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Understanding Racial-ethnic Disparities in Health: Sociological Contributions

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Abstract

This article provides an overview of the contribution of sociologists to the study of racial and ethnic inequalities in health in the United States. It argues that sociologists have made four principal contributions. First, they have challenged and problematized the biological understanding of race. Second, they have emphasized the primacy of social structure and context as determinants of racial differences in disease. Third, they have contributed to our understanding of the multiple ways in which racism affects health. Finally, sociologists have enhanced our understanding of the ways in which migration history and status can affect health. Sociological insights on racial disparities in health have important implications for the development of effective approaches to improve health and reduce health inequities.

Keywords

race, health, socioeconomic status, racism, migration

The most difficult social problem in the matter of Negro health is the peculiar attitude of the nation toward the well-being of the race. There have . . . been few other cases in the history of civilized peoples where human suffering has been viewed with such peculiar indifference.

—W. E. B. Du Bois (1899 [1967]:163)

Racial differences in health date back to some of our earliest health records in the United States, with blacks (or African Americans) having poorer health than whites across a broad range of health status indicators. This article highlights some of the important contributions of sociologists to understanding racial inequities in health. It begins with a brief description of the findings of a seminal study conducted by the African American sociologist W. E. B. Du Bois in the late nineteenth century. It shows how later sociologists have built on this work by elaborating on the ways in which socioeconomic status (SES), racism, and migration affect racial differences in health. We also consider the implications of this sociological research for policies to reduce disparities in health.

DU BOIS'S EARLY RESEARCH ON RACE AND HEALTH

In his classic 1899 book, *The Philadelphia Negro*, W. E. B. Du Bois provided a detailed characterization of the “negro problem” in America (Du Bois [1899] 1967). His insightful analysis indicated that the higher level of poor health for blacks was one important indicator of racial inequality in the United States. In the late nineteenth and early twentieth centuries the dominant medical paradigm attributed any observed racial difference in health to innate biological differences between racial groups (Krieger 1987). In contrast, Du Bois saw racial differences in health as reflecting

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differences in “social advancements,” the “vastly different conditions” under which blacks and whites lived. He argued that, although the causes of racial differences in health were multifactorial, they were nonetheless primarily social. The list of contributing factors included poor heredity, neglect of infants, bad dwellings, poor food, and unsanitary living conditions. For example, consumption (tuberculosis) was the leading cause of death for blacks in Philadelphia, and Du Bois ([1899] 1967) indicated that the causal factors were primarily environmental. He stated that, “bad ventilation, lack of outdoor life for women and children, poor protection against dampness and cold are undoubtedly the chief causes of the excessive death rate” (p. 152). Du Bois also noted that the health of blacks varied within Philadelphia by neighborhood of residence. Death rates were higher in the Fifth Ward, “the worst Negro slum in the city and the worst part of the city in respect to sanitation,” than in the Thirtieth Ward, which had “good houses and clean streets” (Du Bois [1899] 1967:150–51).

Du Bois reported that black men had poorer health than black women and that the gender differences in health were larger for blacks than for whites. These patterns were also attributed to “the social condition of the sexes in the city” (Du Bois [1899] 1967:151). He indicated that, although domestic work was the only option for black women, work was more available for black women than for their male counterparts. In addition, the conditions of work for black women were more conducive to health than those for black men. The domestic servant had access to a good house, good food, and proper clothing. In contrast, black males lived in poorer housing, lived on poorly prepared or irregular food, and had jobs that provided greater exposure to adverse weather conditions. Du Bois also speculated that migration and urbanization were influences on black health. He noted, though, that because the migration of blacks from the south to the north was recent, its full impact on black health was not known. However, he documented that in Philadelphia wards with a high proportion of immigrants, death rates were reduced because of the demographic composition of the population (“the absence of old people and children,” see Du Bois [1899] 1967, p. 155).

