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ELIJAH WATSON

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Professional Summary

I am a population health scientist and biodemographer of aging trained in biological anthropology, social epidemiology, and biocultural medical anthropology. My research integrates ecosocial theory and fundamental causes theory with epigenetic biomarkers, population-based cohort data, and advanced causal inference methods to investigate how structural inequities shape health and aging across the life course.

Keywords: Aging, biodemography, life course, epigenetics, embodiment, climate and health, ecosocial theory, social epidemiology, biomarkers, quantitative methods, causal inference

Education

Ph.D. Anthropology, Northwestern University, Evanston, IL *Expected June 2026*
M.P.H. Epidemiology, Northwestern Feinberg School of Medicine, Chicago, IL *Exp. June 2026*
M.A. Anthropology, Northwestern University, Evanston, IL *June 2023*
B.A. Anthropology, UNC Chapel Hill, Chapel Hill, NC *June 2019*

Northwestern University Certificates

Society Biology and Health Certificate *Expected June 2026*
Management for PhDs, Northwestern Kellogg School of Management *August 2025*

- Highly selective, intensive certificate program for STEM PhD students surveying core MBA content in leadership, marketing, finance, accounting, strategic decision making, and negotiation

Awards

Grants

- **F31 Ruth L. Kirschstein Predoctoral Individual National Research Service Award (NRSA) |** ($88,110) *2024-2026*
  - National Institutes of Health / National Institute on Aging
  - F31AG084273 (Link to NIH Reporter)
  - Title*: "Socioeconomic status across the life course and epigenetic age acceleration in adulthood: Evidence from two generations of a Filipino birth cohort study"*
- **National Science Foundation Graduate Research Fellow (GRFP) |** $138,000 *2020*
- **UNC Frances L. Phillips Travel Scholarship**: Awarded to support travel to the Galapagos Islands and South Africa for fieldwork and experiential learning to inform future research on food and water insecurity | ($9,500) *2019*
- **UNC Undergraduate Research Consultant Team Grant |** ($10,000) *2019*
  - Pilot study of food and water security on Isla Isabela, Galápagos *(collaboration with the Universidad San Francisco de Quito & UNC-USFQ Galápagos Science Center)*

- **UNC Gillian T. Cell Senior Thesis Research Grant** *2018*
- **UNC Summer Internship Grant** *2018*
    - Awarded to support research practicum and training in statistical programming at the Carolina Population Center.

Scholarships and Awards

- **E.E. Hunt, Jr. Student Award for Outstanding Podium Presentation**, Human Biology Association *2024*
- **Tuition Scholarship,** Short course on causal inference, Department of Epidemiology, Harvard T. H. Chan School of Public Health *2022*
- **Travel Award,** Interdisciplinary Association of Population Health Scientists *2022*
- **Society, Biology, and Health Cluster Fellow,** Northwestern University *2021*
- **Honigmann Undergraduate Thesis Award**, UNC Dept. of Anthropology *2019*
- **Travel Award**, **Harvard T. H. Chan School of Public Health, Center for Communicable Disease Dynamics** | Conference to Increase Diversity in Mathematical Modeling & Public Health *2019*

Publications

Peer-reviewed Manuscripts

- **Elijah Watson**, Delaney Glass, and Lucia Petito. (2025). "Toward New Directions in Human Biology: A Roadmap for Anthropological Causal Inference with Observational Data." *American Journal of Human Biology.*
- Chihua Li, Rebecca Stebbins, Grace Noppert, Constanza Carney, Chunyu Liu, Ashley Sapp, **Elijah Watson**, and Allison Aiello. (2024). Peripheral Immune Function and Alzheimer's Disease: A Living Systematic Review and Critical Appraisal. *Molecular Psychiatry.* (link)
- Margaret Butler, Britney Smart, **Elijah Watson**, Shreya Narla, and Lauren Keenan-Devlin. (2023). Breastfeeding durations differ at the intersection of race/ethnicity and educational attainment in a nationally representative sample from the US. *Journal of Human Lactation*. (link)
- Melissa Manus, **Elijah Watson**., Sahana Kuthyar, Delia Carba, Nikola Belarmino, Thomas McDade, Christopher Kuzawa, and Katherine Amato. (2023). Prenatal household size and composition are associated with infant fecal bacterial diversity in Cebu, Philippines. *American Journal of Biological Anthropology*. (link)
- Amanda Thompson, Khristopher Nicholas, **Elijah Watson**, Enrique Terán, and Margaret Bentley. (2019). Water, food, and the dual burden of disease in Galápagos, Ecuador. *American Journal of Human Biology.* (link)

