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DEBATE-COMMENTARY

HSR Health Services Research

Racism and health: A call to action for health services research

The majority of health services research focuses on health care—access to it, utilization of it, outcomes from it, and, importantly, disparities in it. Yet, health services research is much broader than health care and includes the study of *all* of the factors that may impact *health* (not just health care), including social factors such as racism in all its forms—structural, interpersonal, and internalized. Understanding racism and how it affects health and health equity requires a broad range of content and methods expertise, working in collaboration, including outcomes research, social epidemiology, anthropology, social genomics, psychology, geospatial methods, cohort studies, health disparities, qualitative research, behavioral interventions, controlled trials, and more.

In order for health services research, as a field, to fully contribute to this rapidly expanding area of research, we must have a widespread understanding throughout the entire health services research community about how racism affects health and be more precise and nuanced in our language and methods that explore associations between race and health.[1] While the majority of scholars understand race to primarily be a social construct, rather than a biological or genetic one, much of health services research still utilizes race as a biological, individualistic determinant of health outcomes. This commentary summarizes the current literature about how racism can negatively impact health and provides a call to action for the health services research community on how we can make substantial contributions to advance the science and be active collaborators in the field.

1 | UNDERSTANDING THE RACISM–HEALTH CONNECTION

Much of what we know about the mechanisms by which racism negatively impacts health has been discovered over the past 1-2 decades. Prior to this, scholars were primarily working to confirm that disparities in health care and health outcomes were indeed real. The 2001 report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* definitively made the case for disparities in health care and named institutional health care factors (i.e., structural racism) and discrimination (i.e., interpersonal racism) as the two primary causes.[2] *Unequal treatment* found that in every location of health care delivery, from the outpatient primary care to the inpatient care to postacute rehabilitation, in every specialty, from pediatrics to geriatrics, and in every geographic region of the United States, there was evidence of racism that negatively impacted the care and health outcomes of racialized minorities.[2] African Americans and other racialized minorities had less access to health care organizations (structural racism) and also received lower quality care within health care organizations (attributed to discrimination).

Several well-known models broaden our understanding of how racism may lead to population-level health disparities. Dr. Camara Jones' framework is highlighted because of its widespread use and because it was developed to demonstrate how racism can lead to health disparities.[3] Jones describes three levels of racism: institutionalized racism, personally mediated racism, and internalized racism.[3] Institutionalized, or structural, racism is defined as differential access to goods, services, and opportunities based on race. Personally mediated racism, or interpersonal racism, is defined as prejudice (differential assumptions about the abilities, motives, and intentions of others according to their race) and discrimination (differential actions toward others according to their race). Finally, Jones defines internalized racism as the acceptance by members of stigmatized races of negative messages about their abilities and intrinsic worth. Internalized racism can have many manifestations, including helplessness, self-devaluation, and limiting one's right to self-determination and self-expression.

2 | STRUCTURAL RACISM AND HEALTH

Jones' framework helps us understand research findings pertaining to racism and health. Structural racism does not require personal bias that is commonly associated with the term "racism" and may manifest in "race-neutral" policies. For example, during the coronavirus disease 2019 (COVID-19) pandemic, many tertiary hospitals refused to accept transfers of some patients with severe COVID-19 disease from smaller, community hospitals, which were not equipped with the infrastructure or human capital to provide the same level of care. Because African Americans and Latinx population are disproportionately more likely to receive care from community hospitals, this race-neutral transfer policy contributed to racial disparities in COVID-19 mortality.

Structural racism in health care, compared to other settings such as education or housing, is particularly harmful to short-term health because of the life-threatening nature of some medical illnesses (e.g., acute coronary and cerebrovascular events, aggressive forms of cancer) and the impact of differential treatment on morbidity and mortality. As noted earlier, structural inequities by race have been found throughout the health care continuum, in multiple specialties, and throughout the United States.[2]

Structural racism remains a significant issue not only in health care but also in housing (e.g., purchasing homes, obtaining mortgages), policing (e.g., disparate rates of conviction, use of physical force),

education (e.g., dollars spent per student), and other areas. Importantly, these types of structural racism can also negatively impact health. For example, racialized residential segregation in the United States, the result of government policy in the 1960s, is now tightly correlated with measures of community vulnerability to natural disasters such as pandemics, with racialized minority communities being significantly more at risk. Residential segregation has allowed the persistence of unequal access to quality elementary and high school education, the disproportionate exposure to pollution and toxins in the environment, the concentration of crime and violence in neighborhoods, and other sources of psychosocial and environmental stress. These factors directly and indirectly impact health. For example, in Massey's[4] biosocial model of racial stratification, concentrations of poverty and violence result in high allostatic loads that have downstream health effects such as coronary artery disease, inflammatory disorders, and cognitive impairment. Smith et al.[5] found that, among a sample of middle-aged African American and Latinx adults, exposure to violence—community violence and, particularly, police violence—was associated with increases in hypervigilance and systolic blood pressure.