For much of the twentieth century, as reflected by publications in the two leading journals in American sociology, the health of the black population has not been a central focus of the discipline. To illustrate, we searched the phrases “race and health,” “health inequality and race,” “health inequality and ethnicity,” and “health disparity” in the

American Journal of Sociology (AJS) and the *American Sociological Review (ASR)* from the earliest dates available electronically (1895 for *AJS* and 1934 for *ASR*) to identify articles addressing racial-ethnic disparities in health. We identified only 18 relevant articles published by the year 1989 (ten in *AJS* and eight in *ASR*). However, there was considerably more recent interest in the topic. There were 14 articles published from 1990–2008 (six in *AJS* and eight in *ASR*). Although we argue that racial disparities in health were not a central focus of the top journals of the discipline, sociologists have made and continue to make seminal contributions to our understanding of racial disparities in health. Examples include Williams and Collins (1995) in the *Annual Review of Sociology*, Link and Phelan (1995) in the *Journal of Health and Social Behavior*, and Markides and Coreil (1986) in *Public Health Reports*. Sociologists have also been contributors to several landmark publications on race in the last several decades. These include *A Common Destiny: Blacks and American Society* (Jaynes and Williams 1989), *Unequal Treatment* (Smedley, Stith, and Nelson 2002), and *America Becoming: Racial Trends and their Consequences* (Smelser, Wilson, and Mitchell 2001). As we indicate below, much of the sociological research on race and health has built and elaborated on many of the insights that were present in Du Bois’s seminal work.

THE PERSISTENCE OF RACIAL DIFFERENCES IN HEALTH

There is abundant evidence of the continued existence of racial differences in health. Table 1 provides an example of the magnitude and trends of these inequities. It shows racial differences in life expectancy at birth for men and women from 1950 to the present. Gender is an important social status category, and there is need for increased attention to how health is distributed by multiple social status categories simultaneously. The racial gap in health is large and persistent over time. White men and women outlived their black counterparts by 7.4 and 9.3 years, respectively, in 1950. Although life expectancy has increased for all groups over the last half-century, in 2006 white men still lived six years longer than African American men and white women had a four year advantage over their black peers. And as Du Bois ([1899] 1967) noted over a century ago, the patterns are gendered. The racial gap in health is larger for men than for

Table 1. Racial Differences in Years of Life Expectancy at Birth: 1950–Present

Year	Men			Women			Gender Difference	
	White	Black ^a	Difference	White	Black ^a	Difference	White	Black ^a
1950	66.5	59.1	7.4	72.2	62.9	9.3	5.7	3.8
1960	67.4	61.1	6.3	74.1	66.3	7.8	6.7	5.2
1970	68.0	60.0	8.0	75.6	68.3	7.3	7.6	8.3
1980	70.7	63.8	6.9	78.1	72.5	5.6	7.4	8.7
1990	72.7	64.5	8.2	79.4	73.6	5.8	6.7	9.1
2000	74.7	68.2	6.5	79.9	75.1	4.8	5.2	6.9
2006	75.7	69.7	6.0	80.6	76.5	4.1	4.9	6.8
Change from 1950 to 2006	9.2	10.6		8.4	13.6			

^aFrom 1950 to 1960, includes all non-white races.

Source: Heron et al. 2009

women, and there have been larger reductions in the racial gap in life expectancy for women than for men over time, reflecting the fact that, of the four race-gender groups considered, black women have had the largest absolute gains in life expectancy between 1950 and 2006. Moreover, since 1970, the gender difference in life expectancy has been larger for blacks than for whites, with African American women enjoying a higher level of life expectancy than white men.

Other research reveals that African Americans and American Indians have higher age-specific death rates than whites from birth through retirement (Williams et al. 2010). Hispanics (or Latinos) have elevated rates of some leading causes of death, such as diabetes, hypertension, liver cirrhosis, and homicide. Moreover, the elevated rates of disease and death for minorities compared to whites reflect the earlier onset of illness, greater severity of disease, and poorer survival (Williams et al. 2010). Even when African Americans have a lower rate of illness than whites, they have a prognosis that is considerably worse than those of their white counterparts. For example, a recent national study found that, although blacks have lower current and lifetime rates of major depression than whites, the cases of depression among blacks were more likely to be persistent, severe, disabling, and untreated (Williams et al. 2007a).

WHAT IS RACE?

Sociological research seeking to understand how and why these large racial differences in health persist has attempted to delineate what “race” is.

The U.S. Government’s Office of Management and Budget (OMB) currently recognizes five racial categories (white; black or African American; American Indian or Alaskan Native; Asian; and Native Hawaiian and other Pacific Islander), as well as Hispanic or Latino, an ethnic category (Office of Management and Budget 1996). Early research on racial differences in health viewed all observed disparities as reflecting biological differences between racial groups (Krieger 1987). Recent scientific research reveals that human genetic variation does not naturally aggregate into subgroups that match human conceptions of racial categories, and that “race” is in large part a social rather than a biological category (Cooper, Kaufman, and Ward 2003).

