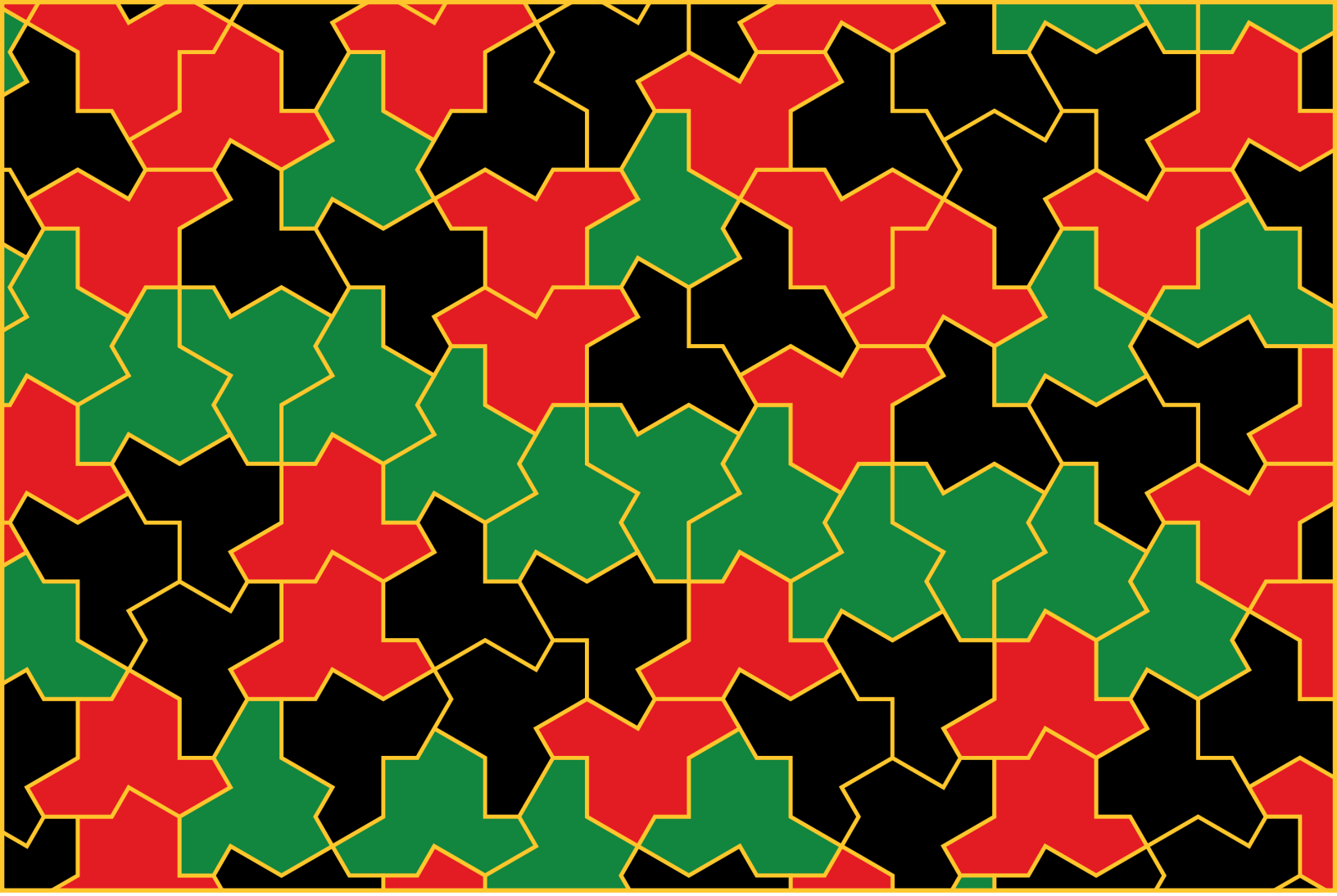

# Anti-Racist Health Policy: Addressing the Mechanism and Manifestations of Racial Health Inequities©

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# Policy Brief

## Executive Summary

Despite overall improvement in population health, the racial gap in health outcomes has persisted. Racism is a leading explanation for continuing racial health inequities. In this brief, we describe a series of studies examining: 1) the psychobiological mechanisms through which racism gets "under the skin"; and 2) the measurement of area-level racial sentiment—a manifestation of cultural racism—and its associations with racial health inequities. We, then, discuss the implications of this and the larger evidence base in support of broad scale antiracist health policy. Finally, we provide several recommendations to address racial health inequities.