Dissertation Manuscripts in Preparation

- **Elijah Watson,** Thomas McDade, Michael Kobor, Calen Ryan, Nanette Lee, Linda Adair, and Christopher Kuzawa. "Epigenetic Age Acceleration Predicts Functional Aging, Biomarkers, and Socioeconomic Status Among Middle-Aged Filipino Women: A Longitudinal Validation of Epigenetic Clocks in a Non-Western Population"
- **Elijah Watson,** Thomas McDade, Lucia Petito, Michael Kobor, Calen Ryan, Nanette Lee, Linda Adair, and Christopher Kuzawa. "Timing of pre- and postnatal exposure to the 1983 Filipino economic crisis and epigenetic age acceleration four decades later: Evidence from the Cebu Longitudinal Health and Nutrition Survey"
- **Elijah Watson,** Thomas McDade, Lucia Petito, Michael Kobor, Calen Ryan, Nanette Lee, Linda Adair, and Christopher Kuzawa. "Typhoon exposure, epigenetic aging, and cognitive decline: Evidence from two generations of the Cebu Longitudinal Health and Nutrition Survey"
- **Elijah Watson,** Thomas McDade, Lucia Petito, Michael Kobor, Calen Ryan, Nanette Lee, Linda Adair, and Christopher Kuzawa. "Socioeconomic status across the life course and epigenetic age acceleration in adulthood: Evidence from two generations of a Filipino birth cohort study"

Working Papers

- **Elijah Watson**, Joshua M. Schrock, Christina Hayford, Daniel T. Ryan, Rana Saber, Nanette Benbow, Michael E. Newcomb, Alexis R. Demonbreun, Elizabeth M. McNally, Richard T. D'Aquila, Brian Mustanski, and Thomas W. McDade. "Racialized economic segregation in Chicago and COVID-19 antibody prevalence before the 2020 vaccine rollout: An application of Bayesian multilevel regression and poststratification"
- **Elijah Watson**. "Effects of schooling on the risk of intimate partner violence among women in the Philippines: Quasi-experimental evidence from the Demographic & Health Surveys and an educational policy reform"

Presentations and Talks

Upcoming Invited Lectures

- Invited lecture, *Montgomery Lecture Series*, Center for Medical Humanities and Bioethics, Northwestern University Feinberg School of Medicine (Jan 2026): "Embodied truths and the stories bodies tell: Prenatal exposure to the 1983 Filipino economic crisis and epigenetic age acceleration four decades later"
- Guest lecture, University of Toronto (Oct 2025): "Causal Inference with Observational Data," Graduate Seminar in Anthropology.

Oral Presentations

- **EJ Watson**, Thomas McDade, Lucia Petito, Michael Kobor, Calen Ryan, Nanette Lee, Linda Adair, and Christopher Kuzawa. "Timing of pre- and postnatal exposure to the 1983 Filipino economic crisis and epigenetic age acceleration four decades later: Evidence from

the Cebu Longitudinal Health and Nutrition Survey." Flash Talk at the 2025 Formal Demography Workshop, University of California, Berkeley. *2025*

- **EJ Watson**, Delaney Glass, Lucia Petito. "Toward New Directions in Human Biology: A Roadmap for Causal Inference with Observational Data." Human Biology Association. Baltimore, MD. *2025*
- **EJ Watson.** "It's Biomedical Standard Time somewhere: Unsettling the framing of epigenetic aging as a causal mechanism linking social and environmental exposures to health." EpiCause 2024: Causality in Epidemiology' meeting at the Institute of Philosophy and Scientific Method. Johannes Kepler University of Linz, Austria. *2024*
- **EJ Watson,** TW McDade, CP Ryan, NR Lee, JL MacIsaac, K Dever, P Atashzay, MS Kobor, CW Kuzawa. "Evaluating the convergent and predictive validity of epigenetic age acceleration measured from common epigenetic clocks in Cebu, Philippines." Human Biology Association. Los Angeles, CA. (Awarded the E.E. Hunt, Jr. Student Award for Outstanding Podium Presentation). *2024*

Selected Poster Presentations

- **EJ Watson**. Effects of schooling on the risk of intimate partner violence among women in the Philippines: Quasi-experimental evidence from the Demographic & Health Surveys and an educational policy reform. Upcoming presentation at the Interdisciplinary Association for Population Health Sciences. Pittsburgh, PA. *2025*
- **Watson, EJ**, LC Petito, TW McDade, SL Young, CW Kuzawa. "Intergenerational educational attainment and mental health in young adulthood among a Filipino birth cohort." Society for Epidemiologic Research. Portland, OR. *2023*
- **Watson, EJ**, AK Johnson, C. Scott Smith, M Newcomb, R Saber, JM Schrock, DT Ryan, AR Demonbreun, B Mustanski, R D'Aquila, EM McNally, TW McDade. "Neighborhood racialized economic segregation and SARS-CoV-2 seropositivity among a Chicago adult community-based sample." Society for Epidemiologic Research. Chicago, IL. *2022*
- **Watson, EJ,** ME Bentley, AL Thompson. "Social Predictors of Diet Quality in Galápagos, Ecuador." Human Biology Association. Cleveland, OH. *2019*

