

How Food Environments Shape Our Eating Habits

Dr Terrence Thomas

Dr Murat Cankurt

Dr Cihat Günden

Dr Alton Thompson

JUNE 2025

doi.org/10.33548/SCIENTIA1201



MEDICAL & HEALTH SCIENCES



ARTS, HUMANITIES & SOCIAL SCIENCES

 Scientia





How Food Environments Shape Our Eating Habits

How we eat dramatically impacts our health, yet millions of Americans live in 'food deserts' – areas with limited access to fresh, nutritious food. Recent research reveals that solving this crisis requires looking beyond just physical access to food to understand how our entire community environment shapes our dietary choices. Through a series of pioneering studies, Dr Terrence Thomas and colleagues at North Carolina A&T State University have been investigating how different aspects of our food environment influence what we put on our plates. Their findings suggest that creating lasting change requires reimagining how communities engage with food at every level.

The Hidden Complexity of Food Deserts

The relationship between nutrition and health is undeniable, as Dr Terrence Thomas of North Carolina A&T State University explains. Yet, in many low-income communities across America, accessing healthy food options remains a persistent challenge that goes far beyond simple geography or economics.

In Guilford County, North Carolina, where much of Dr Thomas's research has focused, over 26 distinct food desert areas have been identified – up from 24 just a decade ago. Within these communities, residents face significantly higher rates of diet-related chronic diseases and rely heavily on convenience stores offering primarily processed foods high in fat, sugar, and salt. However, Dr Thomas's work reveals that the issue goes far deeper than just physical access to grocery stores. Through extensive community surveys and in-depth interviews, his team has documented how social networks, cultural attitudes, and community support systems play crucial roles in shaping dietary habits. Their research shows that food environments are incredibly complex systems where multiple factors interact to influence behaviour.

The implications of living in a food desert extend far beyond individual health. Communities affected by limited food access often face higher healthcare costs, reduced productivity, and diminished quality of life. The impact is particularly severe in historically underserved areas, where the challenges of accessing healthy food compound existing social and economic disparities.

Understanding Food Environment Dynamics

To better understand these complex dynamics, Dr Thomas and his colleagues designed an innovative study comparing how different food environments influence eating habits. They surveyed 246 residents across Guilford County, presenting them with two contrasting scenarios that captured the multifaceted nature of food environments.

In the first scenario, described as a typical food desert, convenience stores sold only packaged foods high in fat, sugar and salt. Community organisations served meals without fresh produce, advertisements promoted fast food, and community members expressed scepticism about the benefits of fruits and vegetables. This environment reflected the reality many Americans face in food deserts today.

The second scenario depicted what the researchers termed a 'food oasis', where convenience stores stocked fresh produce, mobile vendors and roadside stands sold fruits and vegetables, community leaders actively promoted healthy eating, and local organisations incorporated fresh produce into meals. This environment represented a more supportive ecosystem for healthy eating.

The results were both striking and statistically significant. Residents exposed to the healthy food environment scenario were 4.5 times more likely to say they would consume fruits and vegetables compared to those presented with the food desert scenario. They also expressed stronger beliefs in the health benefits of produce and a greater commitment to maintaining healthy eating habits.



The Power of Social Context

Dr Thomas's research demonstrated that the social context of food environments plays a crucial role in shaping dietary choices. When community leaders, local organisations, and social networks actively promoted healthy eating, individuals were significantly more likely to adopt and maintain healthier dietary habits. This finding aligns with emerging research in social practice theory, which examines how shared habits and behaviours develop within communities. Dr Thomas's work shows that eating habits are not simply individual choices but are deeply embedded in community practices and social norms.

The study revealed interesting gender differences as well. Women were consistently more likely than men to say they would adopt healthier eating habits, regardless of which scenario they were presented with. This gender disparity held true across different age groups and demographic categories, suggesting the need for targeted interventions that consider gender-specific attitudes and behaviours around food.

Beyond Physical Access: The Role of Social Networks

Building on these initial findings, Dr Thomas and his team will conduct additional research that examines how social networks and community engagement influence eating habits. This work will draw on both social practice theory and social physics – an emerging field that uses mathematical tools to analyse how ideas and behaviours spread through groups. Based on their previous work and reports in the literature that show positive impact of the social environment on eating habits, they are convinced that people are heavily influenced by the eating habits of their friends, family and community leaders. When community members

regularly observed others embracing healthy eating, they were more likely to try it themselves. This effect was particularly strong when the examples came from trusted community figures or organisations.