Sociologists have long shown that established racial classification systems are arbitrary and evolved from systems of stratification, power, and ideology (Frazier 1947; Blauner 1972; Omi and Winant 1994). In critiques of the conceptual, methodological, and practical implications of using race as a variable in health research, sociologists have rejected the dominant view of the last century that racial disparities in health primarily reflect biological differences between racial groups (Wilkinson and King 1987; Williams 1997; American Sociological Association 2003). Duster and Garrett (1984), for example, have shown how an emphasis on the genetic sources of racial disparities in health can serve important ideological functions in society. Views of race that focus on biology can divert attention from the social origins of disease, reinforce social norms of racial inferiority, and promote the maintenance of the status quo. If racial differences in health are caused by inherent genetic

differences, then social policies and structures that initiate and sustain the production of disease are absolved from responsibility. Sociologists have also emphasized that science is not value-free and that preconceived opinions, political agendas, and cultural norms, consciously or unconsciously, can shape scientific research by determining which research questions are asked and which projects are funded (Duster and Garrett 1984).

Sociologists have also noted a recent trend on the part of some geneticists to use current racial categories to capture genetic differences between population groups (Frank 2008). These researchers argue that data from multiple loci on the human genome can provide fairly accurate characterization of individuals into continental ancestral groups that approximate our current racial categories (Risch et al. 2002). These data on “continental ancestry” have been used to suggest that there is enormous practical value in using race as a biological category. However, Serre and Paabo (2004) have shown that sampling biases play a key role in conclusions regarding the continental clustering of populations. Thus, although genetic markers can uniquely identify most individuals, variations in biological characteristics relevant for health risks are not inherently structured into meaningful “racial” categories such that identifying ancestry provides little direct information regarding whether an individual has a specific genetic characteristic (Cooper et al. 2003). Sociologist Reanne Frank (2008) has noted the worrying trend in health disparities research of keeping the logic of genetic racial differences intact but substituting the language of “ancestral background” for the language of “race.”

Sociologists also emphasize that, although the contribution of genetics to racial variations in major chronic diseases is likely to be small, research on racial differences in health should seek to understand how social exposures combine with biology to affect the social distribution of disease (Williams et al. 2010). However, all conclusions about the contribution of genetics should be based on explicit tests of genetic traits. In addition, researchers should pay more attention to issues of population sampling when making inferences to larger populations about observed genetic variation, and they should also be more mindful both of genetic variation within race and differences across racial groups. Most importantly, sociologists and other social scientists need to devote more concerted and systematic attention to developing valid and reliable measures of the relevant

aspects of the social environment for the study of gene–environment interactions.

Research indicates that, even in the case of single gene disorders, the severity and timing of genetic expression are affected by environmental triggers, and that established genetic risks can be exacerbated or become protective in the presence of specific environmental exposures (Shields, Fullerton, and Olden 2009). Recent sociological research illustrates how gene–environment interactions can potentially shed light on the mechanisms linking the social environment to disease. For example, an analysis of data from adolescents in the Add Health Study found that genetic traits interacted with family processes (e.g., daily family meals), school processes (e.g., repeating a grade), and friendship network variables (e.g., friend delinquency) to predict delinquency and violence among male adolescents (Guo and Roettger 2008).

In contemporary society, racial groups differ on a broad range of social, behavioral, nutritional, psychological, residential, occupational, and other variables. And, given that biology is not static but is adaptive to the environmental conditions in which the human organism exists, there are likely to be interactions of the social environment with both innate and acquired biological factors. Thus, although variation in gene frequency is unlikely to play a major role in accounting for racial disparities, differences in gene expression linked to the occupancy of different environmental contexts could play a critical role. Epigenetics refers to changes in gene expression that are not caused by changes in the nucleotide sequences of the DNA. Recent research reveals that exposure to risk factors and resources in the social environment can produce changes in gene expression (Williams et al. 2010). Future research on racial inequities in health needs to more systematically explore the extent to which the distinctive residential and occupational environments of racial minorities give rise to patterns of social exposures that can produce epigenetic changes in gene expression and tissue and organ function (Kuzawa and Sweet 2009).