Lectures, Talks, and Panels

- "The embodiment of acute climate disaster: Effects of typhoon housing damage in childhood on biological aging in adulthood in Cebu, Philippines." Presented at workshop with visiting CLHNS colleagues from the Office of Population Studies, University of San Carlos, Cebu, Philippines. Northwestern University. *2024*
- "Statistical versus causal inference." (Remote). Invited panelist for a round table discussion hosted by the Frontiers in Social Evolution (FINE) Seminar. *2022*
- "A primer on using directed acyclic graphs for causal inference." Workshop presentation for Northwestern's Evolutionary & Ecological Approaches to Health research group meeting. *2022*

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Research Experience

Doctoral Researcher, Northwestern University *2020 – present*

- Designed and led an interdisciplinary dissertation project integrating biosocial anthropology, epidemiology, and biodemography to examine how socioeconomic inequality becomes biologically embedded through epigenetic aging.
- Conducted advanced statistical analyses (causal inference, mediation, and machine learning approaches) on longitudinal cohort data from the Philippines, generating novel insights into the life course determinants of health and aging.

Field Researcher

- **UNC Center for Galápagos Studies & Galápagos Science Center** Isabela Island, Galapagos *2019*

Internships

- **Carolina Population Center**. UNC Chapel Hill *2018*
- **Scalabrini Centre of Cape Town, South Africa** *2017*
    - Refugee/Migrant Employment Access Programme Intern

Research Assistantships

- **UNC Gillings School of Global Public Health, Department of Epidemiology** *2018*

Teaching Experience

Instructor of Record, Northwestern University, Evanston, IL *2025 & Winter 2026*

- **"Climate Change and Sustainability in Health Care" –** Winter 2025
    - Elective seminar for (10) first year medical students at the Northwestern Feinberg School of Medicine
    - Coordinated and facilitated seminars and lecturer for 2 out of 5 sessions

Teaching Assistant, Northwestern University Evanston, IL

- **"Intermediate Epidemiology"** | BIOSTAT 401 *2023*
    - Taught by Dr. Amy Johnson and Dr. Andrew Naidech (MPH/MS course)
    - Lectured on "Causal Inference with Directed Acyclic Graphs"
- **"Introduction to Epidemiology"** | BIOSTAT 301 *2023*
    - Taught by Peter Serrano, MPH (MPH/MS course)
- **"The Social Determinants of Health"** | Global Health 222 *2023*
    - Taught by Dr. Charlayne Mitchell (undergraduate course)
- "**Introduction to Global Health"** | Public Health/Global Health 390 *2022*
    - Taught by Dr. Bill Leonard (combined undergraduate/MPH course)

Workshop Instructor, Northwestern University Evanston, IL

- **R for Social Data Science** *2024*
    - Designed and led a 5-session workshop (4–5 attendees weekly) on reproducible data science (R, tidyverse, RStudio, Quarto, GitHub).

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Mentorship

- Silas Colombara, Undergraduate Research Mentee *2023 – Present*
    - "Childhood Household Wealth Trajectories and Adult Mental Health in the Cebu Longitudinal Health and Nutrition Survey"

Trainings

Workshops and Short Courses

- **Berkeley Workshop in Formal Demography,** University of California, Berkeley *2025*
- **Causal Inference with Time-Varying Exposures**, Society for Epidemiologic Research workshop *2023*
- **Introduction to Parametric and Semi-parametric Estimators for Causal Inference,** Society for Epidemiologic Research workshop *2023*
- **Writing Reproducible Research in R with Quarto,** Society for Epidemiologic Research workshop *2023*
- **Key Topics in Causal Inference,** CAUSALab, Department of Epidemiology, Harvard T. H. Chan School of Public Health *2022*
- **Mixtape Sessions: Causal Inference,** taught by Dr. Scott Cunningham, Baylor University *2022*

Op-eds

- "Opinion: Climate studies, National Institutes of Health Under Attack" Asheville Citizen Times *2025*
- "Can a Clock Tell Us How Old We Really Are?" – in press at *Sapiens Anthropology Magazine,* public-facing science writing on the uses and misuses of epigenetic clock algorithms *2025*

Service and Outreach

- **Boys & Girls Clubs of Chicago / Northwestern Science in Society Program**
    - Science Club Mentor, Pedersen-McCormick Boys & Girls Club *2023 – 2024*
- **Northwestern Feinberg School of Medicine, Program in Public Health**
    - Curriculum Committee *2025 – Present*
- **Interdisciplinary Association for Population Health Science**
    - Student Committee, Webinar Co-Chair *2023 – Present*

Professional Society Memberships

- Population Association of America
- Interdisciplinary Association for Population Health Science
- Society for Epidemiologic Research
- Human Biology Association

Skills

- Statistical analysis using R (advanced), Stata (proficient), SAS (basic)
- Quarto/RMarkdown

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- Git/GitHub
- Causal inference with observational data
    - Biostatistical approaches (g-computation, IPTW, causal mediation analysis)
    - Econometric approaches (instrumental variables, natural experiments)
    - Machine learning approaches (Targeted Maximum Likelihood Estimation)