

# **DEMOGRAPHIC DESTINIES**

## **Interviews with Presidents of the Population Association of America**

### **Interview with Robert Hummer PAA President in 2021**



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PAA President in 2021 (No. 84)

**WE DO NOT YET HAVE AN INTERVIEW WITH DR. HUMMER**

**STAY TUNED!**

# Race and Ethnicity, Racism, and Population Health in the United States: The Straightforward, the Complex, Innovations, and the Future

Robert A. Hummer

**ABSTRACT** For far too long, U.S. racialized groups have experienced human suffering and loss of life far too often and early. Thus, it is critical that the population sciences community does its part to improve the science, education, and policy in this area of study and help to eliminate ethnoracial disparities in population health. My 2022 PAA Presidential Address focuses on race and ethnicity, racism, and U.S. population health in the United States and is organized into five sections. First, I provide a descriptive overview of ethnoracial disparities in U.S. population health. Second, I emphasize the often overlooked scientific value of such descriptive work and demonstrate how such seemingly straightforward description is complicated by issues of population heterogeneity, time and space, and the complexity of human health. Third, I make the case that the population sciences have generally been far too slow in incorporating the role of racism into explanations for ethnoracial health disparities and lay out a conceptual framework for doing so. Fourth, I discuss how my research team is designing, collecting, and disseminating data for the scientific community that will have potential to, among many other purposes, create a better understanding of ethnoracial health disparities and the role of racism in producing such disparities. Finally, I close by suggesting some policy- and education-related efforts that are needed to address racism and population health within U.S. institutions.

**KEYWORDS** Racism • Population health • Ethnoracial disparities • Add Health • Demography

## Introduction

The 2020 murder of George Floyd in Minneapolis and the large racial and ethnic disparities in sickness, hospitalization, and death during the COVID-19 pandemic have brought widespread attention to issues of race and ethnicity, racism, and population health in the United States. Such tragedies have also fed into the country's already poor population health profile and very wide health disparities. At the same time, some leading politicians have denied the existence of systemic racism in the United

**Note** This essay represents the revision of my Presidential Address given at the 2022 annual meeting of the Population Association of America, April 8, 2022, Atlanta, GA.

States, and others have proposed or helped pass laws to regulate what can and cannot be taught in schools regarding race and racism. It is clear, then, that we are at a crossroads if we want to better understand racial and ethnic disparities in health and other dimensions of social life in the United States. Hence, it is as important as ever that the population sciences community weighs in and develops a better understanding of the issues and facts at hand and works to ensure that our research findings help educate the public and inform policy in the effort to eliminate health disparities and help create a better society for all.

In this essay, I make the case that the population sciences community has a central role to play in this critical area of societal concern. Our serious engagement in this area is of the utmost importance for at least three scientific reasons. First, U.S. population health is poor relative to that of other high-income countries, and racial and ethnic health disparities are wide (Becker et al. 2021; Woolf and Aron 2013). Second, while population scientists have for decades led the way in accurately describing racial and ethnic health disparities, that task is as challenging as it has ever been and our expertise is especially needed. Third, at the same time, the population sciences community has fallen short in incorporating the concept and role of racism in understanding racial and ethnic health disparities; that needs to change. Beyond scientific reasons, there are also moral reasons to engage in this area of work. Indeed, health disparity statistics are not simply numbers; those numbers represent lost lives and human suffering for sizable groups of people. There is profound injustice in such disparities that demands our attention.

Drawing on the foregoing issues, my essay is divided into five sections. First, I describe the enormous contributions that population scientists have made and continue to make regarding the documentation of racial and ethnic disparities in U.S. population health. Second, I argue that such seemingly straightforward description is both complicated by and can also be clarified by attention to population heterogeneity, time and space, and the careful measurement of both race and ethnicity and human health. Third, I discuss the conceptualization and measurement of racism for research on racial and ethnic disparities in population health, which is the scientific frontier in this area of study.<sup>1</sup> Fourth, I summarize data collection work that my colleagues and I are doing in the development of Wave VI of the National Longitudinal Study of Adolescent to Adult Health (Add Health)—work that we hope facilitates the short- and long-term study of race and ethnicity, racism, and U.S. population health. In my brief closing section, I urge the population sciences community to be bold in providing policymakers, students, and the general public with critical data and research findings that can be used to help understand and eliminate long-standing, unjust, and harmful ethnoracial disparities in population health.

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<sup>1</sup> I am fully cognizant that race and ethnicity are not identical constructs and discuss them in greater depth later in this essay. However, the racialization process in the United States and elsewhere has created a fuzzy boundary between the two concepts (Williams 2012), making it challenging to empirically capture fully distinct differences between them. I use “race” and “race and ethnicity” interchangeably throughout the essay and use the term “ethnoracial” instead of racial/ethnic to refer to the broad set of categories I discuss.

## The Straightforward

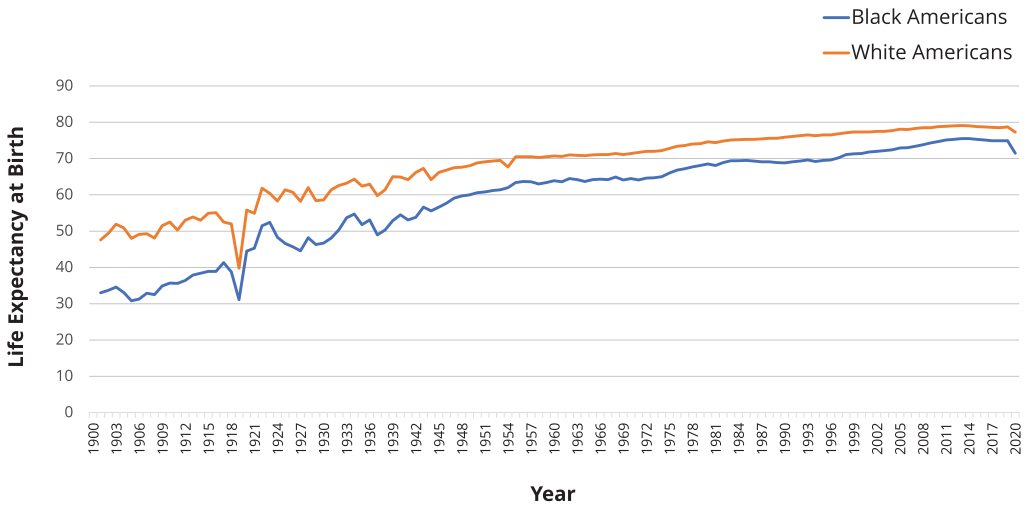
### Demography as Foundational for Accurately Documenting Ethnoracial Disparities in Health

Racial and ethnic disparities in health and mortality cannot be understood without the tools and concerns that form the core of demography as a scientific discipline (Nam 1979; Poston 2019; Preston et al. 2001; Siegel and Swanson 2004). We carefully construct rates with concerns regarding both numerators and denominators, use statistical tools like standardization to take age differences across populations into account, and produce accurate life tables for the U.S. population as a whole and for its large subgroups. We design our studies to be representative of geographically defined populations and give substantial attention to population heterogeneity within our data. We also pay obsessive attention to data quality and measurement issues, and think about and measure time in the three dimensions of age, period, and cohort. And demographers are careful with regard to issues of causality: we employ causal modeling approaches only when the data and designs are appropriate and use causal language with care. It is the core tools and concerns of demography that provide population scientists with such a high degree of credibility within the scholarly community and among policymakers. Drawing on these core tools and concerns of demography, I now provide a brief overview of current U.S. ethnoracial health disparities.

### Racial and Ethnic Disparities in Population Health: A Brief Overview

It is clearly documented that Black Americans have higher all-cause mortality rates at most ages across the life course and live significantly shorter lives on average than White Americans. [Figure 1](#) shows estimates of life expectancy at birth for Black Americans and White Americans from 1900 to 2020. Black Americans lived an estimated 14.6 years shorter, on average, than White Americans in 1900 (Arias et al. 2017). While both groups exhibited substantial increases in life expectancy across the twentieth century and through the first decade of the twenty-first century, the Black–White disparity in life expectancy was still an estimated 3.5 years in 2013 (Arias et al. 2017).

Unfortunately, White Americans exhibited modest declines in life expectancy in the mid-2010s and then a COVID-19-related decline of an estimated 1.4 years in 2020 compared with 2019 (Arias and Xu 2022; Woolf et al. 2021). While life expectancy for Black Americans continued to inch upward in the mid- and late 2010s, they experienced a much more substantial 3.3-year estimated COVID-19-related decline in life expectancy in 2020 relative to 2019 (Woolf et al. 2021). As a result, as the third decade of the twenty-first century unfolds, Black American life expectancy at birth is 5.8 years shorter than that of White Americans (Arias and Xu 2022; Woolf et al. 2021), a disparity similar to what was seen in the late 1990s. Perhaps most alarming, life expectancy at birth for Black males was just 67.8 years in 2020 (Arias and Xu 2022; Woolf et al. 2021), a figure about three years lower than the estimated male life expectancy of 71 in the world as a whole (Heuveline 2022). Unfortunately, the



**Fig. 1** Life expectancy at birth for Black and White Americans from 1900 to 2020. Prior to 1929, figures are based on select states. Prior to 1970, estimates for Black Americans include other non-White groups. Sources: Arias et al. (2017), Arias and Xu (2020), and Woolf et al. (2021).

Black–White life expectancy disparity is not just a statistic; it reflects excess deaths and tragedy among Black Americans that occur far too early, year in and year out, and represents heartbreak and stress for decedents’ family members, friends, and neighbors (Donnelly et al. 2020; Satcher et al. 2005; Umberson et al. 2017; Wrigley-Field 2020).