SOCIAL STRUCTURE AND RACE

Sociological research has long explored the role of social structure and social stratification as a key determinant of health. Social structure refers to enduring patterns of social life that shape an individual’s attitudes and beliefs, behaviors and

Table 2. Years of Life Expectancy at Age 25, United States

Group	White	Black	Difference
All (1998) ^a	53.4	48.4	5.0
By Education (1988–1998) ^b			
0–12 Years	50.1	47.0	3.1
12 years	54.1	49.9	4.2
Some College	55.2	50.9	4.3
College Graduate	56.5	52.3	4.2
Difference	6.4	5.3	

^aMurphy 2000.

^bBraveman et al. 2010, National Longitudinal Mortality Study 1988–1998.

actions, and material and psychological resources. Among the social structures investigated within sociology, social class, usually operationalized as socioeconomic status (SES), has proven particularly relevant for understanding racial disparities in health. In a seminal study in the 1840s, Engels ([1844] 1984) showed how life expectancy in Liverpool, England varied by the occupation of the residents. Moreover, he showed how specific exposures in both occupational and residential environments were related to the elevated risk of particular diseases. More recent sociological research has found that SES is inversely associated with high quality health care, stress, exposure to social and physical toxins, social support, and healthy behaviors. Accordingly, SES remains one of the strongest known determinants of variations in health status (Williams and Collins 1995).

Sociological work on class informs the study of racial disparities in health, because, as Du Bois ([1899] 1967) noted at the turn of the century, race is strongly intertwined with SES. Recent research continues to find that SES differences among the races account for a substantial component of the racial-ethnic differences in health (Hayward et al. 2000; Williams and Collins 1995; Hummer 1996). However, sociologists have emphasized that race and SES are two related but distinct systems of social ordering that jointly contribute to health risks (Navarro 1990; Williams and Collins 1995). Accordingly, attention needs to be given to both race-based and class-based factors that undergird racial health disparities.

Table 2 illustrates the complex relationship between race and SES by presenting national data on life expectancy at age across categories of race and education. It shows that there is a five-year

racial difference in life expectancy at age 25, but an even larger difference within each race by education. It also indicates that the racial differences in health cannot be simply reduced to SES, because there are residual racial differences at every level of education. These data illustrate the notion of the potential “double jeopardy” facing those in non-dominant racial groups who experience health risks associated with both their stigmatized racial status and low SES (Ferraro and Farmer 1996). The life expectancy data at age 25 also reveal that the racial gap in life expectancy is greater at the higher levels of education compared to the lowest level. This is generally consistent with the “diminishing returns” hypothesis, which argues that racial minorities receive declining health returns as SES increases (Farmer and Ferraro 2005). This pattern exists for some but not all health outcomes. Sociologists have also shown that race and SES can combine with gender and other social statuses in complex ways to create patterns of interaction and intersectionality (Schulz and Mullings 2006).

Sociological work on social class has also contributed to our understanding of racial disparities by underscoring the multidimensionality of SES indicators (Hauser 1994). Sociologists have shown that it requires assessing the multiple dimensions of SES to fully characterize its contribution to racial disparities in health. Moreover, all of the indicators of SES are nonequivalent across race. For example, compared to whites, blacks and some other racial minorities have lower income at every level of education; less wealth (net assets) at every level of income; higher rates of unemployment at all levels of education; higher exposure to occupational hazards, even after adjusting for job experience and education; and less purchasing power because of higher costs of goods and services in their residential contexts (Williams and Collins 1995). Sociological research has also highlighted the role of SES at the community level, as captured by neighborhood-level markers of economic hardship, social disorder, and concentrated disadvantage (Wilson 1990; Massey and Denton 1993). Other sociological research has called attention to large racial-ethnic inequalities in wealth, and they have documented that these gaps reflect, at least in part, the historical legacy of institutional discrimination (Conley 1999; Oliver and Shapiro 2006). While income captures the flow of economic resources (such as wages) into the household, wealth captures the economic reserves that are reflected in savings, home equity, and other financial assets. National data reveal that, for every

dollar of wealth that white individuals have, blacks have 9 cents and Hispanics have 12 cents (Orzechowski and Sepielli 2003). These striking disparities exist at every level of income. For example, for every dollar of wealth that poor whites in the lowest quintile of income have, poor blacks have one penny and poor Latinos have two pennies.

