

Postdoctoral Fellow Position in Racism and Birth Outcomes

Researchers at the University of California, San Francisco announce an opening for a Postdoctoral Fellow with a focus on racism and health outcomes under the NIH R01 grant “Risk and strength: determining the impact of area-level racial bias and protective factors on birth outcomes.”

Under the direction of the principal investigator, Dr. Thu T. Nguyen, the postdoctoral fellow will help lead publications investigating the role of area-level racial sentiment, hate speech, and racial prejudice on adverse birth outcomes, allostatic load, and other health outcomes.

Project Summary

There are large and persistent racial and ethnic disparities in preterm birth and low birth weight. Individual-level risk factors do not fully explain the observed disparities. There is increasing evidence for the role of area-level racial bias in explaining these disparities, but we currently lack the measures, methods, and findings to empirically evaluate its influence. The proposed research will advance the research in all 3 areas. We will be using online and social media data and machine learning models to create two measures of area-level racial bias and implement a robust research design to determine whether area-level racial bias impacts birth outcomes. Our investigative team—comprised of experts in the field of epidemiology, health disparities, machine learning, social media data, biostatistics, and community engaged research—is uniquely suited to implement the study aims. Our Specific Aims are to 1) track and detect changes in area-level racial bias and identify local and national race-related events during these time points, 2) determine the impact of changes in area-level racial bias on changes in adverse birth outcomes, and 3) identify protective factors for adverse birth outcome. Because our data is collected repeatedly and finely across the United States, we can explicitly account for temporal trends and place effects. The proposed study uses new data to capture trends in racial bias with sophisticated machine learning models, and represents a critical advancement in the investigation of racial disparities in birth outcomes.

Postdoctoral fellow’s role

The postdoctoral fellow will help address issues related to the measurement of area-level racial bias using online and social media. They will implement analytic approaches using the timing of race-related events to quantify the extent to which changes in area-level racial bias are related to changes in birth outcomes. The project employs an array of methods including rigorous quantitative approaches involving large datasets, machine learning models, analysis of natural experiments, regression methods, and qualitative research methods to accomplish the research objectives. The role of the fellow would be to implement the quantitative analyses and be part of the broader research team to support the machine learning and qualitative work.

The postdoctoral fellow will gain experience in data management of large data sources, data analysis, manuscript preparation, and grant proposals. The fellow will have opportunities to first author papers and have dedicated time to prepare her/his own grant proposals. The fellow will also have opportunities to attend conferences and will collaborate with the interdisciplinary research collaborative, Big Data for Health Equity (BD4HE), led by Dr. Nguyen. BD4HE is composed of faculty, trainees, and students across various universities in the U.S. committed to advancing research on inequities in health using big data. As a result, the fellow will have a well-rounded and robust preparation for future scientific and career endeavors. People who identify with groups which are under-represented in academia are especially encouraged to apply as a diverse research team with strengthen this work.

Qualifications

Candidates must hold or complete a doctoral degree (PhD, ScD, DrPH, or equivalent) before the position starts. We encourage applications from epidemiology, biostatistics, social and behavioral sciences, and data science.

Experience in Stata, R, or SAS is required. Fellow must have strong quantitative skills, be detailed-oriented, and willing to implement and / or learn novel approaches in advanced epidemiology, data science, and GIS as needed. Methodological expertise in longitudinal analysis and natural language processing are highly desirable. Research experience in social determinants of health, health disparities, and racism research is also highly desirable. This position is for two to three years pending annual review and is suitable for graduating doctoral students who are looking to gain research experience and further career development.

Applicants may submit their applications in an email entitled "Postdoc application" to Dr. Nguyen at thu.nguyen@ucsf.edu. Questions about the position can also be directed to Dr. Nguyen. Screening of applicants will begin immediately and will continue as needed throughout the recruitment period. The earliest start date is June 2021. Salaries are competitive and will be commensurate with the applicants' experience and training.

Application requirements

- Curriculum Vitae
- Cover Letter describing interests, experience, and career goals
- One manuscript (published or unpublished)
- Sample of statistical code

Reference requirements

- 3-5 required (contact information only)

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, or protected veteran status.