

Ganga S. Bey, PhD, MPH

Assistant Professor of Epidemiology
gbeyster86@gmail.com

Education

University of North Carolina

Gillings School of Global Public Health

Chapel Hill, North Carolina

Postdoctoral Fellowship; April, 2019 – August, 2023

University of Massachusetts Medical School

Morningside Graduate School of Biomedical Sciences

Worcester, Massachusetts

Doctor of Philosophy, Clinical and Population Health Research; June, 2019

The Icahn School of Medicine at Mount Sinai

Graduate School of Biomedical Sciences

New York, New York

Master of Public Health, Health Promotion and Disease Prevention; January, 2014

Princeton University

Princeton, New Jersey

Bachelor of Arts, Anthropology; June, 2009

Professional Experience

- 2023 – Assistant Professor
University of North Carolina at Chapel Hill, Department of Epidemiology
- As PI of an ancillary study to the ongoing Multi-Ethnic Study of Atherosclerosis cohort, I aim to empirically test hypotheses generated from a previously developed innovative health disparities theoretical framework toward identifying novel interventions on health disparities. Specifically, my research exists at the intersection of epidemiology, biology of aging, and social psychology with an emphasis on uncovering novel sources of psychosocial resilience to the impact of social stressors on aging over the life course.
- 2023 – Alzheimer's Disease Disparities Research Faculty Fellow
Columbia University Center for Interdisciplinary Research on Alzheimer's Disease Disparities
- My research examines identity influences on the relationship between neighborhood stressors, psychosocial traits, and cognitive aging and health in a large cohort.
- 2021 – 2023 Alzheimer's Disease Disparities Research Postdoctoral Fellow
Columbia University Center for Interdisciplinary Research on Alzheimer's Disease Disparities
- I aim to empirically test hypotheses generated from a previously developed theoretical framework. Beginning with the construction and validation of a scale measuring a novel health-predictive identity characteristic, my primary research examined identity influences on the relationship between neighborhood stressors, psychosocial traits, and cognitive aging and health in a large cohort.
- Supervisors: Priya Palta, PhD, MPH and Gerardo Heiss, MD, PhD
- 2020 – 2023 Cardiovascular Research Postdoctoral Scholar
University of North Carolina at Chapel Hill, Dept. of Epidemiology and the Office of Postdoctoral Affairs
- I examined the role of psychosocial factors in influencing the effects of chronic social stressors on aging and cardiovascular health among participants in two large cohorts. The ultimate goal of this work was to identify additional intervention points for health disparities and contribute to identity-based

interventions which work in tandem with efforts for structural change to promote the health and well-being of marginalized populations.

Supervisors: Gerardo Heiss, MD, PhD and Cheryl Woods-Giscombe, PhD

2019 – 2020 Cardiovascular Research Postdoctoral Fellow
University of North Carolina at Chapel Hill, Department of Epidemiology

- My work aimed to clarify mechanisms from structural inequity to health inequity, with a specific focus on the ways in which the chronic stress associated with unequal social conditions shape identity processes related to health. I refined a new theoretical framework outlining a novel identity-related characteristic posited to predict stress appraisal, aging rates, and cardiovascular outcomes.

Supervisors: Gerardo Heiss, MD, PhD and Cheryl Woods-Giscombe, PhD

2017 – 2019 Cardiovascular Research Predoctoral Fellow
University of Massachusetts Medical School, Department of Population and Quantitative Health Sciences

- I conceptualized, designed, and conducted dissertation research using secondary, longitudinal data to examine gendered racial and geographic differences in the experience of discrimination, the synergistic effect of reported gender and racial discrimination exposure on the development of cardiovascular disease (CVD) risk factors, and gendered racial variation in predictors of incident CVD. This line of investigation seeks to address some of the theoretical, epidemiological, and statistical challenges arising from health disparities research through an innovative application of intersectionality theory to advanced epidemiological and statistical techniques.