RACISM AND HEALTH

Sociological research has also shed important light on how factors linked to race contribute to racial differences in health. This work has identified multiple ways in which racism initiates and sustains health disparities (Williams and Mohammed 2009). This research explicitly draws on the larger sociology literature on racism and conceptualizes it as a multilevel construct, encompassing institutional and individual discrimination, racial prejudice and stereotypes, and internalized racism (Feagin and McKinney 2003; Bonilla-Silva 1997; Massey and Denton 1993).

At the institutional level, sociological research has underscored the role of residential racial segregation as a primary institutional mechanism of racism and a fundamental cause of racial disparities in health (Massey and Denton 1993; LaVeist 1989; Williams and Collins 2001), and it has helped shape local and federal policies. Sociologists have documented how segregation produces the concentration of poverty, social disorder, and social isolation, and how it creates pathogenic conditions in residential environments (Massey 2004; Schulz et al. 2002; Williams and Collins 2001). For example, an examination of the 171 largest U.S. cities found that the worst urban context in which white individuals lived was better than the average context of black neighborhoods (Sampson and Wilson 1995). These differences in neighborhood quality and community conditions are driven by residential segregation by race, a neglected but enduring legacy of institutional racism in the United States. Considerable evidence suggests that, because of segregation, the residential conditions under which African Americans, American Indians, and an increasing proportion of Latinos live are distinctive from those of the rest of the population.

Sociologists have also identified multiple pathways through which segregation can adversely affect health (Morenoff 2003; Williams and Collins 2001; Schulz et al. 2002). First, segregation

restricts SES attainment by limiting access to quality elementary and high school education, preparation for higher education, and job opportunities. Second, the residential conditions of concentrated poverty and social disorder created by segregation make it difficult for residents to eat nutritiously, exercise regularly, and avoid advertising for tobacco and alcohol. For example, concerns about personal safety and the lack of recreation facilities can discourage leisure time physical exercise. Third, the concentration of poverty can lead to exposure to elevated levels of financial stress and hardship, as well as other chronic and acute stressors at the individual, household, and neighborhood levels. Fourth, the weakened community and neighborhood infrastructure in segregated areas can also adversely affect interpersonal relationships and trust among neighbors. Fifth, the institutional neglect and disinvestment in poor, segregated communities contributes to increased exposure to environmental toxins, poor quality housing, and criminal victimization. Finally, segregation adversely affects both access to care and the quality of care. Research has linked residential segregation to an elevated risk of illness and death, and it has shown that segregation contributes to the racial disparities in health (Williams and Collins 2001; Acevedo-Garcia et al. 2003).

Segregation probably has a larger impact on the health of African Americans than other groups because blacks currently live under a level of segregation that is higher than that of any other immigrant group in U.S. history (Massey and Denton 1993). In addition, the association between segregation and SES varies by minority racial group. For Latinos and Asians, segregation is inversely related to household income, but segregation is high at all levels of SES for blacks (Massey 2004). The highest SES blacks (incomes greater than \$50,000) in the 2000 Census were more segregated than the poorest Latinos and Asians (incomes less than \$15,000) (Massey 2004).

At the individual level, experiences of discrimination have been shown to be a source of stress that adversely affect health (Williams and Mohammed 2009). Research has documented elevated levels of exposure to both chronic and acute measures of discrimination for socially stigmatized racial and immigrant groups in the United States, Europe, Africa, Australia, and New Zealand (Williams and Mohammed 2009). Exposure to discrimination has been shown to be associated with increased risk of a broad range of indicators of physical and mental illness. In addition, discrimination, like other

measures of social stress, adversely affects patterns of health care utilization and adherence behaviors, and it is predictive of increased risk of using multiple substances to cope with stress, including tobacco, alcohol, and illicit drugs. Several studies have found that, in multiple national contexts, racial discrimination makes an incremental contribution to SES in accounting for observed racial disparities in health (Williams and Mohammed 2009).

