Sam Rosenberg

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EDUCATION

Boston University Boston, MA Jan. 2022 - Aug. 2023 Master of City Planning • Capstone: Economic Forces Related to Housing in Maplewood Square Northeastern University (transferred to BU) Boston, MA Master of Urban Planning & Policy May 2021 - Dec. 2021 Northeastern University Boston, MA Master of Public Health in Urban Health Sep. 2018 - Aug. 2020 • Capstone: Systemic Safety Traffic Interventions for Public Health Northeastern University Boston, MA Certificate in Urban Analytics May 2019 - May 2020 Delft University School of Technology Delft, Netherlands Dialogue of Civilizations in Sustainable Urban Transportation July 2018 - Aug. 2018 Northeastern University Boston, MA Bachelor of Science in Health Science, Minor in Urban Studies Sep. 2014 - May 2019

RESEARCH EXPERIENCE

Senior Data Analyst

Boston University School of Public Health

Jan. 2025 – present

Boston, MA

- PI: Eric Rubenstein
- Conduct advanced statistical analyses on electronic health records and Medicaid claims to study intellectual disabilities and associated health outcomes.
- Develop and maintain databases on AWS, ensuring compliance with data governance, privacy, and security for electronic health record, Medicare, and Medicaid data.
- Manage invoices, purchase orders, and contracts across two mixed methods studies.
- Use REDCap to determine participant eligibility, creating SOPs and auditing the work of research assistants.
- Collaborate with interdisciplinary research teams composed of community representatives to inform health policy.

Research Data Analyst

Sep. 2021 – Dec. 2024

Boston, MA

Boston University School of Public Health

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- PIs: Sandro Galea, Salma Abdalla, Greg Cohen
- Produced tables, figures, apps, and dashboards for websites, presentations, and publications using R and RShiny.
- Conducted a process evaluation of the Bloomberg Partnership for Healthy Cities through global surveys and interviews to determine effectiveness of policymaking across substance use harm reduction and urban health.
- Managed and tracked IRB protocols for exempt studies.
- Developed two agent-based model simulations to estimate how expanding national SNAP and unemployment benefits programs could have reduced the prevalence of poor mental health during the Covid-19 pandemic.
- Designed and implemented five global surveys across 10 countries and 70 cities, assessing multilevel social determinants of health, institutional trust, assets, debts, stressors, traumatic events, and mental health, providing data-driven insights for policy interventions.
- Imputed missing data and performed regression, elastic net, random forest, and other supervised machine learning to assess associations between social determinants and mental health outcomes.
- Consulted World Health Organization, municipal governments, and global nonprofit partners on processes and outcomes related to urban policymaking across transportation safety, food insecurity, air quality, and overdose.
- Managed and mentored twelve research assistants on manuscript writing, data analysis, and questionnaire validation, fostering an inclusive environment with strength in diversity of thought.
- Performed text mining and cluster analysis on publications to gauge thematic trends in systemic racism and Covid-19 research.
- Interpolated FEMA flood data points in QGIS, joining with Hurricane Harvey survey data to gauge the associations between neighborhood flooding, income inequality, and mental health.

GIS & Planning Assistant

June 2021 - Sep. 2021

Metropolitan Area Planning Council (MAPC)

Boston, MA

• Developed Python and SQL scripts to wrangle data from the U.S. Census API into the MAPC DataCommon to provide Massachusetts communities with actionable U.S. Census data for policy and zoning reforms.

- Validated and refined population simulations to predict housing and workforce growth in Massachusetts municipalities through 2050, supporting long-term urban planning efforts.
- Refined 75 key metrics to assess health, racial justice, and climate resilience, guiding municipal planning and policy interventions across Massachusetts.
- Integrated form-based zoning into the Zoning Atlas and updated the Massachusetts Land Parcel Database, coordinating with municipal leaders and using updated parcel and assessor data.