Supervisors: Catarina Kiefe, MD and Sharina Person, PhD

2016 – 2018 Project Manager, Center for Health Equity and Intervention Research
University of Massachusetts Medical School, Department of Population and Quantitative Health Sciences

- I oversaw a pilot study adapting a mindfulness curriculum to address violence-based trauma among young men of color. I was actively involved in many aspects of the research process, including IRB submissions, obtaining informed consent from participants, facilitating focus groups, and writing required progress reports and a secondary grant proposal.

Supervisor: Jeroan Allison, MD

2015 – 2017 Research Assistant
University of Massachusetts Medical School, Department of Population and Quantitative Health Sciences

- I consulted on a Center for Health Equity and Intervention Research project entitled SCRIPTT, assisting with the development of a curriculum for training culturally-competent research assistants with the goal of increasing enrollment and retention of underrepresented minorities in clinical research.

Supervisor: Michelle Pugnaire, MD

- I collaborated on the development and implementation of social determinants of health (SDH) measures in risk adjustment and payment formulas for MassHealth, the state-funded insurance provider. Responsibilities included reviewing literature for the current expert consensus on the most important SDH and best practices for addressing SDH through public health policy and drafting the findings. Our research culminated in a poster presentation at the 2017 National Health Policy Conference and a report presented to the Massachusetts Department of Health and Human Services. The next phase of the project entails comparative evaluation of neighborhood stress indices as viable predictors of healthcare costs, in which I will be conducting analyses of large Medicaid claims datasets.

Supervisor: Arlene Ash, PhD

2013 Project Manager

Brooklyn District Public Health Office, NYC Department of Mental Health and Hygiene

- I managed the collection, entry, and coding of data on cycling in two Brooklyn neighborhoods. Through video-recorded observation of bike lane activity as well as intercept surveying of cyclists, the aim of this study was to better understand the needs of cyclists. This research ultimately sought to optimize safety and encourage physical activity through increasing cycling in disadvantaged neighborhoods.

Supervisor: Philip Noyes, MPH, MA

2012 – 2015 Research Assistant

The Icahn School of Medicine at Mount Sinai, Department of Preventive Medicine

- I assisted in literature review, methodological development and implementation, and data collection of a study on the impact of active living design on physical activity, body habitus, and food frequency of South Bronx residents living in two LEED-certified green buildings. This research contributed to the evidence base supporting the role of the built environment in influencing health outcomes in low-income, urban communities, and is the data used for my Master's thesis.

Supervisor: Elizabeth Garland, MD, MS

- I conducted literature review, survey development, methodological implementation, and data collection of a community-based participatory research study aimed at determining the prevalence of bicycle ownership and usage, and assessing potential community improvements to increase bicycle use in two low-income neighborhoods. This research underscored the necessity of structural changes such as bike lanes, secure bike storage, street lighting, and crime reduction in promoting physical activity through increased cycling among certain populations.

Supervisor: Elizabeth Garland, MD, MS

2010 – 2012 Cancer Research Undergraduate Fellow

New York University, Department of Cardiothoracic Surgery

- I assisted in the characterization of cell-signaling pathways involved in tumorigenesis. Key responsibilities included designing and conducting experiments with MCF-7 breast cancer cell lines, as well as analysis of results, which were reported weekly. This research furthered the mission of NYU School of Medicine by providing additional insight on druggable targets for cancer therapies.

Supervisor: Paolo Mignatti, MD

Honors

2023 – Participant, Research Centers Collaborative Network Scholars Program in Multidisciplinary Research, National Institute on Aging, National Institutes of Health

2023 Participant, Butler Williams Scholar Programs
National Institute on Aging, National Institutes of Health

2023 – Recipient, Loan Repayment Award # 1L60AG083783-01
National Institute on Aging, National Institutes of Health

2022 – Recipient, K99/R00 Pathway to Independence Award #4 R00 AG075327-03
National Institute on Aging, National Institutes of Health

2022 – 2023 Recipient, NC TraCS \$2K Pilot Award Grant #2KR1472107
University of North Carolina at Chapel Hill, Clinical and Translational Science Awards program