## Background

Racial health inequities in the U.S. have been pervasive, recurring across time, across place, and over the lifecourse. Despite overall improvement in population health, the racial gap in health outcomes has persisted, and in some instances widened, which is only partially explained by some of the well-known predictors of health (eg, individual- and community-level socioeconomic status, health behaviors, access to health care).[1–4] Racism is a leading explanation for continuing racial health inequities. Thus, in this brief, instead of saying racial health disparities, we use the term *health inequities* to convey the unjust nature of the non-random distribution of health/illness across racial and ethnic groups.

Racism has been defined as "a *system* of structuring opportunity that confers unfair advantage and disadvantage by race across multiple levels, from structural and institutional policies, practices, and norms including (control over) collective and individual discourses—systems of thoughts, constructed knowledge, beliefs, attitudes, and communications that construct or govern interpretations of reality/truth—to individual beliefs, attitudes, and behavior."[5] Racism has been reported as a chronic stressor among racially stigmatized groups and has been linked with numerous adverse health outcomes.[6–14] However, until relatively recently, the psychobiological mechanisms linking racism to poor physical health were not well understood, diminishing the biological plausibility of these associations and reifying notions of the biological basis of race.

Over the past 20 to 30 years, a strong body of research investigating and identifying the psychobiological mechanisms linking racial discrimination to poor health has emerged.[7–9,11,13–23] The majority of this work has focused on individual-level (i.e., personally-mediated) racial discrimination—being the target or victim of racial discrimination—which has contributed to our understanding of the health effects of racial discrimination, or racism more broadly. This work has also identified the types and scale of interventions that may help ameliorate racial health inequities. In addition to racial discrimination at the individual level, recent research has focused on more fundamental forms of racism, structural and cultural racism, showing associations with health that among other pathways, also operate through a stress pathway. This research has also shown that these health

impacts are not dependent upon individual experiences of racial discrimination.[24]

In this brief, we describe a series of studies examining: 1) the psychobiological mechanisms through which racism gets "under the skin";[25] and 2) the measurement of area-level racial sentiment—a manifestation of cultural racism—and its associations with racial health inequities. We, then, discuss the implications of this and the larger evidence base in support of broad scale antiracist health policy. Finally, we provide several recommendations to address racial health inequities.

## Methodology and Data Collection

Below, we describe three data collection projects that help fill important knowledge gaps in understanding racism as a fundamental cause of health inequities.

**The Bay Area Heart Health Study (Chae, PI)** was a cross-sectional study designed to examine associations between racial discrimination and health among African American men.[17]

- We recruited 95 African American (AA) men between February 2010 and May 2010 from the San Francisco Bay Area. Eligibility criteria were: 1) self-identification as an African American man; 2) age between 30 and 50 years; 3) U.S. nativity and parental U.S. nativity; 4) absence of serious or unstable disease (e.g., cancer, HIV/AIDS, tuberculosis, hepatitis); and 5) ability to read, write, and understand English. Through self-referral from posted advertisements and via word of mouth, participants were recruited from socioeconomically diverse neighborhoods and at outlets where the population was most accessible, including churches, barbershops, and community events.

- Study procedures were: 1) a brief face-to-face interview assessing basic demographic characteristics; 2) minimally invasive physical exam; 3) administration of the Black-White implicit association test (B-W IAT) to assess internalized racism (having a pro-/anti-Black bias); and 4) a computer-assisted self-interview including more sensitive measures of racial discrimination, psychological factors, and socioeconomic measures. The physical exam included the collection of anthropometric data and dried blood spots that were assayed for biomarkers of cardiovascular health and cellular aging (i.e., telomere length). Statistical procedures consistent with the study outcome were used to assess associations between study variables. All studies included controls for a range of covariates to minimize confounding.