Research Assistant, Mass in Motion

Jan. 2020 - May 2020

Massachusetts Department of Public Health

Boston, MA

- Developed ArcGIS models and programs to visualize and analyze population reach of intervention sites.
- Led a systematic review on the social environment, urban planning, and health, extending the program's scope to encompass social cohesion benefits for urban communities.
- Advised 50 community-led food programs in Massachusetts to improve fresh produce access in food deserts and environmental justice areas, increasing local food security.
- Managed pass-through funds and audited community evaluations for quality, ensuring accountable and transparent resource use.

Research Assistant, Human Performance and Exercise Science Lab

Sep. 2018 - May 2019

Northeastern University

Boston, MA

- PIs: Diego Arguello, Dinesh John, Stephen Intille
- Developed machine learning models by synchronizing participant tasks with G-force data from twelve channels to reverse-engineer smart wearable movement and posture algorithms.
- Recorded and labeled participant movement through twelve G-force sensors and video camera equipment.
- Administered VO2-max testing and Dual-energy X-ray Absorptiometry (DXA) testing.

Neuroendocrinology Research Associate

July 2016 – June 2017

Yale University School of Medicine

New Haven, CT

- PIs: Robert Sherwin, Lisa Parikh, Renata Belfort-DeAguiar, Janice Hwang, Ania Jastreboff
- Analyzed fMRI and PET scan data to study the effects of obesity and diabetes on the human brain.
- Performed difference-in-difference analyses on fMRI data to compare within RCT and intervention arms.
- Established new participant screening procedure and conducted phone screens and informed consents.
- Designed new participant tasks and created new protocols for specimen retrieval.
- Presented an oral research presentation at the American Diabetes Association 77th Scientific Sessions.

TEACHING EXPERIENCE

Covid-19: A Pop-Up Course Graduate Teaching Assistant

Summer 2020

Northeastern University

Boston, MA

- Facilitated course of 200 students and 5 professors, ensuring smooth operation by anticipating technical issues.
- Coordinated twenty guest lecturers on topics like infectious disease surveillance and legal structures of response.

Race, Ethnicity, & Health Graduate Teaching Assistant

Spring 2020

Northeastern University

Boston, MA

- Delivered lectures on race, immigration, citation formatting, and the impacts of terminology on research representation.
- Guided students through two-part research papers tying a racial/ethnic group to a health outcome with culturally-appropriate, evidence-based interventions.
- Transitioned course to online learning and developed future curricula for online and modular learning.

Global Discrimination & Health Graduate Teaching Assistant

Fall 2019

 $Northeastern\ University$

Boston, MA

- Delivered lectures on citation formatting, global migration, ethnography, and climate change.
- Graded homework assignments and managed Blackboard site, uploading weekly discussion threads and readings.
- Edited drafts of final assignments, ensuring sound foundation of multilevel program proposal.

Introduction to Exercise Science Graduate Teaching Assistant

Spring 2019

 $Northeastern\ University$

Boston, MA

- Led laboratory sessions, teaching thirty students how to operate machines and use proper form to prevent injury.
- Instructed students on the principles and applications of body composition measurement tools.

Community & Public Health Graduate Teaching Assistant

Fall 2018

Northeastern University

Boston, MA

- Scheduled guest lectures; Delivered lectures on social determinants of health and healthy community design.
- Graded homework assignments and weekly quizzes, updated Blackboard grades, and answered student questions.

Senior Health Educator Peer Health Exchange

Sep. 2015 – Sep. 2017 Boston, MA

• Complemented health education in Boston high schools, teaching the knowledge, skills, and resources to improve students' decision-making skills with engaging workshops centered on peer pressure, sex education, drugs, and alcohol.

Staff Senate Representative, Epidemiology

Boston University School of Public Health

Dec. 2021 – Dec. 2023 Boston, MA

• Chaired the Staff Senate, leading four inclusive work culture initiatives and a quarterly recognition program to enhance staff morale and retention.

President, MPH Student Advisory Council

Northeastern University

Sep. 2019 – May 2020

Boston, MA

 Developed four programs for MPH student networking, professional development, and staying connected during the pandemic.