3 | INTERPERSONAL RACISM AND HEALTH

The chronic stress induced by personal experiences with discrimination is one mechanism by which racism may affect physical and mental health. Interpersonal racism has been associated with a range of chronic diseases, including hypertension, asthma, breast cancer, and all-cause mortality.[6] Associations have been seen in cross-sectional studies, even after controlling for confounding variables such as personality characteristics, education, insurance, and other factors. Associations have been found in longitudinal cohort studies, which mitigate the hypothesis of reverse causality between perceived discrimination and poor health. For example, Brown et al.[7] found that prior reports of discrimination predicted future diagnoses of depression, but not vice-versa.

McEwen's[8] model of allostatic load emphasizes interactions between cognitive processes (e.g., responses to perceived stress) and physiological responses to explain how environmental stressors, major life events, and trauma (e.g., racism) result in poor health. The assumption is that interpersonal racism is *perceived* and that there is a stressful, affective response that activates a series of maladaptive disruptions to neuroendocrine systems (e.g., hypothalamic-pituitary-adrenal [HPA] axis), cardiovascular systems (e.g., heart rate variability), and immune system that causes systemic inflammation and leads to physical and mental health.[9] For example, perceived discrimination has been associated with cortisol dysregulation, C-reactive protein, coronary artery calcification, carotid intima media thickness, and cellular inflammation.[6]

While much of the literature describes experiences of "everyday discrimination" in society (e.g., while in school, at work, shopping, and so forth), there have also been studies that explored the impact of perceived discrimination within the health care setting. Peek et al.[10] found that perceived racial discrimination in health care was associated with worse measures of diabetes quality of care (e.g., eye exams, diabetes-related primary care visits, HbA1c testing) and diabetes complications (e.g., diabetes-related foot disorders, retinopathy). Studies like this are important because participants were exposed not only to interpersonal racism (i.e., known to trigger pathophysiological changes) but also to structural racism (i.e., differential access to life-saving diabetes care), making the health care system a particularly toxic location for racism to occur.

In a landmark study, Schulman et al.[11] utilized actors to portray patients in clinical vignettes presenting with chest pain in need of cardiac catheterization; only the gender and race of the patients varied in the vignettes. Of the 720 primary care physicians surveyed, women had 0.60 lower odds than men (95% confidence interval (CI): 0.4-0.9, $p = 0.02$) of being recommended for catheterization, black persons had 0.60 lower odds than white persons (95% CI: 0.4-0.9, $p = 0.02$) of being recommended for catheterization, and black women had 0.40 lower odds than white men (95% CI: 0.2-0.7, $p = 0.004$) of being recommended for catheterization.[11] Interpersonal racism within health care is also important because it can negatively impact the patient/provider relationship, which may subsequently cause or exacerbate: unequal treatment and disparate access to health care goods and services, provider mistrust, treatment nonadherence, and reduced health care utilization for primary and preventive care. In a study of 1816 adults in a managed care organization, Cooper-Patrick et al.[12] found that African American patients rated their physician visits as less participatory than their white peers. In addition, they found that African American patients in race-concordant physician relationships rated their visits as significantly more participatory than those in race-discordant relationships.[12]

Another mechanism by which racism may adversely affect health is through negative coping mechanisms. For example, qualitative research among black women with diabetes found that study participants reported using "comfort food" and other poor nutritional habits as a coping mechanism to racism.[13] Tobacco and alcohol use, substance use, and poor sleep hygiene have also been linked to racism.[6]

4 | INTERNALIZED RACISM AND HEALTH

The body of literature for internalized racism, and its impact on health, is much smaller than that for structural racism or interpersonal racism; the data are nonetheless compelling. A 2020 review of 112 quantitative studies over the past three decades found that internalized racism can negatively impact health through the following mechanisms: decreasing positive core self-evaluation, exacerbating the relationship between other stressors and poor health, and mediating the relationship between discrimination (i.e., interpersonal racism) and health.[14] The author of the review distinguished between conscious and unconscious forms of internalized racism and between self-focused (e.g., "I go through periods when I am down on myself for being Black") and group-focused (e.g., "Whites are superior to African

Americans") internalized racism. Studies of a variety of types of internalized racism, both conscious and unconscious, self-focused and group-focused, showed negative associations with health and well-being.[14]