**The African American Women's Heart & Health Study (Allen, PI)** is an observational cross-sectional study designed to examine associations between racial discrimination and cardiometabolic risk, physiologic dysregulation, and cellular aging among a community sample of 208 midlife (ages 30–50) AA women residing in the San Francisco Bay area.[13]

- Study recruitment took place between March 2012 through March 2013. Eligibility criteria included: 1) self-

identified AA and female since birth, 2) ages 30–50, 3) U.S.-born, 4) parent(s)/primary caregiver(s) US-born AA, 5) can read/write English. Purposive sampling was used to maximize variability on key exposures and covariates (eg, racial discrimination, socioeconomic factors) and included: targeted neighborhood sampling (eg, low vs. high percent AA per census tract), venue- (eg, nail/hair salons, churches), event- (eg, arts concerts/performances, festivals, black college expo) and organization-based sampling (eg, non-profits serving either low- or high-income AA women). We also recruited via social media and traditional media outlets.

- Study participation consisted of: 1) an interviewer-administered questionnaire; 2) computer-assisted self-interview for more sensitive questions; 3) physical exam; and 4) a fasting venous blood draw. We collected a range of self-reported mental and physical health outcomes as well as objectively assessed health indicators including standard anthropometric measures and various biomarkers indicative of physiologic functioning and cellular aging. Statistical procedures consistent with the given study outcome were used to assess associations between study variables. All studies included controls for a range of covariates to minimize confounding and other procedures intended to minimize threats to validity.

**Big Data for Health Equity (Nguyen, PI)** is a series of studies aimed to 1) develop a measure of area-level racial sentiment; 2) examine trends in racial sentiment across place and time; and 3) test associations with health outcomes at the population level and among race-specific groups.

- The majority of studies examining racism and health assess self-reports of personally-mediated racial discrimination.[26] To address some of the limitations of self-report (eg, social desirability, self-censorship, and other forms of reporting bias) and of focusing only on experiences at the individual level, we use social media data to capture area-level racial sentiment, the racial climate of place, and how it may impact the health of people living in those places, independent of individual level experiences. This is an emerging area of research; hence, there is no gold standard measure of area-level racial sentiment.

- Our goal was to develop such a measure to gain a more ecological perspective of collective or cultural racism as a driver of health inequities. Cultural racism has been defined as "the values and belief systems of White superiority that operate at the level of our shared social consciousness and are expressed in the language, symbols, and media representations of dominant society".[24] We used Twitter's streaming application programming interface to collect a random sample of tweets (ranging from 1.25 million to ~56 million tweets from over 3 million unique twitter users) originating in the U.S. containing at least one race-related term based on U.S. census racial categories, prior studies examining race-related online conversations, and a validated database of racial slurs. Sentiment analysis was performed using support vector machine, a supervised machine learning model. The sentiment of each tweet was categorized as negative vs. positive/neutral. Twitter data were merged, as needed, with other data sources to test associations with specified outcomes.

## Findings

Our findings for each study are summarized below.

**Bay Area Heart Health Study (BAHHS)**: After controlling for chronologic age and socioeconomic and health-related characteristics, studies show associations between racial discrimination and cellular aging, hypertension, and depressive symptoms.[17,27,28]

- Most studies have focused on personally-mediated racism. Few studies have examined internalized racism, that is, when one internalizes negative beliefs and attitudes about one's own racial group. This internal, often subconscious, level of racism can manifest as embracing whiteness, denial of racism, self-devaluation, and acceptance or resignation of racial prejudice and discrimination as deserving.[26]

- The BAHHS is among the few to examine internalized racism and the only one, to our knowledge, to assess the joint influence of multiple levels of racism. We studied the joint influence of personally-mediated and internalized racism (using implicit/subconscious racial bias assessed using the B-W IAT as a proxy), and found a significant statistical interaction between the two across health outcomes. In one study, we found that those demonstrating an implicit anti-Black bias *and* reporting higher levels of racial discrimination had the shortest telomeres, whereas those presenting an implicit anti-black bias and reporting lower levels of racial discrimination had the longest telomeres.[17] Cellular aging has been associated with numerous chronic diseases and premature mortality.