Patient Operations Assistant

Jan. 2018 – Jan. 2020

Massachusetts Eye and Ear Infirmary

Boston, MA

- Supervised team of co-operative education students, hired new staff, and trained new staff members.
- Maintained patient care areas, ensuring sterility; assisted physicians and nursing staff in operating rooms.
- Managed inventory and ordering of surgical supplies for use in the operating rooms.

Resident Assistant

Jan. 2017 – June 2018

Boston, MA

 $Northeastern\ University$

- Designed and executed social programs for first- and second-year residents.
- Monitored residence dormitories, ensuring safety and security; mediated and resolved resident conflicts.

TECHNICAL SKILLS

Research Skills: Survey Design, Manuscript Writing, Grant Writing, Dashboard Building, Data Visualization, Agent-Based Modeling, Simulation Validation, Policy Evaluation, Project Management

Software Skills: R, RShiny, Python, SQL, HTML/CSS, JavaScript, SPSS, SAS, Stata, ArcGIS, QGIS, Qualtrics, REDCap, Tableau, Excel, VOSviewer, Rayyan

Analysis Skills: Logistic regression, generalized estimating equations, Poisson regression, linear regression, LASSO/elastic net, survival analysis, difference-in-difference, cluster analysis, propensity score matching, inverse probability weighting, raking, factor analysis, random forest, structural equation modeling

PEER-REVIEWED PUBLICATIONS

- 10. Abdalla SM, Rosenberg SB, Maani N, et al. Income, education, and the clustering of risk in cardiovascular disease in the US, 1999-2018. The Lancet Regional Health Americas. Published March 6, 2025. doi: 10.1016/j.lana.2025.101039
- 9. Ettman CK, Abdalla SM, Wang R, **Rosenberg SB**, Galea S. Generalized anxiety disorder in low-resourced adults: a nationally representative, longitudinal cohort study across the COVID-19 pandemic. *Am J Epidemiol*. Published online August 9, 2024. doi:10.1093/aje/kwae270
- 8. Abdalla SM, Assefa E, **Rosenberg SB**, et al. Perceptions of the determinants of health across income and urbanicity levels in eight countries. *Commun Med (Lond)*. 2024;4(1):107. Published 2024 Jun 6. doi:10.1038/s43856-024-00493-z
- 7. Hoang H, Lacadie C, Hwang J, Lam K, Elshafie A, **Rosenberg SB**, et al. Low-calorie diet-induced weight loss is associated with altered brain connectivity and food desire in obesity. *Obesity*. 2024;32(7):1362-1372. doi:10.1002/oby.24046
- 6. Abdalla SM, Ettman CK, **Rosenberg SB**, et al. Post-traumatic stress disorder during the Covid-19 pandemic: a national, population-representative, longitudinal study of US adults. *npj Mental Health Research*. 2024;3(20). doi:10.1038/s44184-024-00059-w
- 5. Abdalla SM, Koya SF, **Rosenberg SB**, et al. Pandemic stressors and mental health indicators in eight countries. *Soc Psychiatry Psychiatr Epidemiol.* 2024;59(4):585-598. doi:10.1007/s00127-023-02541-w
- 4. Cohen GH, Wang R, **Rosenberg SB**, et al. Neighborhood-level economic characteristics and depression and PTSD symptoms among Houstonians who have experienced Hurricane Harvey and COVID-19. *Psychiatry Res.* 2024;333:115766. doi:10.1016/j.psychres.2024.115766
- 3. Abdalla SM, Rosenberg SB, Cohen GH, et al. Disruptions to the social determinants of health and mental health indicators during the pandemic in eight countries. SSM-Mental Health. 2023;4:100249. doi:10.1016/j.ssmmh.2023.100249
- 2. Abdalla SM, Hernandez M, Fazaludeen Koya S, Rosenberg SB, et al. What matters for health? Public views from

1. Bini J, Parikh L, Lacadie C, Hwang JJ, Shah S, **Rosenberg SB**, et al. Stress-level glucocorticoids increase fasting hunger and decrease cerebral blood flow in regions regulating eating. *NeuroImage: Clinical.* 2022;36:103202. doi:10.1016/j.nicl.2022.103202