The overall shorter lives for Black Americans in comparison with White Americans are paralleled by worse self-assessments of physical health, higher prevalence of morbidity across a wide range of bodily systems, worse indicators of cognitive and physical functioning, and higher levels of disability. For example, Hummer and Gutin (2018) reported age-standardized rates of hypertension, diabetes, functional limitations, and activity limitations among U.S.-born Black women aged 65+ that were 1.5 to 3.0 times as great as rates among their U.S.-born White counterparts. These disparities are not specific to women; they are also wide and nearly ubiquitous for men (Hummer and Gutin 2018). Importantly, the higher mortality rates and worse health of Black Americans relative to White Americans is not exclusive to those aged 65 or older; these patterns are generally mirrored in earlier stages of the life course. For example, although twenty-first-century increases in White American midlife mortality are justifiably problematic and have garnered tremendous research and policymaker attention, the 2021 Consensus Study on High and Rising Mortality Rates Among Working-Age Adults (Becker et al. 2021:401) concluded that “working-age mortality rates were much higher among Blacks than among Whites throughout the 1990–2017 period.”

Tragically, the maternal mortality rate is also 3.5 times as high among Black women as among White women (MacDorman et al. 2021), mortality for Black Americans aged 1–24 is 1.6 times that of White Americans (Rogers et al. 2021; Rogers et al. 2017), and the infant mortality rate for babies born to Black women is

2.3 times as high as for babies born to White women (Ely and Driscoll 2020). Moreover, these elevated mortality rates for Black Americans in early segments of the life course are echoed in myriad worse health outcomes as well, including but not limited to cardiovascular diseases, most cancers, infectious diseases, and many measures of physical functioning and disability (Geronimus et al. 2006; Hummer and Gutin 2018; Williams 2012). Lest anyone think that U.S. racial equity has been achieved or is even within sight, this brief overview should serve to dispel such a notion.

Unfortunately, ethnoracial health disparities are not limited to Black vis-à-vis White Americans. Indeed, data clearly indicate enormous population health disparities between the American Indian or Alaska Native (AIAN) population and White Americans. For example, the inaugural federal government report on the mortality and life expectancy of the AIAN population, using data from 2019, showed that they have, by far, lower estimated life expectancy at birth (71.8 years) than any other ethnoracial group in the country (Arias et al. 2021); moreover, the 2020 COVID-19-induced life expectancy decline was largest (4.7 years) among the AIAN population (Arias and Xu 2022). Earlier, Iliya Gutin and I used data from two large nationally representative surveys to document AIAN population health vis-à-vis other ethnoracial groups for those aged 45–64 and those aged 65+; we also concluded that the AIAN adult population exhibited the worst health profile of any ethnoracial group in the country (Hummer and Gutin 2018). Such poor health for AIAN adults cuts across many diseases, self-reports, and causes of death, illustrating that a narrow focus on improving one or just a few conditions or diseases is not the best pathway to achieving equity with other groups.

In recent decades, Hispanic and Asian American populations have grown the fastest and now account for approximately 19% and 7%, respectively, of the U.S. population (U.S. Census Bureau 2021). Given the rapid growth of these populations, there has understandably been growing interest in their population health patterns and trends as well. And some of the news is positive. For example, despite some data uncertainties, Asian Americans as a group exhibit lower age-specific mortality rates, substantially higher life expectancy, and more positive population health profiles compared with all other U.S. ethnoracial groups (Acciai et al. 2015; Hummer and Gutin 2018). Of course, there are important exceptions and caveats to such a positive broad appraisal. To briefly mention just two: the population health profile is much less positive among Filipino, Hmong, Vietnamese, and Cambodian Americans compared with Chinese, Japanese, Korean, and Indian Americans (Adia et al. 2020; Baluran and Patterson 2021; Cho and Hummer 2001; Frisbie et al. 2001), and population health measures tend to be less favorable among U.S.-born Asian Americans than among Asian immigrants (Hummer and Gutin 2018; Singh et al. 2013).

Heterogeneity by immigrant status and national origin also characterizes the population health profile of Hispanic individuals. Similar to Asian Americans, Hispanic immigrants exhibit lower mortality rates, higher life expectancy, and a generally healthier profile than U.S.-born Hispanics (Alcántara et al. 2017; Hummer et al. 2007; Markides and Eschbach 2005). Indeed, several studies estimated that life expectancy at birth, at age 25, and at age 65 for Hispanic immigrants is 2–3 years higher than that of U.S.-born Hispanic people (Lariscy et al. 2015; Singh et al. 2013). And by national origin, Cuban and Dominican Americans tend to exhibit more positive population health profiles than Puerto Ricans or Mexican Americans (Franzini et al. 2001;

Gutin and Hummer 2018; Markides and Eschbach 2005). Hence, as with all of the large ethnoracial groups discussed thus far, a simple and straightforward description of Hispanic population health is challenging at best.

Nonetheless, overall, the U.S. Hispanic population exhibits some health indicators that are relatively favorable compared with those of the non-Hispanic White population and others that are less favorable. For example, Hayward et al. (2014) showed that while life expectancy at age 50 for both U.S.-born and foreign-born Hispanic populations is higher than that for their White counterparts, unhealthy life expectancy at age 50—which is measured by average years lived with a disability—is substantially higher for both Hispanic groups relative to their White counterparts. Moreover, the COVID-19 pandemic has exhibited some of its greatest devastation on the Hispanic population, as perhaps most clearly and tragically evident in the estimated 3.9-year decline in Hispanic life expectancy in 2020 (Woolf et al. 2021). Such a decline has resulted in the near complete loss of the longtime Hispanic mortality advantage relative to the non-Hispanic White population (Arias and Xu 2022; Sáenz and Garcia 2021).

Finally, the population health profile of the non-Hispanic White population of the United States, which remains the largest ethnoracial group in the country at about 60% of the population (U.S. Census Bureau 2021), is perhaps best characterized by adjectives such as unexceptional or mediocre. Indeed, the 2018 life expectancy at birth for U.S. non-Hispanic White individuals of 78.6, while 3.9 years longer than that for the non-Hispanic Black population, was 3.2 years shorter than that for the Hispanic population. Moreover, the White life expectancy at birth of 78.6 years, if separately specified, would place 29th of the 37 countries in the OECD. Note as well that these 2018 life expectancy statistics were, of course, prior to the devastation of the COVID-19 pandemic on U.S. life expectancy. Similarly, the U.S. infant mortality rate (IMR) per 1,000 live births in 2018 for non-Hispanic White women of 4.63 is substantially lower than that for non-Hispanic Black and AIAN women, modestly lower than that for Hispanic women, and 27.5% higher than that for Asian American women. The IMR of 4.63 for non-Hispanic White women is also higher than that for the average OECD country and, if separately specified, would rank 30th out of 37 of all OECD countries (United Health Foundation 2020).

Overall, this brief description points to two important conclusions echoed in other recent assessments of U.S. population health (Crimmins et al. 2010; Hummer and Gutin 2018; Hummer and Hamilton 2019; Woolf and Aron 2013). First, it is clear that there continue to be very wide ethnoracial disparities in population health that are especially damaging to the Black and American Indian or Alaska Native populations in the United States, but that are also evidenced among particular subgroups of the Hispanic and Asian American populations. Second, even though U.S. ethnoracial health disparities are often gauged in comparison to the non-Hispanic White population, the population health profile of non-Hispanic White Americans compares quite unfavorably with most OECD countries around the world. When U.S. ethnoracial health disparities are gauged with the non-Hispanic White population serving as a reference group, the bar is not high. Together, these summary conclusions also intimate that the context of life in the United States is not conducive to favorable population health for even the most economically, socially, and politically powerful group in the country, a point that strongly suggests major societal changes are needed for the improvement of population health across the board.



## Complexities and Clarifications

The foregoing overview, while informative at one level, is limited not only by its generality, but also by my largely ignoring important nuances that are key to more fully understanding ethnoracial disparities in population health and developing a thoughtful research and policy agenda in this area of study. Thus, I focus this section on three issues of complexity and clarification: (1) the conceptualization and measurement of race, ethnicity, and ethnoracial categorization; (2) population heterogeneity and its meaning; and (3) the complexity of human health. I end this section with commentary on the fundamental importance of accurate description in this area of science.

### Conceptualizing and Measuring Race and Ethnicity

In an important project that systematically examined published scientific work on race, ethnicity, and population health since 1995 in leading journals of epidemiology, Martinez et al. (2023) showed that the vast majority of papers on ethnoracial disparities in health did not define race or ethnicity or provide readers with any sense of why race and ethnicity are measured as they are. Given the damaging and discredited biological notions of race and ethnicity that dominated American science throughout much of the 1900s (Duster 2001; Frank 2007; Morning 2009), it is crucial that population scientists make explicit what we mean and measure when using the concepts of race and ethnicity (Krieger 2003; LaVeist 1996; Martinez et al. 2023; Roth 2016).