- Similarly, among participants with an implicit anti-Black bias, more frequent reports of racial discrimination were associated with a higher probability of hypertension, whereas less frequent racial discrimination was associated with lower hypertension risk.[27] Among those with an implicit pro-Black bias, reporting more frequent racial discrimination was associated with lower hypertension risk. Those with a negative implicit racial bias may be more likely to engage in self-blame and be vulnerable to the impact of stigmatizing experiences, exacerbating stress responses. Indeed, prior research has posited that attributing negative life experiences to external causes, such as racial discrimination, may be protective.[29] We found that higher implicit anti-Black bias was associated with lower reports of racial discrimination.[28] In contrast, greater reports of racial centrality, which is associated with having a positive racial identity (eg, "I feel good about Black people", "I am happy I am Black") were positively associated with racial discrimination.

**African American Women's Heart & Health Study (AAWHHS)**: Physiologic aging or "weathering" is a leading explanation for poorer health among AA women.[30] One common measure of physiologic weathering is allostatic load, the simultaneous dysregulation of multiple physiologic systems (eg, neuroendocrine, cardiovascular, immune, metabolic), which results in greater biological susceptibility and increased risk for poor health.[31,32] Similarly, telomere attrition, or cellular aging, has been associated with a range of chronic diseases and mortality.[33,34] Studies show that AA women have up to five-fold higher odds of allostatic load.[32,35–37] and experience accelerated cellular aging relative to other race-gender groups.[38–40]

- Our studies were among the first to examine whether racial discrimination may help explain this pattern of heightened physiologic dysregulation and aging among AA women. Our studies with AA women have investigated and shown associations between racial discrimination and allostatic load, system-specific

dysregulation (eg, neuroendocrine, immune), cellular aging, cardiometabolic health and adverse birth outcomes. In one study, we examined the association between racial discrimination and allostatic load, stratified by educational attainment.[13] In the lower education group (<high school diploma), reporting low, high, and very high levels of racial discrimination was associated with higher allostatic load (a U-shaped relationship, reference group=moderate discrimination). In the higher education group, reporting low, high, and very high levels of racial discrimination was associated with lower allostatic load.

- Prior work has shown that acknowledging racial discrimination is protective of health vs. internalizing those experiences and potentially engaging in self-blame which is more common among socially stigmatized groups.[29,41] Indeed, we found that the higher education group reported more chronic racial discrimination. In other work using focus groups with AA women, we found that denying or ignoring experiences was common, particularly among lower socioeconomic groups.[6] These findings point to the potential intersecting dynamics of coping, racial identity, self- vs. system-blame, attributional ambiguity and implicit racial bias—additional factors associated with the overall burden of racism-related stress. Associations with allostatic load were stronger for racial discrimination occurring within institutional settings (eg, housing, health care, work, criminal justice) vs. more subtle everyday microaggressions (eg, being treated with less courtesy and respect).[42]

- We also found that racial discrimination occurring within institutional settings is associated with accelerated cellular aging, primarily among employed women.[43] This aligns with our work showing the workplace as one of the most commonly reported sources of racial discrimination for AA women.[42] Overall, our studies show that racial discrimination is a unique and salient form of social stress, both distinct from and more threatening than more general life stress (eg, family illness, job loss, and financial distress).[44] Racial discrimination is predictive of biological perturbations that play a critical role in the etiology and pathogenesis of numerous chronic diseases and mortality.