2021 – 2022 Recipient, Research Fellowship
Columbia University, Center for Interdisciplinary Research on Alzheimer's Disease Disparities

- 2020 – 2022 Carolina Postdoctoral Program for Faculty Diversity Scholar
University of North Carolina at Chapel Hill, Office of Postdoctoral Affairs
- 2019 – 2020 National Heart, Lung, and Blood Institute T32 Cardiovascular Research Postdoctoral Fellow
University of North Carolina at Chapel Hill, Department of Epidemiology
- 2017 – 2019 National Heart, Lung, and Blood Institute T32 Cardiovascular Research Predoctoral Fellow
University of Massachusetts Medical School, Department of Quantitative Health Sciences
- 2016 – 2017 National Institutes of Health IMSD Fellow
University of Massachusetts Medical School, Department of Quantitative Health Sciences
- 2015 Inductee
Delta Omega Honorary Society in Public Health
- 2010 – 2012 National Institutes of Health MARC Scholar
New York University, Department of Cardiothoracic Surgery

Bibliography and Products of Scholarship

Books and Chapters:

1. Woods-Giscombe CL and **Bey, GS**. Stress, Coping, Adaptation and Health Behavior. In K. Glanz, B.K. Rimer, and V. Viswanath (Eds). *Health Behavior: Theory, Research and Practice*, 6th ed. (in press).
2. **Bey, GS**. Health disparities at the intersection of gender and race: beyond Intersectionality Theory in epidemiologic research. In S.G. Taukeni and F. Irtelli (Eds). *Quality of Life - Biopsychosocial Perspectives*, ISBN 978-1-83968-481-4 (2020). doi:10.5772/intechopen.92248

Peer-reviewed Publications:

1. Snigdha Jain, **Bey, GS**, Sarah N Forrester, Annalise Rahman-Filipiak, Nicole Thompson Gonzalez, Darina V Petrovsky, Stephen B Kritchevsky, Tina E Brinkley (2023). Aging, Race, and Health Disparities: Recommendations From the Research Centers Collaborative Network, *The Journals of Gerontology: Series B*, Volume 79, Issue 6, June 2024, gbae028, doi.org/10.1093/geronb/gbae028
2. **Bey, GS**, Pike JR, Xiao Q, Yu B, Shah A, and Palta P. (2023). The relationship of neighborhood disadvantage, biological aging, and psychosocial risk and resilience factors in heart failure incidence among Black persons: A moderated mediation analysis. *Journal of Gerontology: Series B Psychological Sciences*, DOI:10.1093/geronb/gbad121
3. **Bey, GS**, Pike JR, and Palta P. (In Press). Distinct moderating pathways for psychosocial risk and resilience in the association of neighborhood disadvantage with incident heart failure among Black persons. *Social Science and Medicine – Population Health* <https://doi.org/10.1016/j.ssmph.2023.101475>
4. Woods-Giscombe, C. L., Williams, K. P., Conklin, J., Dodd, A., Bravo, L., Anderson, A.M., Frazier, T., **Bey, GS**, Robinson, M.N., Warren, B. J., Wright, K., Felix, A. S., Anderson, C. M., & Hood, D. A systematic, scoping review and conceptual analysis of resilience in African American women. *Archives of Psychiatric Nursing*. <https://doi.org/10.1016/j.apnu.2023.04.008>
5. **Bey GS**. The Identity Vitality-Pathology model: A novel theoretical framework proposing “identity state” as a modulator of the pathways from structural to health inequity (2022). *Social Science and Medicine*, 314. <https://doi.org/10.1016/j.socscimed.2022.115495>
6. Xiao Q, Heiss G, Kucharska-Newton A, **Bey GS**, Love SM, and Whitsel EA. Life-course Neighborhood Socioeconomic Status and Cardiovascular Events in Black and White Adults in the Atherosclerosis Risk in Communities Study (2022). *American Journal of Epidemiology*, 191(8):1470-1484. doi: 10.1093/aje/kwac070.
7. **Bey, GS**, Pike J, Palta P, Xiao Q, Love SM, and Heiss G. Biological age mediates the effects of neighborhood disadvantage on heart failure risk among African Americans in the Atherosclerosis Risk in Communities and Jackson