Although the majority of studies have documented correlations between internalized racism and poor mental health (e.g., anxiety, depression), studies have also demonstrated associations with physical health outcomes such as increased systolic blood pressure. In a qualitative study of African Americans with diabetes, group-focused internalized racism was reported (along with structural and interpersonal racism) as a factor that negatively impacts patient–provider relationships and treatment decisions within clinical encounters.[15]

5 | THE CONVERGENCE OF RACISM: A COMMON EPIGENETIC PATHWAY

Structural, interpersonal, and internalized racism may have a common pathway that adversely impacts health through epigenetics. Environmental and psychosocial stressors, as well as physical toxins, can cause differential methylation of DNA, which has been associated with an increased risk of diseases, including breast cancer, small-cell lung cancer, hypertension, chronic kidney disease, and depression.[16] There is a large body of research documenting associations between maternal psychosocial stressors and infant DNA methylation of HPA axis–related genes. A study by Sen et al.[17] demonstrated that DNA methylation patterns associated with maternal lead exposure persisted for two generations, providing the first evidence of multigenerational epigenetic inheritance.

Telomeres, the DNA–protein complexes that cap chromosomal ends and promote chromosomal stability, shorten over time and in response to stress, including racial discrimination. Telomere length has been used as a marker of biological age (vs. chronological age), and telomere shortening has been associated with a range of chronic diseases such as obesity, hypertension, chronic obstructive pulmonary disease, idiopathic pulmonary fibrosis, and chronic kidney disease. Thus, to the degree that racialized minorities are differentially exposed to social and economic stressors, environmental toxins and pollution, and other adverse conditions as a result of racism, epigenetic changes will result in an increased burden of disease for these population and their descendants. Racism, in all its forms, causes measurable physiological and psychological harm.

6 | A CALL TO ACTION

We have learned an extraordinary amount about racism and health in past 20 years, primarily that *race* is a social construct and *racism* has a negative biological impact on racialized minorities. We are just beginning to understand some of the complex mechanisms by which racism impacts health and, consequently, the health services research community has a lot of work to do. There are urgent questions for us to answer. For example, how do we best measure experiences of discrimination? How do we account for racism in studies about racialized minorities that do not measure racism/discrimination? How do we best capture the discrimination that accompanies living at the intersection of multiple marginalized social identities (i.e., intersectionality)? What exposures (e.g., social support, positive coping mechanisms) can best mitigate interpersonal racism? What interventions can best address structural racism? How can we harness and mobilize the vast research infrastructure, databases, and analytic tools available to drive this research? How can we collaborate across disciplines and institutions to robustly answer questions together? Most importantly, how do we ensure that our research can be translated into policies, practices, and actions that create a more just and equal world without racism, one where racialized minorities can thrive, live their best lives, find joy, and truly know freedom?

Understanding racism is at the core of understanding health disparities, but it is also at the core of understanding how we can promote health and optimize health care systems in the US screening and addressing social determinants of health, such as housing instability, food insecurity, and transportation barriers, are becoming a routine part of health care. Understanding that these determinants are unevenly allocated based on race (i.e., structural racism) and socioeconomic status will better prepare our health care systems to risk-stratify population based on need. Already, we have seen how using data-driven approaches can help improve health for communities affected by structural racism. For example, the Social Vulnerability Index of the Centers for Disease Control and Prevention has been used to help allocate vaccinations during the COVID-19 pandemic because of its ability to predict place-based risk of COVID-19 infection. This place-based risk is due to downstream effects of racialized residential segregation, such as increased housing density, concentrated poverty, limited community resources (e.g., grocers), and transportation barriers.

To truly address racism also means addressing it within health services research. Valuing, and learning from, the lived experience of those affected by racism is a crucial path forward not just for our nation but also for *our profession* to effectively advance the cause of eliminating racism in our society. It is time for academic medical journals to think critically about how to elevate the voices and perspectives of researchers with the lived experience, research skills, and content expertise in racism so that research about racism and health is better represented. This will involve multiple important decision points along the way. For example, who will hold positions of decision making power on editorial teams (i.e., members of the Editorial Board, Associate Editors, and Editors-in-Chief)? Which theme issues, dedicated sections, and funders will be highlighted by journals? What scientific standards will be put in place (if any) regarding how race and racism are addressed within journals? How will journals hold themselves accountable to their authors, reviews, editorial board, and the community at large? And how will journals work to create a sense of urgency among peer journals about the importance of addressing racism and health at this particular sociopolitical juncture in US history?

Health services research, as a field, should be actively engaged long term in this journey. As a premier journal in the field, *Health Services Research*, should help lead the way.

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