**Big Data for Health Equity**: Using our newly developed measure (see above), we documented area-level racial sentiment toward different groups and found the greatest negative sentiment toward Blacks and Middle Eastern groups.[45,46]

- We also show that negative sentiment has increased for all racial minority groups over time, 2011-2021, (Black, Latinx, Asian, Middle Eastern) at the national, state, and county levels.[46] Trends in racial sentiment also coincide with major societal events. For example, we saw a temporary decline in negative sentiment toward Blacks during the height of the Black Lives Matter movement and an increase in negative sentiment toward Asians with the emergence of COVID-19 and the use of terms such as the "China-virus".[47,48] These findings demonstrate the potential for mass communication and awareness campaigns to sway public opinion or sentiment toward racial and ethnic groups that have been historically excluded or discriminated against.

- To further examine measurement validity, we examined associations with two sensitive population health indicators, low birthweight (LBW) and preterm birth (PTB). We found a greater incidence of LBW and PTB in states with greater negative racial sentiment among all mothers, regardless of race, demonstrating that living

in areas characterized by negative racial sentiment against racial minorities is associated with adverse birth outcomes for everyone, not just the targets of the prejudice.[49,50] However, the greatest effects were observed among Blacks and among all racial minorities as a group.

- We also examined associations with a variety of cardiometabolic health outcomes and found that negative sentiment toward racial and ethnic minorities was associated with increased risk of hypertension, diabetes, obesity, stroke, myocardial infarction (i.e., heart attack), and coronary heart disease.[51] Conversely, Twitter-derived positive sentiment towards racial/ethnic minorities was associated with a lower prevalence of CVD outcomes.

## Recommendations

While it may be tempting to address individual-level strategies, structural and institutional efforts that create new norms for ways of knowing and ways of being will be needed to change beliefs, attitudes, and behavior. Our work focuses on the psychobiology of racism-related stress to demonstrate the downstream health effects of racism as a root cause. Fundamental causes are those that remain associated with health over time, across multiple health outcomes, despite changes in intervening variables, and that determine ownership over "flexible resources" (i.e., money, power, prestige, beneficial social connections, freedom to control one's own life circumstances).[15] Fundamental causes have been called "risk-regulators" because they determine exposure to downstream risks and/or resources that either support or impede health.[52] Racism is a fundamental cause of health inequities given its role in the systematic and systemic arrangement of advantage/disadvantage across a range of life domains that shape opportunities for achieving optimal health. Hence, focusing on more proximal manifestations of racism will not serve health equity in the long term.

Based on the findings discussed above, below we provide five recommendations.

1. We lift up the National Campaign Against Racism which suggests three critical steps: 1) naming and understanding racism as a *system* of structuring opportunity; 2) asking "how is racism operating here?"; and 3) organizing and strategizing to act.[53] Jones points out that a focus on the system alleviates the challenge of blaming individuals and instead recognizing that we are all part of a system that has normalized white privilege.

2. Given the joint influence of multiple levels of racism, efforts to address structural and cultural racism, including their manifestation through personally-mediated racism, in concert with efforts to promote positive in-group racial attitudes—also through intervening on societal policies, practices, and norms—are needed.

3. Workplace and other institutional policies, practices, and norms focused on changing culture are needed across sectors. This includes raising awareness of how racism operates (i.e., racial literacy), recalibrating our ways of knowing to focus on the lived experience of those who have historically been excluded and discriminated against, addressing bystanderism, and having a resistance management plan (eg, plan for addressing white fragility, norming around psychological unsafety, and institutional commitment to change

both in terms of human and financial capital).

4. Constant and consistent messaging, including through social media, to build a culture of antiracism. Social media has become a powerful platform for influencing public attitudes about race. Regulation of social media to minimize racist messaging and promote inclusive messaging may help shift public attitudes.

5. Mechanisms for funding actionable antiracism work at the societal and institutional levels with a focus on structural and cultural racism.

## Conclusion

Racism saps the strength of the whole society,53 not just the targets of prejudice and discrimination. The evidence presented here is part of a larger body of work documenting the role of racism in the creation and preservation of health inequities. We provide recommendations focused on addressing racism as a root cause and urge leaders to consider relevant actions to dismantle structural racism through broad scale antiracist health policy.

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