Heart Study cohorts (2022). *Journal of Racial and Ethnic Health Disparities* <https://doi.org/10.1007/s40615-022-01476-3>

8. Lu Y...**Bey GS**...Heiss G. Aging-related multisystem dysregulation over the adult lifespan and physical function in later life: the Atherosclerosis Risk in Communities (ARIC) Study (2022). *Journal of Gerontology*, doi: 10.1093/gerona/glac236
9. Castaneda-Avila MA, Jesdale BM, Beccia A, **Bey GS**, Epstein MM. Differences in Survival Among Multiple Myeloma Patients in the United States SEER Population by Neighborhood Socioeconomic Status and Race/Ethnicity (2021). *Cancer Causes and Control*, 32(9):1021-1028. doi: 10.1007/s10552-021-01454-w.
10. Giscombe C, Lobel M, Brooks J, Sheffield-Abdullah K, **Bey GS** et. al. Using Food to Cope with Culturally-Relevant Stress is Associated with Body Mass Index in African American Women. *Nursing Research* 2021;70(5S Suppl 1):S53-S62. doi: 10.1097/NNR.0000000000000532
11. López-Cepero A, Frisard C, **Bey GS**, Lemon S, and Rosal MC. The association between food insecurity and emotional eating in Latinos is mediated by perceived stress (2020). *Public Health Nutrition*, 23(4):642-648.
12. **Bey GS**, Person SD, and Kiefe C. Gendered race and setting matter: Sources of complexity in the relationships between reported interpersonal discrimination and cardiovascular health in the CARDIA study (2020). *Journal of Racial and Ethnic Health Disparities*, 7(4):687-697.
13. **Bey GS**, Jesdale BM, Forrester S, Person SD, and Kiefe C. Intersectional effects of racial and gender discrimination on cardiovascular health vary among black and white women and men in the CARDIA Study (2019), *Social Science and Medicine-Population Health*, doi: 10.1016/j.ssmph.2019.100446.
14. **Bey GS**, Jesdale, BM, Ulbricht CM, Mick EO, and Person SD. Variation in Allostatic Load Biomarker Associations with Depression among US Black and White Women and Men (2018). *Healthcare*, 6(3):105.
15. **Bey GS**, Ulbricht CM, and Person SD. Theories for Race and Gender Differences in Management of Social Identity-related Stressors: A Systematic Review (2018). *Journal of Racial and Ethnic Health Disparities*, doi: 10.1007/s40615-018-0507-9
16. Sanchez SH, Thanik E, **Bey GS**, Papazaharias DM, Onyebekwe LC, Oh J, Syldort M, Wolf S, and Garland EJ. Assessment of Bicycle Use Among Residents in Affordable Housing in New York City (2017). *Science Journal of Public Health*, 6(5):127.
17. **Bey, GS**, Waring ME, Jesdale BM, and Person SD. Gendered Race Modification of the Association between Chronic Stress and Depression among Black and White U.S. Adults (2016). *American Journal of Orthopsychiatry*, 88(2):151-160.
18. Garland E, Baban K, Garland V, **Bey GS**, Sanchez SH. One Step at a Time Towards Better Health: Active Design in Affordable Housing (2014). *Environmental Justice*, Vol. 7.

Submitted manuscripts:

1. **Eguchi E**, Prizment A, Wang S, Sedaghat S, Nagayoshi M, Everson-Rose S, Sullivan K, **Bey G**, Kucharska-Newton A, Coresh J, Guan W, and Lutsey P. Social networks, social support, and association with Age Acceleration of Proteomic Aging Clocks: The Atherosclerosis Risk in Communities Study.

Manuscripts in Preparation:

1. **Bey, GS**, Waheed ZI, Carmody M. Development of the Identity Vitality-Pathology Scale: A novel measure of health-relevant identity-based influences on stress and coping.
2. **Bey, GS** et. al. Anger expression moderates the effects of neighborhood disadvantage on brain health among African Americans in the Atherosclerosis Risk in Communities and Jackson Heart Study cohorts.
3. **Bey, GS** et. al. Self-reported Discrimination and cognitive decline: An intersectional analysis of the KHANDLE-STAR cohort.