To that end, race and ethnicity are both sociohistorical constructs that vary across time and place (Martinez et al. 2023); they capture social, political, economic, and cultural domination on the one hand, and exploitation and oppression on the other (Williams 2012). The process of racialization, driven by racism, distinguishes the dominant group(s) from those who are exploited and oppressed (Omi and Winant 2015). Racialized groupings are often created around physical characteristics such as skin tone and are constructed and maintained by dominant social groups to restrict and protect valued societal resources, including education, power, privilege, money, space, and time. Ethnic groupings are largely composed around cultural characteristics, such as language, food, and dress, but may also be created around physical characteristics. Because the distinctions between race and ethnicity are fuzzy given that the characteristics used to construct and organize racialized groups overlap with the characteristics used to organize ethnic groupings, I combine the concepts of race and ethnicity into an ethnoracial construct and categorize Americans into the umbrella groupings of Black, American Indian or Alaska Native, Hispanic, Asian, and White (i.e., Williams 2012). Importantly, these are neither biologically based nor static categories, but instead reflect the sociohistorical constructs of race and ethnicity as they currently exist in U.S. society (Martinez et al. 2023). I further recognize tremendous heterogeneity within each of these umbrella ethnoracial groupings; that is, these groups are all internally heterogeneous according to individuals' national origins, language use, social and economic characteristics, phenotypic features, geographic distribution, and more.

## Multidimensional Human Beings, Population Heterogeneity, and Meaning

Understanding ethnoracial disparities in health necessitates that researchers recognize that individuals are not one-dimensional racial and ethnic beings. Indeed, our personal identities encompass varied dimensions that include but are not limited to age, birth cohort, biological sex, gender identity, sexual orientation, skin color, other aspects of physical appearance and physical ability, nativity, legal status, veteran status, socioeconomic status, religious denomination, geography of residence, and more. Relatedly, at the population level, racial and ethnic subgroups are not internally homogeneous and comprise people of various backgrounds, characteristics, and statuses who live in varied contexts. Demographers have, of course, long been obsessed with population heterogeneity, even coining a cute phrase for it: “broken down by age and sex.” But population heterogeneity goes well beyond age and sex, not only in terms of the dimensions of identity under consideration but also in the complexity of meaning underlying such heterogeneity. Taking into account such heterogeneity—not only statistically, but also conceptually—is critical in describing and understanding ethnoracial disparities in population health. And while thorough consideration of heterogeneity that takes into account all dimensions of identity is typically impossible even with the largest data sets that we work with, serious attention to heterogeneity and its meanings is always encouraged (Crenshaw 1991).

One example of population heterogeneity that has implications for research in this area focuses on nativity and duration of residence in the United States and how they affect ethnoracial disparities in health. With the substantial growth of the U.S. immigrant population since the mid-1960s, research findings began to emerge—the soundness of which was sometimes doubted—showing favorable population health and mortality patterns among Hispanic immigrants relative to their U.S.-born Hispanic and U.S.-born White counterparts (Elo et al. 2004; Hummer et al. 2000; Markides and Coreil 1986). As this body of work matured, it became clear that not only was the Hispanic immigrant health and mortality advantage real (Hummer et al. 2007; Turra and Elo 2008), but also that foreign-born individuals tended to exhibit better health (with some exceptions) and lower mortality rates than U.S.-born individuals in every racial and ethnic group (Hamilton and Hummer 2011; Hummer, Biegler et al. 1999; Hummer, Rogers et al. 1999; Mehta et al. 2016; Singh et al. 2013). Such findings clearly illustrate that estimates of ethnoracial disparities in health must be sensitive to the immigrant composition of each group and that the immigrant and native-born components of each group should be separately considered in analyses, if at all possible.

Unfortunately, some population health research findings have also suggested that the noted immigrant health or mortality advantage may diminish with increased time spent in the United States (among the immigrant generation) and across generations (Antecol and Bedard 2006; Cho et al. 2004; Hamilton et al. 2011; Jasso et al. 2004; Riosmena et al. 2013). The methods for accurately documenting such population health deterioration have been hotly debated in the literature and remain ripe for continued research; indeed, some studies found a continued mortality advantage among long-term U.S. immigrants (Zheng and Yu 2022). It is also clear that immigrant selectivity—the idea that immigrants are a generally healthy subset of individuals from

sending countries relative to those who do not migrate—is an important explanation for favorable immigrant population health patterns (Akresh and Frank 2008; Riosmena et al. 2017). But in addition, life in the United States, across both time and generations, may not be conducive to the maintenance of favorable population health among immigrant groups. This seems to especially be the case for those who are racialized into racial and ethnic minority groups given their national origin or darker skin tone and who subsequently encounter significant experiences of racism in the United States (Engelman and Ye 2019; Hamilton 2019; Hamilton and Hummer 2011; Hummer and Hayward 2015; Monk 2021; Riosmena et al. 2017; Viruell-Fuentes et al. 2012). Conceptually, then, the immigrant composition of racial and ethnic groups is much more than a statistical issue of population heterogeneity; taking such heterogeneity into serious account involves understanding not only why immigrants tend to exhibit such initially favorable health patterns but why such initially good health may tend to decline over time.

### The Complexity of Human Health

Among the many challenges related to the accurate documentation and understanding of racial and ethnic health disparities is the complexity of human health. I have intentionally focused thus far on general measures of population health. Such general measures are widely used in the population sciences, in part because they are easier to assess than more specific measures and in part because they facilitate comparisons across ethnoracial groups, time, and space. Moreover, the purpose of the population health sciences is not to cure diseases or treat individual patients, but rather to accurately document and explain the health of the population as a whole and its constituent subgroups so that the information can be used by policymakers and the public for the betterment of society (Hummer and Hamilton 2019). Hence, the widespread utilization of general measures of health in the population sciences is most often well justified and facilitates informed policy and programmatic solutions that focus on the upstream historical, social, and cultural factors affecting the general health of large groups of people in defined geographic areas rather than on the downstream factors related to specific diseases or individuals.

Nonetheless, a sole focus on general measures of health is limiting. Indeed, the COVID-19 pandemic propelled many in our field to focus on accurately documenting infection, hospitalization, and death rates by age, sex, race and ethnicity, socioeconomic status, geographic area, and more. Such a disease-specific focus has been critically important in understanding which groups COVID-19 is affecting most significantly and how solutions should be tailored. Similarly, it is critical that population scientists focus efforts on biomarkers of health that facilitate detection of health disparities and trends prior to the emergence of disease or death (Harris 2010). Our field's expansion of biological health measurement in large population-based data sets has been extraordinary over the last two decades (Harris and McDade 2018), leading to much more refined understanding of ethnoracial disparities in health even when full-blown disease and death are relatively uncommon, such as in young adulthood (Geronimus et al. 2006; Harris 2010; Richardson et al. 2021).

In short, population sciences work on racial and ethnic disparities is needed and important when either very general or much more specific measures of health are utilized. Moreover, the World Health Organization's (2006:1) definition of health—"a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"—is important to keep in mind; while I've used a classic demographic measure of population health (i.e., alive versus not) in much of the preceding text, health is much more than simply being alive. Our data collection efforts and analytic focus should account for varied measures of health, including those that are both self-reported and collected via physical measurement or biospecimen; those that are physical, cognitive, functional, mental, and social; and those that may be most appropriate and important in different stages of the life course and among different population subgroups. In addition, the illnesses and diseases that make us sick are not necessarily those that cause us to die. For example, the relatively high life expectancy of the U.S. Hispanic immigrant population is accompanied by very high levels of disability in late life (Hayward et al. 2014; Sheftel and Heiland 2018), most likely because of the tolls that demanding physical labor takes on the knees, hips, and backs of many Hispanic immigrant adults, without necessarily resulting in early death. Accordingly, population health scientists should not fully rely on either general measures of health or specific measures that may obscure large-scale understandings of racial and ethnic disparities; rather, a balance of attention to both general and specific measures is necessary.

### The Centrality of Accurate Description

Far too often, scientific work on racial and ethnic health disparities pays short shrift to description and jumps too quickly to explanation and even policy recommendations. Such dismissal of description is a big mistake. Indeed, ethnoracial disparities in population health are neither static across time nor fixed across places. Groups and health patterns change and can sometimes do so quite quickly, as in the case of large immigration flows, shifts in ethnoracial identification (e.g., the racialization process), or new disease outbreaks. And the differing compositions and contexts of places can and do result in ethnoracial health disparities that vary across place and consequently provide important clues toward explanation and effective policy making (Burgard et al. 2021). Similarly, birth cohort after birth cohort experiences life in ways unlike any others, necessitating continued attention to the accurate description of ethnoracial disparities specific to cohort context (Masters et al. 2014). Moreover, population health data are always imperfect and fresh data may shed descriptive light on previously unknown patterns and trends. In addition, population heterogeneity, especially within ethnoracial groups, is typically not accounted for very well, if at all, in work on racial disparities.

In short, a key and critical strength of the population sciences and in demography more narrowly is obsession with getting the facts right. I urge the population sciences research community, funding agencies, and scientific journals to devote serious time and resources toward accurate description of ethnoracial health disparities, and particularly so in a rapidly changing and complex society. Indeed, accurate description necessarily precedes explanation and effective action.

## **“Innovation”: Incorporating Racism Into the Study of Racial and Ethnic Disparities in Population Health**

The population sciences community and much of the scientific community writ large have seriously lagged in efforts toward conceptualizing racism and developing measures of it that may be used in studies of population health. This lag is due in part to the complexity of the concept of racism, which I will discuss below. For now, it is important to note that racism is a multilevel, multi-institutional, historical, and contemporary concept that, if taken seriously, necessitates explicit attention in all steps of the research process in this area of study, including in the questions we ask, the theories and literature we draw upon, the hypotheses we test, the data we collect, the measures we employ, the analytic tools we use, and the conclusions we make. This idea is not new (Horton 1999; Horton and Sykes 2001; Zuberi and Bonilla-Silva 2008). Unfortunately, lagged interest in racism as a central and scientific concept in population health is our own collective fault. Only in the last few years have the most powerful scientific funding agencies, professional associations, universities, and think tanks seriously begun to engage with racism as a scientific and measurable construct that is central to American society. Such long-term institutional- and individual-level neglect needs to change.