Conference Abstracts, Posters, & Oral Presentations

- 10. Abdalla SM, **Rosenberg S**, Ettman CK, et al. The distribution of adverse mental health indicators across eight countries. *Consortium of Universities for Global Health. In press.*
- 9. Abdalla SM, Melendez Contreras C, **Rosenberg S**, et al. The sociodemographic distribution of institutional trust across eight countries. *Consortium of Universities for Global Health. In press.*
- 8. Abdalla SM, Pickerel NM, **Rosenberg S**, et al. The distribution of life stressors and traumatic events across eight countries. Consortium of Universities for Global Health. In press.
- 7. Lam W, Seo D, Lacadie C, Schmidt CP, **Rosenberg S**, et al. Short-term weight loss undermines brain regulation of food consumption. *Diabetes*. 2018;67(Supplement 1):1802-P. doi:10.2337/db18-1802-P
- 6. Groskreutz D, Sinha R, Lacadie C, Lam W, Hamza M, Schmidt CP, Seo D, Hwang J, Belfort-Deaguiar R, Leventhal
- J, Rosenberg S, et al. Hyperinsulinemia invokes greater brain perfusion in reward and motivation regions in obesity. *Diabetes*. 2018;67(Supplement 1):365-OR. doi:10.2337/db18-365-OR
- 5. **Rosenberg S**, Savoye M, Seo D, et al. Brain responses to postprandial glucose levels influence weight loss. *Diabetes*. 2017;66:A38-A38.
- 4. Parikh L, **Rosenberg S**, Jastreboff AM, et al. Stress-level increments in peripheral glucocorticoids affect brain regions that regulate feeding. *Diabetes*. 2017;66:A498-A498.
- 3. Lam W, Hamza M, Lacadie C, Schmidt C, Belfort-Deaguiar R, Hwang JJ, Seo D, **Rosenberg S**, et al. Does hyperinsulinemia in obesity elicit brain responses that provoke greater motivation for food? *Diabetes*. 2017;66:LB87-LB87.
- 2. Hamza MA, Hwang JJ, Lacadie C, Seo D, Parikh L, Schmidt C, Belfort-Deaguiar R, Lam W, Rosenberg S, et al. Stress perception and parietal lobe connectivity in type 1 diabetes. *Diabetes*. 2017;66:A42-A42.
- 1. Lam W, Seo D, Schmidt C, **Rosenberg S**, et al. Lowering blood glucose level diminshes brain responses in decision-making areas while promoting food desire in T2D patients. *Diabetes*. 2017;66:A499-A499.

Publications under Review

- 7. Tewolde S, **Rosenberg SB**, et al. Epidemiology of Alzheimer disease and related dementia among Medicare and Medicaid enrolled autistic adults, 2011-2019. *Under review*. 6. Abdalla SM, Pickerel NM, **Rosenberg SB**, et al. Distribution of experiences of traumatic events and life stressors across socio-economic groups in eight countries. *Under review*. 5. Abdalla SM, **Rosenberg SB**, Fazaludeen Koya S, et al. Structural racism and health in the US: a scoping and meta-knowledge review of the literature. *Under review*.
- 4. Abdalla SM, **Rosenberg SB**, Hu L, et al. The built environment and the health of racial/ethnic minority groups: a scoping and meta-knowledge review of the literature. *Under review*.
- 3. Abdalla SM, Fazaludeen Koya S, **Rosenberg SB**, et al. Structural racism in healthcare and the health of racial/ethnic minority groups. *Under review*.
- 2. Abdalla SM, Agarwal N, Rosenberg SB, et al. Association between gender inequality and population health indicators in 125 countries between 2000 and 2019: a panel data analysis. *Under review*.
- 1. Abdalla SM, Hu L, **Rosenberg SB** et al. Do lifestyle interventions have a long-term impact on cardiovascular outcomes? A review of reviews on the log-term effectiveness of individual behavioral interventions. *Under review*.