Refereed and Other Products of Scholarships

1. Diego Ramonfaur, Rani Zierath, Victoria Arthur...**Bey, GS**...Amil M. Shah. Proteomic Measures Linking Social Determinants of Health to Heart Failure Risk: The Atherosclerosis Risk in Communities Study (American Heart Association Scientific Sessions), Philadelphia, PA 2023 (Oral)
2. **Bey, GS**. The role of the social exposome and social determinants of health in resilience to stressors (American Geriatrics Society Annual Meeting), Long Beach, CA 2023 (Oral)
3. **Bey, GS**. Characterizing pathways from social stressors to cognitive health disparities (Sticht Center Conference on Aging), Winston-Salem, NC 2022 (Oral)
4. **Bey, GS**, Pike J, Palta P, Manly JJ, Barnes LL, Barber S, and Heiss G. Anger moderates the effects of neighborhood disadvantage on cognitive decline among African Americans in the Atherosclerosis Risk in Communities and Jackson Heart Study cohorts (Alzheimer's Association International Conference), San Diego, CA 2022. (Poster)
5. **Bey, GS**, Pike J, Palta P, Xiao Q, Love SM, Barber S, and Heiss G. Biological age mediates the effects of neighborhood disadvantage on heart failure risk among Black persons in the Atherosclerosis Risk in Communities and Jackson Heart Study cohorts (Interdisciplinary Association for Population Health Science Annual Conference), Minneapolis, MN 2022. (Oral)
6. **Bey, GS**, Pike J, Palta P, Xiao Q, Love SM, Barber S, and Heiss G. Optimism moderates the association of neighborhood disadvantage with incident heart failure among Black persons in the Atherosclerosis Risk in Communities and Jackson Heart Study cohorts (American Heart Association EPI | LIFESTYLE Conference), Chicago, IL 2022. (Poster)
7. **Bey GS**, Person SD, and Kiefe CI. Gendered race and setting matter: Sources of complexity in the relationships between reported interpersonal discrimination and cardiovascular health in the CARDIA study (Society for Epidemiologic Research Annual Meeting), Minneapolis, MN 2019. (Oral)
8. **Bey GS**, Person SD, and Kiefe CI. Intersectional effects of racial and gender discrimination on cardiovascular health vary among black and white women and men in the CARDIA Study (American Heart Association EPI | LIFESTYLE Conference), Houston, TX 2019. (Poster)
9. **Bey GS**, Person, SD, and Kiefe, CI. Race, sex, and geographical variation in perceived racial discrimination: The Coronary Artery Risk Development in Young Adults (CARDIA) study (American Heart Association EPI | LIFESTYLE Conference), New Orleans, LA 2018. (Poster)
10. López-Cepero A, **Bey GS**, Lemon S, and Rosal MC. The association between Food Insecurity and Emotional Eating in Latinos is mediated by perceived stress (Nutrition), Boston, MA 2018.
11. **Bey, GS**, and Person, SD. Variation in Allostatic Load biomarker association with Depression among Black and White Women and Men (Annual Meeting of the American Psychiatric Association), San Diego, CA 2017.
12. **Bey GS**, Ash A, Cabral L, and Gurewich, D. Whether and How to Include Social Determinants of Health in Care Delivery Risk Adjustment: A Select Review of State-of-the-Art Opinions and Practice (National Health Policy Conference), Washington, D.C. 2017. (Poster)
13. **Bey, GS**, and Person, SD. Race/Sex Modification of the Association between Allostatic Load and Depression: Findings from the National Health and Nutrition Examination Survey, 2005-2010 (UMass Center for Clinical and Translation Science conference), Worcester, MA 2016.
14. Gurewich, D; Willis G; Cabral L; **Bey GS**; Eanet F; Clark M; and Ash A. Risk Adjustment in MassHealth Payment and Care Delivery Reform: Qualitative Research Report (2016) (Research Paper).