The Importance of Comprehensive Solutions

Based on these findings, Dr Thomas and his team advocate for a more comprehensive approach to addressing food access issues. Their research suggests that simply building new grocery stores, while important, is insufficient to create lasting change in eating habits. Instead, they recommend developing integrated strategies that transform the entire food environment. This includes engaging community leaders and organisations in promoting healthy eating, supporting local vendors and markets selling fresh produce, incorporating nutrition education and healthy meals into community programmes, and creating social networks that reinforce healthy eating habits.

Impact and Implementation

The implications of Dr Thomas's work extend far beyond Guilford County. His research is helping reshape how policymakers and public health officials think about food access issues nationwide, leading to more nuanced and effective interventions.

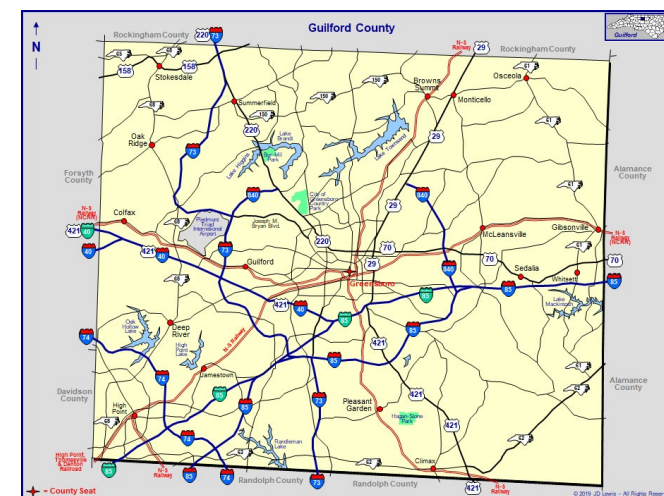
Dr. Thomas and his team provided nutrition education to several community members using hands-on workshops. These workshops have led to more community members adopting healthier eating habits. Dr Thomas believes it will be easier to create food environments that support healthy eating through multiple reinforcing channels.

These initiatives take a holistic approach, addressing physical access to healthy food and the social and cultural factors influencing food choices.

Early results from these initiatives are promising. In communities that have adopted comprehensive approaches to improving their food environments, residents report eating more fruits and vegetables and express greater confidence in their ability to maintain healthy diets. These changes suggest that transforming food environments can lead to meaningful improvements in dietary habits.

The Role of Technology and Innovation

As their research continues to evolve, Dr Thomas and his team are now exploring how digital technologies and social media might be leveraged to create more supportive food environments.





This work recognises that modern food environments increasingly include digital components that can either support or hinder healthy eating habits. They are also investigating how different cultural contexts influence the effectiveness of various interventions. This cultural awareness is crucial for developing solutions that work effectively across diverse communities and populations.

The Future of Food Environments

Looking ahead, Dr Thomas and his team see both challenges and opportunities in the ongoing evolution of food environments. They note that while technological advances and changing social patterns create new complications, they also offer new tools for promoting healthy eating habits. Their current research focuses on understanding how communities can harness these changes to create more supportive food environments. This includes examining how social media networks influence food choices, how mobile technologies might improve access to healthy food, and how changing work patterns affect eating habits. The researchers are particularly interested in how communities can build resilience into their food environments, creating systems that support healthy eating despite disruptions or challenges. This work has taken on new urgency in the wake of recent global events highlighting food systems' vulnerability.

Creating Lasting Change

For the millions of Americans living in food deserts, this research offers hope that lasting solutions are possible. By understanding how our entire community environment shapes our food choices, we can create more effective strategies for promoting healthy eating and reducing diet-related health disparities. The

work also highlights the crucial role that community members themselves must play in creating change. Creating healthier food environments is not something that can be imposed from outside – it requires engaging with and working through existing community networks and institutions. The research emphasises that sustainable change requires transforming physical access to healthy food and the entire social and cultural environment around eating. When this transformation is successful, communities create environments where healthy eating becomes the natural, easy choice.

Looking to the Future

With obesity and diet-related diseases continuing to rise across America, the need for effective solutions has never been more urgent. Dr Thomas's research suggests that by taking a more comprehensive, community-based approach to improving food environments, we may finally be able to help more Americans access – and embrace – healthier diets. The researchers are now expanding their work to examine how their findings might be applied in different contexts and settings. They are particularly interested in understanding how their insights about food environments might help address other public health challenges. This ongoing work continues to reveal new complexities in how food environments influence eating habits, but it also identifies new opportunities for creating positive change. By understanding these dynamics, communities can develop more effective strategies for promoting healthy eating and improving public health.