Long predating the origins of the Population Association of America, W. E. B. Du Bois was *the* pioneer in studying racial disparities in health and mortality in the United States. His painstaking work provided empirical evidence on the racism-induced social conditions underlying such disparities in Philadelphia and other cities around the country (Du Bois 1906/2003, 1899/2007); notably, he also counteracted racist pseudo-scientific work at the time that attributed disparities to the biological inferiority of Black Americans. Echoing Du Bois, Preston and Haines (1991) much later discussed and statistically modeled the caste-like racial conditions of life in the United States circa 1900, which resulted in enormous racial disparities in infant and child mortality at that time. Efforts toward directly conceptualizing and measuring racism in population health studies finally began to gain substantial momentum in the very late twentieth century and early twenty-first century when a number of scholars pushed scientific thinking and measurement forward in this area of study, roughly 100 years following Du Bois's lead (Bailey et al. 2017; David and Collins 1991; Gee and Ford 2011; Geronimus 1992; Hardeman et al. 2018; Horton 1999; Horton and Sykes 2001; Hummer 1996; Jackson et al. 1996; Krieger 2003; Krieger et al. 1993; LaVeist 1992; Nazroo 2003; Williams 1996; Williams and Collins 1995; Zuberi and Bonilla-Silva 2008). As just one example, Horton (1999:363–364) advanced the critical demography paradigm that challenged researchers to “make explicit the manner in which the social structure differentiates dominant and subordinate groups in society.” Horton (1999) further argued that explanations of population health disparities must challenge assumptions about the way that society is thought to work by dominant groups.

Along with this flurry of largely theoretical papers, other important efforts emerged focusing on the conceptualization, operationalization, and use of measures of racism in population health studies (see Williams et al. 2019 for a review). Most prevalent have been studies using measures of self-reported, individual-level discrimination developed by David Williams and colleagues (e.g., Sternthal et al. 2011)

that have increasingly been incorporated into large-scale U.S. data collection efforts. More recently, such individual-level measures have been expanded to include not only self-reports of discriminatory treatment and its attribution (e.g., to race, immigrant status, sex) but also reports of vigilance, anticipatory discrimination, and vicariously experienced discrimination. Together, these survey-based measures of racism tap into individuals' experiences with thinking about, preparing for, and experiencing everyday racist encounters; they have been shown to exhibit associations with a number of mental and physical health outcomes (e.g., DeAngelis 2020; Hicken et al. 2013; Hicken et al. 2018). Continued measurement innovations are needed to best assess multiple forms and experiences of individual-level, day-to-day discrimination, including the need for greater inclusion of such measures in longitudinal data collection efforts (Williams et al. 2019).

Less prevalent but gaining substantial momentum are efforts to incorporate measures of structural or cultural racism into population health studies (Williams et al. 2019). For example, creative work by Brown and Homan (2021) conceptualized and measured structural racism at the state level and linked the measures to individual-level population health data. Their work documented that structural racism is operating in all U.S. states, but that the level of such racism varies considerably across states. Moreover, they showed that higher levels of structural racism are associated with a number of worse individual-level adult health outcomes for Black Americans but not White Americans. Their study provides the kind of theory-driven, measurement-intensive, foundational work in this area of scholarship that should spur many related efforts in the years to come.

All that said, efforts in conceptualizing, measuring, and understanding the effects of racism on U.S. population health are very challenging. Such work involves conceptualizing and measuring social, economic, political, and cultural contexts that have played out in American society for centuries and that continue to do so, but that are also changing across time and may differ across places such as states, counties, cities, neighborhoods, schools, and worksites. I echo the pathbreakers discussed and cited above in strongly encouraging major research efforts in this area that challenge assumptions, push boundaries, and establish new knowledge regarding ethnoracial disparities in population health through the incorporation of racism into our scholarly community's questions of interest, theories, models, measures, and methods.

## Defining Racism

Borrowing from Williams et al. (2019:106), racism is “an organized social system in which the dominant racial group, based on an ideology of inferiority, categorizes and ranks people into social groups called ‘races’ and uses its power to devalue, disempower, and differentially allocate valued societal resources and opportunities to groups defined as inferior.” A critical aspect of this definition is the concept of “social system.” In the U.S. case, such a system was created by European-origin settlers to oppress and exploit the American Indian, Alaska Native, and Black populations, initially through genocide, forced migration, and slavery, and later through the institutionalization of Jim Crow, political disenfranchisement, residential segregation, mass incarceration, and state-sanctioned violence (Alexander 2010; Gates et al.

2012; Hannah-Jones et al. 2021; Massey and Denton 1993). The Hispanic and Asian American populations, depending on time and space, have been subjugated to some of these same systemic practices as well as others unique to their social histories (Dennis et al. 2021). Importantly, then, the concept of racism captures an extremely powerful but time- and space-varying social system that has the potential to influence the health of ethnoracial groups through numerous mechanisms and across many outcomes (Brown and Homan 2021; Hardeman and Karbeah 2020; Hummer 1996; Phelan and Link 2015; Williams et al. 2019). Given the conceptualization of racism as social system that changes across time and varies across space, its measurement is incredibly challenging. Clearly, the comprehensive measurement of racism in the population sciences cannot be limited to individual-level prejudicial thoughts and attitudes and harmful language and behaviors, as important and damaging to health as they may be. Racism as social system requires digging into the social and economic history, institutions, and culture of a society to best understand and develop ways to measure its long-term but evolving dimensions. Included in such a multilevel, evolving conceptualization and measurement are key institutions: government and politics, family, education, health care, the economy, the criminal justice system, the arts, sports, and the media. Given its virtual neglect by the scientific community until quite recently, including in the population sciences, the measurement of racism is still in its infancy. This measurement is a daunting task given the systemic character of racism, but it is integral to understanding our society and likely why our nation's population health is so poor and our ethnoracial disparities in health are so wide.

### A Conceptual Framework of Racism, Race and Ethnicity, and Population Health

My latest conceptual framework for understanding race, racism, and U.S. population health is portrayed in Figure 2. I have long used such frameworks in research and teaching to lay out my current thinking on a system of relationships; the figure should not be thought of as a tight causal diagram from which one set of equations may be estimated. This portrayal attempts to incorporate the conceptualization of racism outlined above and its damaging influences on the contexts in which ethnoracial groups live, the resources that groups of people have access to, their social experiences and behaviors, and ultimately the bodies they inhabit.

To start, the bottom half of Figure 2 depicts the individual-level relationship between ethnoracial identity and health across the life course, which is the bedrock of descriptive work in this area and should remain foundational. The box depicting “ethnoracial identity” indicates that the relationship between race and health may be associated with other dimensions of identity (and their related systemic inequities, which I do not have space to cover here). Indeed, as noted earlier, people and groups are not unidimensional and considerations of population heterogeneity and their meanings are built in here. The bottom half of the figure also depicts the important mediating role that socioeconomic resources play in producing racial disparities in health. Over the years, population scientists have conducted important work on estimating the extent to which socioeconomic resource inequities can help explain racial health disparities (e.g., Geruso 2012; Hummer and Chinn 2011; Rogers et al. 2017). Such findings point to key socioeconomic-based policy levers that, *if implemented*, could

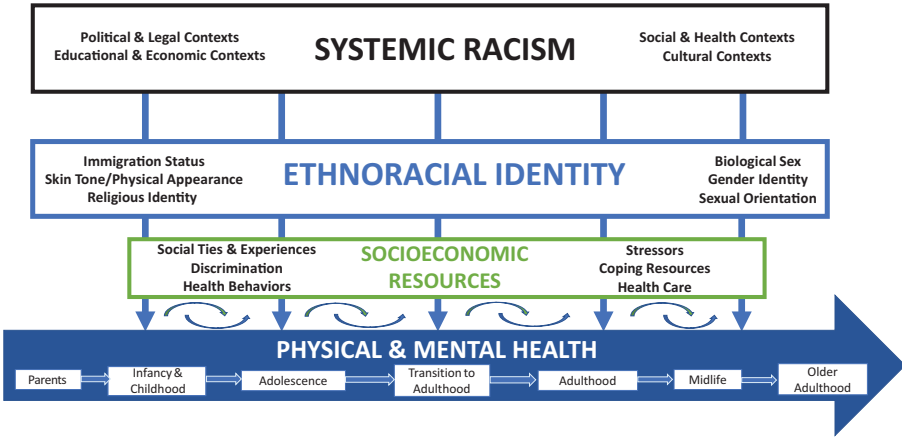


Fig. 2 Conceptual framework linking systemic racism with physical and mental health across the life course in the United States

help reduce disparities. The bottom half of the framework further shows that, beyond socioeconomic resources, other social, psychological, and behavioral factors serve as important individual-level mediators by which racial and ethnic disparities in population health play out. For example, minority group experiences with discrimination and greater exposure to stressors, such as higher levels of child/family loss, have been shown to help account for racial disparities in health (Umberson et al. 2017; Williams et al. 2019). In turn, these social, psychological, and behavioral mechanisms influence population health outcomes. The two-way arrows between these mechanisms and health show that there may also be important interrelationships that unfold between them across the life course, making the collection and use of longitudinal data all the more important in understanding ethnoracial disparities in health (Harris et al. 2006).