Theses/Dissertations:

1. **Bey, GS.** "Interpersonal discrimination, gendered race, and cardiovascular disease disparities: Application of the emerging Identity Pathology Model", University of Massachusetts Graduate School of Biomedical Sciences Library, Thesis Advisor: Sharina Person (2019) (*Doctoral thesis*).
2. **Bey, GS.** "Physical activity and obesity among women in the South Bronx: A cross-sectional study", Icahn School of Medicine at Mount Sinai Library, Supervisor: Elizabeth Garland (2014) (*Master's thesis*).
3. **Bey, GS.** "Living Illness: Memoirs of a Young Black Woman", Princeton University Library, Supervisor: Carol Greenhouse (2009) (*Undergraduate senior thesis*).

Teaching activities

- 2021- Co-instructor, EPID 704: Socially Responsible Epidemiology
University of North Carolina at Chapel Hill, Department of Epidemiology
Class size: ~35
Level: 1st year predoctoral (required)
Credit hours: 1
Dates offered: Fall semester
- 2019-2022 Instructor, The Mentorship Program
North Carolina School of Science and Mathematics
Lead Instructors: Letitia Hubbard, PhD and Josh Fuchs, PhD
Class size: 36
Level: High school juniors and seniors
Dates offered: Fall and Spring semesters
Responsibilities: Curriculum development, grading, teaching research conduct and presentation skills

Memberships

- 2023 – Member, International Society to Advance Alzheimer's Research and Treatment
- 2022 – Member, Association of American Medical Colleges
- 2018 – Peer reviewer: American Journal of Orthopsychiatry; Journal of the American Heart Association; American Journal of Epidemiology; Aging and Mental Health; BMC Public Health; Social Science and Medicine; Journal of Racial and Ethnic Health Disparities; International Journal of Chronic Disease; PLOS One; BMJ Open; Brain, Behavior, and Immunity – Health; Journal of Gerontology – Medical Sciences; Circulation – Cardiovascular Imaging; Social Problems
- 2018 – Member, American Heart Association
- 2016 – 2021 Member, AcademyHealth
- 2015 – Member, Society for Personality and Social Psychology

Grants

Current:

Title: Identity influences on psychosocial traits, biologic age, and cardiovascular disease disparities
Mechanism: K99/R00 Pathway to Independence Award #1 K99 AG075327-01
Funder: National Institute on Aging
Role: PI
Dates: 1/01/2023 – 12/31/2025
FY award amount: \$249,099
Effort level: 92%

Title: Ameliorating Social Isolation in Populations Facing Health Disparities: Identifying Social Structural and Person-level Factors that Impede or Facilitate Health-related Social Behavior Change

Mechanism: R01 Award #1R01MD018492

Funder: National Institute of Minority Health and Health Disparities

Role: Co-I

Dates: 05/09/2022 – 11/30/2027

FY award amount: \$659,743

Effort level: 8%

Title: Identity influences on psychosocial traits, biologic age, and cardiovascular disease disparities

Mechanism: NIH Loan Repayment Program

Funder: National Institute on Aging

Role: PI

Dates: Anticipated 08/01/2023 – 07/31/2025

FY award amount: \$75,000

Effort level: N/A

Past:

Title: Development of the Identity Vitality-Pathology Scale

Funder: University of North Carolina at Chapel Hill, Clinical and Translational Science Awards program

Mechanism: NC TraCS \$2K Pilot Award Grant #2KR1472107

Role: PI

Dates: 04/01/2022 – 03/31/2023

FY award amount: \$2,000

Effort level: N/A

Title: Biopsychosocial mechanisms for the contribution of neighborhood stressors to brain health disparities

Funder: Columbia University, Center for Interdisciplinary Research on Alzheimer's Disease Disparities

Mechanism: Columbia University Pilot Award Grant #5P30AG059303-04

Role: PI

Dates: 07/01/2021 – 03/31/2022

FY award amount: \$35,000

Effort level: N/A