Kitchen in Augusta, GA. African American adults (N=50) 18-65 years old joined a 3-month randomized study. Intervention participants attended 12 classes and received 12 plant-based meals, while control participants received only 12 plant-based meals. For this analysis, 17 menstruating women (average age 41.6 ± 6.2 years old) completed the 15-item Symptom Severity Scale (SSS) at baseline and 12 weeks. The SSS score ranges from 15 to 75, with higher scores indicating greater symptom severity. Diet quality was measured using the Healthy Eating Index (HEI) via the Diet ID platform. All data were collected online and analyzed using SAS v.9.4.

Results: Total SSS scores decreased by -0.02 points for every 1-point increase in HEI ($p=0.59$). Changes in irritability showed a similar trend with a decrease by -0.007 points for every 1-point increase in HEI ($p=0.15$). Cramps slightly increased by 0.004 points for every 1-point increase in HEI ($p=0.43$). Though not significant, scores revealed downward trends in total symptom severity and irritability after 12 weeks.

Conclusion: The findings of this study suggest how a culturally tailored plant-based diet may assist in menstrual symptom management. Future studies with larger sample sizes and extended intervention duration may be necessary to detect meaningful changes.



Molly Parker, EPID

Mental Health and Diabetes Care Among People Experiencing Food Insecurity

Megan Austin, MPH, Angela Liese, PhD, Matthew Pruitt, Traci Bekelman, PhD, MPH, Rachel Davis, PhD, MPH

Objectives: Food insecurity (FI) exacerbates the challenges of managing mental and physical health in individuals living with chronic diseases, such as diabetes.

This study investigates the mental health concerns of young adults with youth-onset diabetes experiencing FI.

Methods: Thematic analysis was completed on nine interviews conducted from April to December 2024 with six participants from the ongoing SEARCH Food Security (SFS) 2 study. All participants (4 – Type 1 diabetes, 2 – Type 2 diabetes; 3 – SC, 2 – CO, 1 – WA) had experienced household FI and noted current FI through a recent questionnaire as part of the SFS 2 study.

Results: Participants described diabetes as being a very “isolating” and demanding disease tied to long-term struggles with loneliness, anxiety, and other mental health conditions. The additional burdens of FI also intensify the stress, anxiety, and depression faced by participants. Participants with FI endure immense stress when prioritizing how to spend money on food versus medical supplies. Feeling stressed and overwhelmed was mentioned to cause spiked blood glucose levels. One participant with Type 2 diabetes added that poor mental health leads to “comfort eating” and placing less attention on physical activity. Participants shared that utilization of mental health resources allowed them “more capacity” for their diabetes, specifically describing how therapy has allowed them to improve their diabetes management through building a healthier mindset surrounding this disease.

Conclusions: This study emphasized the mental health hardships of FI individuals living with diabetes. Mental health support is crucial for proper diabetes management among individuals experiencing FI.



Matthew Pruitt, EPID

Experiences with Hospital Visits and Diabetes Management among Young Adults with Diabetes: A Mixed-Methods Analysis

Megan E. Austin MPH, PhD-C, Emmanuel Julceus MD, MPH, Angela D. Liese MPH, PhD, Traci A. Bekelman PhD, MPH, Molly Parker, Jay Mendoza MD, Lisa Knight MD, Rachel E. Davis PhD, MPH

Objective: In healthcare settings, patient’s diabetes-related routines can be disrupted. This study describes frequency of hospitalizations and emergency department (ED) visits and experiences of diabetes management in hospital settings among young adults.

Methods: Frequency of ED visits and hospitalizations over the preceding year was obtained from 143 participants in an online survey. Thematic analysis was conducted with interviews from a subset of 8 participants who mentioned hospital visits during an interview (Type 1-n=7, Type 2-n=1; n=4 ED visits within 12 months prior to survey completion, n=2 became hospitalizations).

Results: Among survey participants, 25.2% visited the ED and 14.0% were hospitalized in the past year. Of the 8 participants interviewed, many struggled to eat in the hospital, leading to lower blood glucose (BG) levels than “normal”. Reasons provided for this included feeling unable to eat because of consistent interaction with healthcare professionals or testing, and the food offered was inconsistent with nutritional needs. Some believed timing of insulin administration relative to food intake led to hypoglycemia. After returning home, one participant said it took roughly 4 days to return to “normal”.

Conclusion: This study emphasized self-reported frequency that this subset of adults with diabetes utilized the ED or required hospitalization. Additionally, it highlights that nutritional patterns and medication administration schedules of patients in hospitals may vary from their routine, sometimes leading to hypoglycemia and disruptions to diabetes management post-hospital. Close monitoring of food intake and timing of insulin administrations is important in patients with diabetes to reduce the risk of BG abnormalities.