Most important, the top portion of the figure specifies that systemic racism, not ethnoracial identity, is the driving force that creates ethnoracial disparities in health across the life course in the United States. It does so through its damaging influences on the contexts in which we live: the creation, maintenance, and enforcement of the laws and policies that govern us; the educational and economic contexts within which we attend school and work; the social and health contexts within which we reside, shop, recreate, access care, and live out our daily lives and interact with one another; and the cultural contexts that define who is and what is important, valued, and meaningful in society. Moving down the figure, these contexts of systemic racism also define and give meaning to the ethnoracial groups we are divided into; indeed, as has long been noted by social scientists, ethnoracial groups are created and maintained by dominant groups exerting their influence on who does and who does not have access to power and resources in society (Omi and Winant 2015; Williams et al. 2019). Altogether, this framework makes the case that systemic racism has created the conditions in which damaged social contexts, unfair resource and power allocations, and inequities in treatment and social psychological resources result in bodily insults over the life course that have negative influences on health, particularly for members of



racialized groups with the greatest exposure to histories of systemic racism. In light of such a framework, our field needs to do a much better job in incorporating measures of racism—at multiple levels of context across multiple institutions—into our data collection and analysis work on racial health disparities in population health.

At the bottom of [Figure 2](#), I show that racial disparities in population health need to be studied within intergenerational and life course contexts. The late James Jackson was one of the pioneers of such thought in the population sciences community in laying out how historical processes and cumulative advantages and disadvantages across the life course likely play into racial disparities in age-specific health and mortality outcomes (Jackson et al. 2011). Arline Geronimus has also been instrumental in this effort, in terms of both conceptualizing the weathering process and measuring it across different ethnoracial groups in the United States (Geronimus 1992, 2023). Our community's research in this area of study needs to do a better job following their leads. Granted, the data requirements are steep. But with advances in the collection of intergenerational, life course-based data sets—such as Add Health, the Future of Families and Child Wellbeing Study, and the Panel Study of Income Dynamics—and the linkage of major population health surveys such as the Health and Retirement Study to U.S. Census records from decades ago (e.g., Warren et al. 2020), our field is developing the infrastructure by which critical intergenerational and life course questions of ethnoracial health disparities can be studied. For example, to what extent do ethnoracial disparities in childhood neighborhood and school contexts—which, of course, are inherited via inequities from the previous generation(s)—matter for later life health disparities? And to what extent are ethnoracial disparities in biological aging processes influenced by both disparities in socioeconomic status that accumulate across generations and the life course and group differences in experiences with discrimination-related stressors? Addressing such questions will provide policymakers with stronger evidence on the *roots* of ethnoracial disparities in health rather than evidence that focuses on *downstream symptoms* of health disparities.

## Data Collection for the Future

Putting the foregoing framework into practice, I am currently working in my role as Director of the National Longitudinal Study of Adolescent to Adult Health (Add Health) with a large and exceptional team to collect and disseminate data for the scientific community that will have the potential to, among many other purposes, create a better understanding of ethnoracial health disparities in the United States. As illustrated in [Figure 3](#), Add Health is a longitudinal study of a nationally representative sample of 20,745 adolescents who were in grades 7–12 during the 1994–1995 school year; they have been followed for five waves of data collection to date, with a sixth wave in progress (shown at the bottom of the figure). Over the last 25+ years, Add Health has collected rich demographic, social, familial, socioeconomic, behavioral, psychosocial, cognitive, and health survey data from participants and their parents; a vast array of contextual data on participants' schools, neighborhoods, and geographies of residence; and in-home physical and biological data from participants, including anthropometric measures, genetic markers, blood-based assays, and medication use (Harris 2010; Harris et al. 2019). Ancillary studies have added more

Wave	Administrative		Survey Administration		Biological Data Collection
Wave I 1994–1995 (RR = 79%)	Student N = 90,118	School Admin N = 144	Adolescents in grades 7–12 N = 20,745	Parent N = 17,670	Height, weight
Wave II 1996 (RR = 89%)		School Admin N = 128	Adolescents in grades 8–12 N = 14,738		Height, weight
Wave III 2001–2002 (RR = 77%)	High school transcripts		Young adults aged 18–26 N = 15,197	Partner N = 1,507	Height, weight, STI, HIV, genetic (buccal cell DNA)
Wave IV 2008–2009 (RR = 80%)			Adults aged 24–32 N = 15,701		Height, weight, waist, metabolic, immune, inflammation, cardiovascular, medications, candidate genes, GWAS
Wave V 2016–2018 (RR = 72%)	Birth & death records	Sexual Orientation, Gender Identity & Health N = 2,665	Adults aged 33–43 N = 12,300	Parent N = 3,000	Height, weight, waist, metabolic, immune, inflammation, cardiovascular, renal, medications, gene expression, epigenetic, microbiome
Wave VI 2002–2024	Birth & death records		Early midlife adults aged 40–49 Goal N = 13,000		Height, weight, waist, metabolic, immune, inflammation, cardiovascular, renal, medications, gene expression, epigenetic, microbiome, cognitive, physical functioning

Fig. 3 Longitudinal design of Add Health. Each wave also has contextual data linked at various levels. RR = response rate. GWAS = genome-wide association study.

information, including epigenetic, gene expression, and microbiome data. Thus, Add Health is exceptionally unique because it has a rich, multilevel, longitudinal array of data for a large *nationally representative* cohort of Americans who are entering midlife. Importantly, Add Health also oversampled Black, Hispanic, and Asian adolescents in its original design, thus facilitating many studies of ethnoracial health disparities over the years.

As Wave VI data are collected from 2022 to 2024, the participants are 39–49 years old, with an average age of 44. Unfortunately, the overall health profile of the cohort as they make the transition to midlife is problematic across many dimensions. Moreover, ethnoracial health and mortality disparities in this cohort are wide and, in some cases, widening (Becker et al. 2021). Given all of the rich longitudinal data available in Add Health, Wave VI will help to fill a critical need in the understanding of ethnoracial health and aging disparities in the United States. Like previous waves, Wave VI again includes a survey as the core data collection tool; a majority of participants are taking it on the web, while others are taking it in person. The effort also includes the building of contextual data files corresponding to individuals’ geographies of residence; a home exam within which we are collecting blood, anthropometric, and medications data; the collection of both web- and in-person-based cognitive data; and the collection of mortality information for those who died and birth records information for those who consented. We are aiming for data releases in 2025.

Consistent with my conceptual framework depicted in Figure 2, I mention three features of the Wave VI data collection effort that we hope will help the research community better document and understand ethnoracial health disparities in this cohort. First, as has been the case in Add Health since the project’s inception (Harris et al. 2019), we are measuring race and ethnicity in multiple ways, including through self-report of identity(ies) and through self-reported observed race (i.e., the perception of others) (Roth 2016). To further understand the identity of Add Health participants, we are also assessing a range of sociodemographic characteristics, including self-reported skin tone, sexual orientation, biological sex, and gender identity. Such

measurement will continue to provide a range of options for researchers to assess the individual-level ethnoracial identity of participants, as well as substantial individual- and population-level heterogeneity as discussed earlier.

Second, to address one of the main aims for Wave VI, we are enriching content in key domains that will help researchers understand the individual-level mechanisms by which ethnoracial disparities in population health are created. Beyond socioeconomic resources, such measures include a range of employment-related characteristics, individual-level experiences with discrimination across several dimensions of life, a battery of chronic stressors, multiple questions on experiences with violence and interactions with police and the criminal justice system, and experiences with and burdens of caregiving.

Finally, as emphasized in the conceptual framework, we are adding important contextual data coinciding with the timing of Wave VI data collection, with critical attention given to the potential role of systemic racism in influencing the production and maintenance of ethnoracial health disparities. Among the contextual domains we are building and linking to individuals are those focusing on political and legal contexts, educational and economic contexts, social and health contexts, and cultural contexts. Moreover, my colleagues Taylor Hargrove and Chantel Martin are simultaneously leading a study funded by the National Institute on Aging that is building Add Health's contextual database on structural racism going back to Wave I. All told, then, we hope to provide the scientific community with a key data resource for the understanding of race and ethnicity, racism, health, and aging for a long time to come.

## **Conclusion: Studying Race and Ethnicity, Racism, and Population Health to Educate the Public and Eliminate Disparities**

The Human Genome Project was a decades-long, multi-billion-dollar project with the goal of mapping humans' genetic makeup (National Human Genome Research Institute [n.d.](#)); the results were meant to help improve health and well-being for the entire society and beyond. Arguably, conceptualizing and measuring racism and modeling its impact on population health outcomes across the life course is an equally challenging endeavor, given the historical, social, cultural, and demographic complexity of U.S. society (National Academies of Sciences, Engineering, and Medicine [2022](#)), but doing so likewise offers the exciting and extraordinarily important potential to better understand a very important portion of "our societal DNA" (Hannah-Jones et al. [2021](#)). This work is not going to be complete in a year or two or with a few funded projects. And such work will not yield a brief battery of measures that researchers can pull off the shelf and link to their data set of choice; the histories, contexts, and groups involved are too complex for such an expectation. Rather, conceptualizing, measuring, and modeling racism will require a significant and sustained investment of time, money, and sweat that is in its early stages but, in my view, will be well worth the effort. Indeed, the effort will also be instrumental in developing ways to improve the health and well-being of the U.S. population and eliminate health disparities by targeting social systemic changes rather than, for example, medical or pharmaceutical interventions.

At the same time, while conducting our research, we cannot wait to push for social and institutional changes given what we already know about ethnoracial health disparities; lives are at stake. Indeed, we know that racism-induced socioeconomic inequities, while by no means the complete story, are very important in helping to explain racial and ethnic health disparities in our country; hundreds and hundreds of articles have shown this (Phelan and Link 2015). We have a rock-solid case that achieving racial equity in socioeconomic status (educational attainment, occupational status, income, housing, *and wealth*) will move us toward the goal of eliminating ethnoracial health disparities. Thus, policy efforts focusing on the goal of racial and ethnic equity in socioeconomic status should undoubtedly be front and center on the national, state, and local area radar screens. Empirical evidence is also building regarding linkages between individual-level discrimination and health outcomes (Williams et al. 2019). At this critical juncture in time, I believe that population scientists have a growing and important opportunity, and even an obligation, to team up with policy scientists, legal scholars, and activists of all stripes in the effort to help create empirically validated changes in our schools, workplaces, health care settings, and communities.