MEET THE RESEARCHERS



Dr Terrence Thomas

North Carolina A&T State University,
Greensboro, NC, USA

Dr Terrence Thomas obtained his Bachelor of Science in Agriculture from the University of West Indies, Trinidad, followed by a Master of Science in Continuing and Vocational Education/Management from the University of Wisconsin-Madison and a PhD in Technical Education and Management from Louisiana State University. He currently serves as Professor and Director of the Applied Survey Research Laboratory at North Carolina A&T State University. His career spans over two decades of executive experience in both public and private sectors, including pioneering roles as Executive Director of the Environmental Foundation of Jamaica and President of the Agricultural Education Project. Dr Thomas's research focuses on food security, consumer behaviour, and sustainable agriculture, with particular emphasis on community engagement and nutrition education. His work has significantly impacted underserved communities through large-scale surveys and development activities that improve access to fruits and vegetables.

CONTACT

twthomas@ncat.edu



Dr Alton Thompson

North Carolina A&T State University,
Greensboro, NC, USA

Dr Alton Thompson earned his PhD in Demography/Sociology from Ohio State University, following his master's degree in the same field and bachelor's degree from North Carolina Central University. As Executive Director for the Association of 1890 Research Directors, he provides crucial leadership in developing multistate and national research priorities for the 1890 land-grant institutions. His academic expertise bridges statistics, research methods, demography, and rural sociology. Dr Thompson's distinguished career includes service as Interim Provost at multiple universities and Dean of the School of Agriculture and Environmental Sciences at North Carolina A&T State University. His contributions have been recognised through induction into both the George Washington Carver Hall Public Service Hall of Fame and the USDA/National Institute of Food and Agriculture Hall of Fame.

CONTACT

athompsonl@ncat.edu



Dr Murat Cankurt

North Carolina A&T State University,
Greensboro, NC, USA

Dr Murat Cankurt completed his PhD in Agricultural Economics from Ege University, following his master's and bachelor's degrees from Adnan Menderes University. His academic career includes positions as Associate Professor and Assistant Professor at Adnan Menderes University before joining North Carolina A&T State University as a Research Technician. Dr Cankurt's research spans agricultural economics, consumer behaviour, and climate change impacts, with particular expertise in agricultural marketing and econometrics. His work has earned multiple awards, including the TUBITAK Publication Award and Excellence in Teaching recognition. He has contributed to 34 area-based scientific research projects and maintains active international collaborations through research and teaching programmes in the USA, Germany, and Spain.

CONTACT

mcankurt@ncat.edu



Dr Cihat Günden

Ege University, Bornova, Izmir, Turkey

Dr Cihat Günden received his PhD in Agricultural Economics from Ege University. He completed postdoctoral research at the Applied Survey Research Laboratory at North Carolina A&T State University. His research focuses on behavioural and experimental economics, with particular emphasis on behavioural insights and policy design in agricultural contexts. Dr Günden specialises in studying farmer decision-making processes and consumer behaviour in food and environmental contexts. His current work involves developing policy interventions based on behavioural insights to promote climate-resilient farming practices. He teaches courses in behavioural economics, measurement and scales in social research, and statistical analysis, contributing significantly to both academic research and practical applications in agricultural economics.



FURTHER READING

T Thomas, M Cankurt, Influence of Food Environments on Dietary Habits: Insights from Quasi-Experimental Research, *Foods*, 2024, 13, 2013. DOI: <https://doi.org/10.3390/foods13132013>

T Thomas, C Gunden, B Legesse, Leveraging Food-Related Values for Impact in Community Nutrition Education Programs (Interventions), *Foods*, 2023, 12, 714. DOI: <https://doi.org/10.3390/foods12040714>

T Thomas, M Cankurt, Understanding consumers' attitudes toward fruits and vegetable attributes: A Multi-method approach, *Journal of Nutritional Therapeutics*, 2015, 4(3), 85–92. DOI: <https://doi.org/10.6000/1929-5634.2015.04.03.3>



**NORTH CAROLINA AGRICULTURAL
AND TECHNICAL STATE UNIVERSITY**



Find out more at **scientia.global**