While I have outlined the major needs in our research community's work on systemic racism and population health, there are some good research-based examples to draw upon in our efforts to advocate for change with the evidence we can already bring to the table. For example, in the area of civil rights, Hahn and colleagues (2018) published an overview of the beneficial impacts of legislation and policy enforcement regarding U.S. population health—a summary that strongly supports advocacy for civil rights enforcement on behalf of the population health community. Other innovative population health work has been published in recent years on, for example, the harmful impacts of racist political rhetoric and targeted immigration enforcement policies on the birth outcomes of Hispanic women (Gemmill et al. 2019; Gutierrez and Dollar 2023; Krieger et al. 2017; Novak et al. 2017); the harmful impacts of mass incarceration on population health, particularly for Black and Hispanic men (Wildeman and Wang 2017); and lower access to care among low-income people—many Black and Hispanic—in states that have not expanded Medicaid under the Affordable Care Act (Cross-Call 2020). As our research efforts on systemic racism and health unfold, it is imperative that we simultaneously collaborate with policy scientists, legal scholars, and advocates to make our work more widely known and impactful, especially so in an area such as ethnoracial disparities in health that is both such a longstanding injustice and for which we bring very credible evidence to the table.

My final comments focus on institutional change, but I will stick to what I know best: undergraduate and graduate education. In the academic community, I think we have fallen short in training undergraduate students on issues of population health and, in particular, on the creation and maintenance of ethnoracial health disparities. I have been teaching an undergraduate course of 300–400 students on population health over the past five years and have witnessed tremendous student interest in both population health in general as well as in ethnoracial health disparities. And beyond teaching a bit about social history, racism, and health disparities, I have even been able to sneak in a little demography along the way. For academic institutions that have not done so, I strongly encourage the development of courses or even programs (e.g., minors or certificates) that include serious content on race and ethnicity, racism, and population health. From my experience, there is considerable student demand

and such programs attract substantial student diversity. Moreover, students need to understand the social histories of racism that have created ethnoracial disparities and are maintaining them, as well as the policy and legal ideas that may help to dismantle them. Political forces are indeed out to thwart such efforts; it is our collective responsibility to ensure that such efforts do not succeed.

At the graduate level, we have an impressive infrastructure of population centers around the country working for us; population scientists have the capability to bring together tremendous social science, history, law, policy, biological, and epidemiological expertise, with a demography core that holds it all together. Many of us were trained in population centers with some interdisciplinary experiences; however, those experiences typically consisted of a fairly narrow range of coursework and research exposure, often centering around sociology and economics. I believe that continued curricular innovation in our graduate programs is especially necessary to develop higher level thinking on, for example, systemic racism (and sexism, heterosexism, nativism, etc.) and how such history is important for understanding current population health disparities and what can be done about them. Population science curricula need demography. Our core is treasured, trusted, and central to the accurate documentation and more complete understanding of population health and health disparities. But demographic training should not stand alone or as a narrow venture consisting largely of sociology, economics, and perhaps a little bit of epidemiology. Instead, a truly innovative interdisciplinary curriculum is needed to best educate students in this and related areas of science and to provide them with the theory and tools necessary to create scientific and policy breakthroughs in the coming decades. ■

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## References

- Acciai, F., Noah, A. J., & Firebaugh, G. (2015). Pinpointing the sources of the Asian American mortality advantage in the United States. *Journal of Epidemiology and Community Health, 69*, 1006–1011.
- Adia, A. C., Nazareno, J., Operario, D., & Ponce, N. A. (2020). Health conditions, outcomes, and service access among Filipino, Vietnamese, Chinese, Japanese, and Korean adults in California, 2011–2017. *American Journal of Public Health, 110*, 520–526.
- Akresh, I. R., & Frank, R. (2008). Health selection among new immigrants. *American Journal of Public Health, 98*, 2058–2064.
- Alcántara, C., Estevez, C. D., & Alegría, M. (2017). Latino and Asian immigrant adult health: Paradoxes and explanations. In S. J. Schwartz & J. B. Unger (Eds.), *The Oxford handbook of acculturation and health* (pp. 197–220). New York, NY: Oxford University Press.
- Alexander, M. (2010). *The new Jim Crow: Mass incarceration in the age of colorblindness*. New York, NY: The New Press.
- Antecol, H., & Bedard, K. (2006). Unhealthy assimilation: Why do immigrants converge to American health status levels? *Demography, 43*, 337–360.
- Arias, E., Heron, M., & Xu, J. (2017). *United States life tables, 2013* (National Vital Statistics Reports, Vol. 66 No. 3). Hyattsville, MD: National Center for Health Statistics.
- Arias, E., & Xu, J. (2020). *United States life tables, 2018* (National Vital Statistics Reports, Vol. 69 No. 12). Hyattsville, MD: National Center for Health Statistics.
- Arias, E., & Xu, J. (2022). *United States life tables, 2020* (National Vital Statistics Reports, Vol. 71 No. 1). Hyattsville, MD: National Center for Health Statistics.
- Arias, E., Xu, J., Curtin, S., Bastian, B., & Tejada-Vera, B. (2021). *Mortality profile of the non-Hispanic American Indian or Alaska Native population, 2019* (National Vital Statistics Reports, Vol. 70 No. 12). Hyattsville, MD: National Center for Health Statistics.
- Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *Lancet, 389*, 1453–1463.
- Baluran, D. A., & Patterson, E. J. (2021). Examining ethnic variation in life expectancy among Asians in the United States, 2012–2016. *Demography, 58*, 1631–1654. <https://doi.org/10.1215/00703370-9429449>
- Becker, T., Majmundar, M. K., & Harris, K. M. (Eds.). (2021). *High and rising mortality among working-aged adults*. Washington, DC: National Academies Press.
- Brown, T. H., & Homan, P. (2021, May). *Structural racism and health stratification in the U.S.: Connecting theory to measurement*. Paper presented at the annual meeting of the Population Association of America. Retrieved from <https://submissions2.miramart.com/PAA2021/Itinerary/SearchHome.aspx>
- Burgard, S., Montez, J. K., Ailshire, J., & Hummer, R. A. (2021). Aging policy from a multilayered geographic and life course perspective. *Public Policy & Aging Report, 31*, 3–6.
- Cho, Y., Frisbie, W. P., Hummer, R. A., & Rogers, R. G. (2004). Nativity, duration of residence, and the health of Hispanic adults in the United States. *International Migration Review, 38*, 184–211.
- Cho, Y., & Hummer, R. A. (2001). Disability status differentials across fifteen Asian and Pacific Islander groups and the effect of nativity and duration of residence in the United States. *Biodemography and Social Biology, 48*, 171–195.

- Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity, and violence against women of color. *Stanford Law Review*, 43, 1241–1300.
- Crimmins, E. M., Preston, S. H., & Cohen, B. (Eds.). (2010). *International differences in mortality at older ages: Dimensions and sources*. Washington, DC: National Academies Press.
- Cross-Call, J. (2020). *Medicaid expansion has helped narrow racial disparities in health coverage and access to care* (Report). Washington, DC: Center on Budget and Policy Priorities.
- David, R. J., & Collins, J. W., Jr. (1991). Bad outcomes in Black babies: Race or racism? *Ethnicity & Disease*, 1, 236–244.
- DeAngelis, R. T. (2020). Striving while Black: Race and the psychophysiology of goal pursuit. *Journal of Health and Social Behavior*, 61, 24–42.
- Dennis, A. C., Chung, E. O., Lodge, E. K., Martinez, R. A., & Wilbur, R. E. (2021). Looking back to leap forward: A framework for operationalizing the structural racism construct in minority health research. *Ethnicity & Disease*, 31(Suppl. 1), 301–310.
- Donnelly, R., Umberson, D., Hummer, R. A., & Garcia, M. A. (2020). Race, death of a child, and mortality risk among aging parents in the United States. *Social Science & Medicine*, 249, 112853. <https://doi.org/10.1016/j.socscimed.2020.112853>
- Du Bois, W. E. B. (2003). The health and physique of the Negro American. *American Journal of Public Health*, 93, 272–276. (Original work published 1906)
- Du Bois, W. E. B. (2007). *The Philadelphia Negro: A social study*. New York, NY: Oxford University Press. (Original work published 1899)
- Duster, T. (2001). Buried alive: The concept of race in science. *Chronicle of Higher Education*, 48(3), B11–B12.
- Elo, I. T., Turra, C. M., Kestenbaum, B., & Ferguson, R. (2004). Mortality among elderly Hispanics in the United States: Past evidence and new results. *Demography*, 41, 109–128.
- Ely, D. M., & Driscoll, A. K. (2020). *Infant mortality in the United States, 2018: Data from the period linked birth/infant death file* (National Vital Statistics Reports, Vol. 69 No. 7). Hyattsville, MD: National Center for Health Statistics.
- Engelman, M., & Ye, L. Z. (2019). The immigrant health differential in the context of racial and ethnic disparities: The case of diabetes. In R. Frank (Ed.), *Advances in medical sociology: Vol. 19. Immigration and health* (pp. 147–171). Bingley, UK: Emerald Publishing.
- Frank, R. (2007). What to make of it: The (re)emergence of a biological conceptualization of race in health disparities research. *Social Science & Medicine*, 64, 1977–1983.
- Franzini, L., Ribble, J. C., & Keddie, A. M. (2001). Understanding the Hispanic paradox. *Ethnicity & Disease*, 11, 496–518.
- Frisbie, W. P., Cho, Y., & Hummer, R. A. (2001). Immigration and the health of Asian and Pacific Islander Adults in the United States. *American Journal of Epidemiology*, 153, 372–380.
- Gates, H. L., Jr., Steele, C., Bobo, L. D., Dawson, M. C., Jaynes, G., Crooms-Robinson, L., & Darling-Hammond, L. (Eds.). (2012). *The Oxford handbook of African American citizenship, 1865–present*. New York, NY: Oxford University Press.
- Gee, G. C., & Ford, C. L. (2011). Structural racism and health inequities: Old issues, new directions. *Du Bois Review*, 8, 115–132.
- Gemmill, A., Catalano, R., Casey, J. A., Karasek, D., Alcalá, H. E., Elser, H., & Torres, J. M. (2019). Association of preterm births among U.S. Latina women with the 2016 presidential election. *JAMA Network Open*, 2, e197084. <https://doi.org/10.1001/jamanetworkopen.2019.7084>
- Geronimus, A. T. (1992). The weathering hypothesis and the health of African American women and infants: Evidence and speculation. *Ethnicity & Disease*, 2, 207–221.
- Geronimus, A. T. (2023). *Weathering: The extraordinary stress of ordinary life in an unjust society*. New York, NY: Little, Brown Spark.
- Geronimus, A. T., Hicken, M., Keene, D., & Bound, J. (2006). “Weathering” and age patterns of allostatic load scores among Blacks and Whites in the United States. *American Journal of Public Health*, 96, 826–833.
- Geruso, M. (2012). Black–White disparities in life expectancy: How much can the standard SES variables explain? *Demography*, 49, 553–574.
- Gutierrez, C., & Dollar, N. T. (2023). Birth and prenatal care outcomes of Latina mothers in the Trump era: Analysis by nativity and country/region of origin. *PloS One*, 18, e0281803. <https://doi.org/10.1371/journal.pone.0281803>

- Hahn, R. A., Truman, B. I., & Williams, D. R. (2018). Civil rights as determinants of public health and racial and ethnic health equity: Health care, education, employment, and housing in the United States. *SSM—Population Health*, 4, 17–24. <https://doi.org/10.1016/j.ssmph.2017.10.006>
- Hamilton, E. R., Cardoso, J. B., Hummer, R. A., & Padilla, Y. C. (2011). Assimilation and emerging health disparities among new generations of U.S. children. *Demographic Research*, 25, 783–818. <https://doi.org/10.4054/DemRes.2011.25.25>
- Hamilton, T. G. (2019). *Immigration and the remaking of Black America*. New York, NY: Russell Sage Foundation.
- Hamilton, T. G., & Hummer, R. A. (2011). Immigration and the health of U.S. Black adults: Does country of origin matter? *Social Science & Medicine*, 73, 1551–1560.
- Hannah-Jones, N., Roper, C., Silverman, I., & Silverstein, J. (Eds.). (2021). *The 1619 Project: A new origin story*. New York, NY: One World.
- Hardeman, R. R., & Karbeah, J. (2020). Examining racism in health services research: A disciplinary self-critique. *Health Services Research*, 55(S2), 777–780.
- Hardeman, R. R., Murphy, K. A., Karbeah, J., & Kozhimannil, K. B. (2018). Naming institutionalized racism in the public health literature: A systematic literature review. *Public Health Reports*, 133, 240–249.
- Harris, K. M. (2010). An integrative approach to health. *Demography*, 47, 1–22.
- Harris, K. M., Gordon-Larsen, P., Chantala, K., & Udry, J. R. (2006). Longitudinal trends in race/ethnic disparities in leading health indicators from adolescence to young adulthood. *Archives of Pediatric & Adolescent Medicine*, 160, 74–81.
- Harris, K. M., Halpern, C. T., Whitsel, E. A., Hussey, J. M., Killeya-Jones, L. A., Tabor, J., & Dean, S. C. (2019). Cohort profile: The National Longitudinal Study of Adolescent to Adult Health (Add Health). *International Journal of Epidemiology*, 48, 1415–1415k. <https://doi.org/10.1093/ije/dyz115>
- Harris, K. M., & McDade, T. W. (2018). The biosocial approach to human development, behavior, and health across the life course. *Russell Sage Foundation Journal of the Social Sciences*, 4(4), 2–26.
- Hayward, M. D., Hummer, R. A., Chiu, C., González-González, C., & Wong, R. (2014). Does the Hispanic paradox in U.S. adult mortality extend to disability? *Population Research and Policy Review*, 33, 81–96.
- Heuveline, P. (2022). Global and national declines in life expectancy: An end-of-2021 assessment. *Population and Development Review*, 48, 31–50.
- Hicken, M. T., Lee, H., Ailshire, J., Burgard, S. A., & Williams, D. R. (2013). “Every shut eye, ain’t sleep”: The role of racism-related vigilance in racial/ethnic disparities in sleep difficulty. *Race and Social Problems*, 5, 100–112.
- Hicken, M. T., Lee, H., & Hing, A. K. (2018). The weight of racism: Vigilance and racial inequalities in weight-related measures. *Social Science & Medicine*, 199, 157–166.
- Horton, H. D. (1999). Critical demography: The paradigm of the future? *Sociological Forum*, 14, 363–367.
- Horton, H. D., & Sykes, L. L. (2001). Reconsidering wealth, status, and power: Critical demography and the measurement of racism. *Race and Society*, 4, 207–217.
- Hummer, R. A. (1996). Black–White differences in health and mortality: A review and conceptual model. *Sociological Quarterly*, 37, 105–125.
- Hummer, R. A., Biegler, M., DeTurk, P. B., Forbes, D., Frisbie, W. P., Hong, Y., & Pullum, S. G. (1999). Race/ethnicity, nativity, and infant mortality in the United States. *Social Forces*, 77, 1083–1117.
- Hummer, R. A., & Chinn, J. J. (2011). Race/ethnicity and U.S. adult mortality: Progress, prospects, and new analyses. *Du Bois Review: Social Science Research on Race*, 8, 5–24.
- Hummer, R. A., & Gutin, I. (2018). Racial/ethnic and nativity disparities in the health of older U.S. men and women. In M. D. Hayward & M. K. Majmundar (Eds.), *Future directions for the demography of aging: Proceedings of a workshop* (pp. 31–66). Washington, DC: National Academies Press.
- Hummer, R. A., & Hamilton, E. R. (2019). *Population health in America*. Oakland: University of California Press.
- Hummer, R. A., & Hayward, M. D. (2015). Hispanic older adult health & longevity in the United States: Current patterns & concerns for the future. *Daedalus*, 144(2), 20–29.
- Hummer, R. A., Powers, D. A., Pullum, S. G., Gossman, G. L., & Frisbie, W. P. (2007). Paradox found (again): Infant mortality among the Mexican-origin population in the United States. *Demography*, 44, 441–457.
- Hummer, R. A., Rogers, R. G., Amir, S. H., Forbes, D., & Frisbie, W. P. (2000). Adult mortality differentials among Hispanic subgroups and non-Hispanic Whites. *Social Science Quarterly*, 81, 459–476.



- Hummer, R. A., Rogers, R. G., Nam, C. B., & LeClere, F. B. (1999). Race/ethnicity, nativity, and U.S. adult mortality. *Social Science Quarterly*, *80*, 136–153.
- Jackson, J. S., Brown, T. N., Williams, D. R., Torres, M., Sellers, S. L., & Brown, K. (1996). Racism and the physical and mental health status of African Americans: A thirteen-year national panel study. *Ethnicity & Disease*, *6*, 132–147.
- Jackson, J. S., Hudson, D., Kershaw, K., Mezuk, B., Rafferty, J., & Tuttle, K. K. (2011). Discrimination, chronic stress, and mortality among Black Americans: A life course framework. In R. G. Rogers & E. M. Crimmins (Eds.), *International handbooks of population: Vol. 2. International handbook of adult mortality* (pp. 311–328). Dordrecht, the Netherlands: Springer Science+Business Media.
- Jasso, G., Massey, D. S., Rosenzweig, M. R., & Smith, J. P. (2004). Immigrant health: Selectivity and acculturation. In N. B. Anderson, R. A. Bulatao, & B. Cohen (Eds.), *Critical perspectives on racial and ethnic differences in health in late life* (pp. 227–266). Washington, DC: National Academies Press.
- Krieger, N. (2003). Does racism harm health? Did child abuse exist before 1962? On explicit questions, critical science, and current controversies: An ecosocial perspective. *American Journal of Public Health*, *93*, 194–199.
- Krieger, N., Huynh, M., Li, W., Waterman, P. D., & Van Wye, G. (2017). Severe sociopolitical stressors and preterm births in New York City: 1 September 2015 to 31 August 2017. *Journal of Epidemiology and Community Health*, *72*, 1147–1152.
- Krieger, N., Rowley, D. L., Herman, A. A., Avery, B., & Phillips M. T. (1993). Racism, sexism, and social class: Implications for studies of health, disease, and well-being. *American Journal of Preventive Medicine*, *9*(Suppl. 6), 82–122.
- Lariscy, J. T., Hummer, R. A., & Hayward, M. D. (2015). Hispanic older adult mortality in the United States: New estimates and an assessment of factors shaping the Hispanic paradox. *Demography*, *52*, 1–14.
- LaVeist, T. A. (1992). The political empowerment and health status of African Americans: Mapping a new territory. *American Journal of Sociology*, *97*, 1080–1095.
- LaVeist, T. A. (1996). Why we should continue to study race . . . but do a better job: An essay on race, racism, and health. *Ethnicity & Disease*, *6*, 21–29.
- MacDorman, M. F., Thoma, M., Declercq, E., & Howell, E. A. (2021). Racial and ethnic disparities in maternal mortality in the United States using enhanced vital records, 2016–2017. *American Journal of Public Health*, *111*, 1673–1681.
- Markides, K. S., & Coreil, J. (1986). The health of Hispanics in the southwestern United States: An epidemiologic paradox. *Public Health Reports*, *101*, 253–265.
- Markides, K. S., & Eschbach, K. (2005). Aging, migration, and mortality: Current state of research on the Hispanic paradox. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *60*(Special issue 2), 68–75.
- Martinez, R. M., Andrabi, N., Goodwin, A. N., Wilbur, R. E., Smith, N. R., & Zivich, P. N. (2023). Conceptualization, operationalization, and utilization of race and ethnicity in major epidemiology journals, 1995–2018: A systematic review. *American Journal of Epidemiology*, *192*, 483–496.
- Massey, D. S., & Denton, N. A. (1993). *American apartheid: Segregation and the making of the underclass*. Cambridge, MA: Harvard University Press.
- Masters, R. K., Hummer, R. A., Powers, D. A., Beck, A. N., Lin, S. F., & Finch, B. K. (2014). Long-term trends in adult mortality for U.S. Blacks and Whites: An examination of period- and cohort-based changes. *Demography*, *51*, 2047–2073.
- Mehta, N. K., Elo, I. T., Engelman, M., Lauderdale, D. S., & Kestenbaum, B. M. (2016). Life expectancy among U.S.-born and foreign-born older adults in the United States: Estimates from linked Social Security and Medicare data. *Demography*, *53*, 1109–1134.
- Monk, E. P., Jr. (2021). The unceasing significance of colorism: Skin tone stratification in the United States. *Daedalus*, *150*(2), 76–90.
- Morning, A. (2009). Toward a sociology of racial conceptualization for the 21st century. *Social Forces*, *87*, 1167–1192.
- Nam, C. B. (1979). The progress of demography as a scientific discipline. *Demography*, *16*, 485–492.
- National Academies of Sciences, Engineering, and Medicine. (2022). *Structural racism and rigorous models of social inequity: Proceedings of a workshop*. Washington, DC: National Academies Press.
- National Human Genome Research Institute. (n.d.). *The Human Genome Project*. Retrieved from <https://www.genome.gov/human-genome-project>

- Nazroo, J. Y. (2003). The structuring of ethnic inequalities in health: Economic position, racial discrimination, and racism. *American Journal of Public Health, 93*, 277–284.
- Novak, N. L., Geronimus, A. T., & Martinez-Cardoso, A. M. (2017). Change in birth outcomes among infants born to Latina mothers after a major immigration raid. *International Journal of Epidemiology, 46*, 839–849.
- Omi, M., & Winant, H. (2015). *Racial formation in the United States* (3rd ed.). New York, NY: Routledge.
- Phelan, J. C., & Link, B. G. (2015). Is racism a fundamental cause of inequalities in health? *Annual Review of Sociology, 41*, 311–330.
- Poston, D. L., Jr. (Ed.). (2019). *Handbook of population* (2nd ed.). Cham, Switzerland: Springer Nature.
- Preston, S. H., & Haines, M. R. (1991). *Fatal years: Child mortality in late nineteenth century America*. Princeton, NJ: Princeton University Press.
- Preston, S. H., Heuveline, P., & Guillot, M. (2001). *Demography: Measuring and modeling population processes*. Oxford, UK: Blackwell Publishers.
- Richardson, L. J., Goodwin, A. N., & Hummer, R. A. (2021). Social status differences in allostatic load among young adults in the United States. *SSM– Population Health, 15*, 100771. <https://doi.org/10.1016/j.ssmph.2021.100771>
- Riosmena F., Kuhn, R., & Jochem, W. C. (2017). Explaining the immigrant health advantage: Self-selection and protection in health-related factors among five major national-origin immigrant groups in the United States. *Demography, 54*, 175–200.
- Riosmena F., Wong, R., & Palloni, A. (2013). Migration selection, protection, and acculturation in health: A binational perspective on older adults. *Demography, 50*, 1039–1064.
- Rogers, R. G., Hummer, R. A., Lawrence, E. M., Davidson, T., & Fishman, S. H. (2021). Dying young in the United States: What's driving high death rates among Americans under age 25 and what can be done? *Population Bulletin, 75*(2), 1–32.
- Rogers, R. G., Lawrence, E. M., Hummer, R. A., & Tilstra, A. M. (2017). Racial/ethnic differences in early-life mortality in the United States. *Biodemography and Social Biology, 63*, 189–205.
- Roth, W. D. (2016). The multiple dimensions of race. *Ethnic and Racial Studies, 39*, 1310–1338.
- Sáenz, R., & Garcia, M. A. (2021). The disproportionate impact of COVID-19 on older Latino mortality: The rapidly diminishing Latino paradox. *Journals of Gerontology, Series B: Psychological and Social Sciences, 76*, e81–e87. <https://doi.org/10.1093/geronb/gbaa158>
- Satcher, D., Fryer, G. E., McCann, J., Troutman, A., Woolf, S. H., & Rust, G. (2005). What if we were equal? A comparison of the Black–White mortality gap in 1960 and 2000. *Health Affairs, 24*, 459–464.
- Sheftel, M. G., & Heiland, F. W. (2018). Disability crossover: Is there a Hispanic immigrant health advantage that reverses from working to old age? *Demographic Research, 39*, 209–250. <https://doi.org/10.4054/DemRes.2018.39.7>
- Siegel, J. S., & Swanson, D. A. (Eds.). (2004). *The methods and materials of demography* (2nd ed.). San Diego, CA: Elsevier Academic Press.
- Singh, G. K., Rodriguez-Lainz, A., & Kogan, M. D. (2013). Immigrant health inequalities in the United States: Use of eight major national data systems. *Scientific World Journal, 2013*, 512313. <https://doi.org/10.1155/2013/512313>
- Sternthal, M. J., Slopen, N., & Williams, D. R. (2011). Racial disparities in health: How much does stress really matter? *Du Bois Review, 8*, 95–113.
- Turra, C. M., & Elo, I. T. (2008). The impact of salmon bias on the Hispanic mortality advantage: New evidence from Social Security data. *Population Research and Policy Review, 27*, 515–530.
- Umberson, D., Olson, J. S., Crosnoe, R., Liu, H., Pudrovska, T., & Donnelly, R. (2017). Death of family members as an overlooked source of racial disadvantage in the United States. *Proceedings of the National Academy of Sciences, 114*, 915–920.
- United Health Foundation. (2020). *America's health rankings: 2020 annual report*. Retrieved from <https://www.americashealthrankings.org/learn/reports/2020-annual-report/international-comparison>
- U.S. Census Bureau. (2021). *Race and ethnicity in the United States: 2010 Census and 2020 Census* (Report). Retrieved from <https://www.census.gov/library/visualizations/interactive/race-and-ethnicity-in-the-united-state-2010-and-2020-census.html>
- Viruell-Fuentes, E. A., Miranda, P. Y., & Abdulrahim, S. (2012). More than culture: Structural racism, intersectionality theory, and immigrant health. *Social Science & Medicine, 75*, 2099–2106.

- Warren, J. R., Pfeffer, F. T., Helgertz, J., & Xu, D. (2020). *Linking 1940 U.S. Census data to the Panel Study of Income Dynamics: Technical documentation* (Technical Series Paper No. 20-02). Ann Arbor: Institute for Social Survey, Survey Research Center, University of Michigan.
- Wildeman, C., & Wang, E. A. (2017). Mass incarceration, public health, and widening inequality in the USA. *Lancet*, *389*, 1464–1474.
- Williams, D. R. (1996). Racism and health: A research agenda. *Ethnicity & Disease*, *6*, 1–6.
- Williams, D. R. (2012). Miles to go before we sleep: Racial inequities in health. *Journal of Health and Social Behavior*, *53*, 279–295.
- Williams, D. R., & Collins, C. (1995). U.S. socioeconomic and racial differences in health: Patterns and explanations. *Annual Review of Sociology*, *21*, 349–386.
- Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: Evidence and needed research. *Annual Review of Public Health*, *40*, 105–125.
- Wolf, S. H., & Aron, L. (Eds.). (2013). *U.S. health in international perspective: Shorter lives, poorer health*. Washington, DC: National Academies Press.
- Wolf, S. H., Masters, R. K., & Aron, L. Y. (2021). Effect of the COVID-19 pandemic in 2020 on life expectancy across populations in the USA and other high-income countries: Simulations of provisional mortality data. *BMJ*, *373*, n1343. <https://doi.org/10.1136/bmj.n1343>
- World Health Organization. (2006). *Constitution of the World Health Organization* (Basic Documents, 45th ed., Suppl.). Available from <https://www.who.int/about/governance/constitution>
- Wrigley-Field, E. (2020). U.S. racial inequality may be as deadly as COVID-19. *Proceedings of the National Academy of Sciences*, *117*, 21854–21856.
- Zheng, H., & Yu, W. (2022). Diminished advantage or persistent protection? A new approach to assess immigrants' mortality advantage over time. *Demography*, *59*, 1655–1681. <https://doi.org/10.1215/00703370-10175388>
- Zuberi, T., & Bonilla-Silva, E. (Eds.). (2008). *White logic, White methods: Racism and methodology*. Lanham, MD: Rowman & Littlefield Publishers.

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