While much research has focused on the pervasive role of racism in perpetuating health disparities, sociologists have also enhanced our understanding of the complex ways communities respond to discrimination. Some research has explored the harmful health effects of internalized racism, in which minority groups accept the dominant society's ideology of their inferiority (Williams and Mohammed 2009). Other research has identified cultural and psychosocial resources that foster resilience. For example, sociological research has found that religious involvement can enhance health in the face of racial discrimination, and that it can also buffer the negative effects of interpersonal discrimination on health (Bierman 2006; Ellison, Musick, and Henderson 2008). Other research indicates that ethnic identity can serve as a resource in the face of discrimination (Mossakowski 2003). Having a sense of ethnic pride and engaging in ethnic practices can enhance mental health directly, and the strength of ethnic identification can reduce the stress of discrimination on mental health.

MIGRATION AND HEALTH

Du Bois's ([1899] 1967) insight that immigrant status affects the health profile of a population is relevant to understanding contemporary patterns of health. Asians and Latinos have lower overall age-adjusted mortality rates than whites. In the 2000 U.S. Census, 67 percent of Asians and 40 percent of Latinos were foreign-born (Malone et al. 2003). Processes linked to migration make an important contribution to the observed mortality rates for these groups. National data reveal that immigrants of all racial groups have lower rates of adult and infant mortality than their native-born counterparts (Hummer et al. 1999; Singh and Miller 2004; Singh and Yu 1996). Moreover, across multiple immigrant groups, with increasing exposure to American society, health tends to decline. This pattern is especially surprising for Latinos. Hispanic immigrants,

especially those of Mexican background, have high rates of poverty and low levels of access to health insurance in the United States. However, their levels of health are equivalent and sometimes superior to that of the white population. This pattern has been called the Hispanic paradox (Markides and Eschbach 2005).

Sociological research has shed important light on the complex association between migration and health. First, research has shown that when a broad range of health outcomes are considered, a complex pattern emerges. For example, although Hispanics have comparable levels of infant mortality to whites, women of all Hispanic groups have a higher risk of low birth weight and prematurity than whites (Frisbie, Forbes, and Hummer 1998). Similarly, in the California Health Interview Survey (CHIS), virtually all immigrants reported better physical health status than the native-born (Williams and Mohammed 2008). In contrast, for psychological distress, many immigrant groups (most Latino groups, Pacific Islanders, and Koreans) reported worse health than the native-born, while other immigrants groups (blacks, Puerto Ricans, and Filipinos) had better health, and still others (Vietnamese, Japanese, and Chinese) did not differ from their native-born counterparts.

Second, sociological research has shown that migration status combines in complex ways with SES to affect health. Immigrant populations differ markedly in SES upon arrival in the United States (Rumbaut 1996). For example, Asian and African immigrants have markedly higher levels of education than other immigrant groups and U.S.-born whites. In contrast, immigrants from Mexico have low levels of education at the time of migration to the United States, and they face major challenges with socioeconomic mobility in the second generation. Sociological research has shown that these differences in SES affect patterns and trajectories of health in important ways. For immigrant populations largely made up of low SES individuals, traditional indicators of SES tend to be unrelated to health in the first generation, but they exhibit the expected associations in health by the second generation (Angel, Buckley, and Finch 2001). In addition, the socioeconomic status of immigrants upon arrival to the United States appears to be a determinant of the immigrant group's trajectory of health. For example, the gap in mortality between immigrants and the native-born is smaller for Asians than for whites, blacks, and Hispanics (Singh and Miller 2004), and recent national data reveal that declines in mental health for subsequent

generations were less marked for Asians (Takeuchi et al. 2007) than for blacks (Williams et al. 2007b) and Hispanics (Alegria et al. 2007). Thus, although black, Latino, and Asian first generation immigrants all have lower disorder rates than the general population of blacks and whites, by the third generation the disorder rates of Latino and black but not Asian immigrants are higher (Alegria et al. 2007; Takeuchi et al. 2007; Williams et al. 2007b; Miranda et al. 2008). One of the factors contributing to the good health profile of immigrants is their selection on the basis of health. Recent sociological research has shown that differences in the SES of immigrant streams is the key determinant of variation in health selection among immigrants, with immigrants to the United States from Mexico having lower levels of positive health selection than immigrants from all other regions of the world (Akresh and Frank 2008). That is, the surprisingly good health of immigrants from Mexico is not primarily due to the better health of Mexican immigrants relative to Mexicans who did not migrate. Future research is needed to clearly identify the relative contribution of various factors to the health status of immigrants and how these may vary across various immigrant populations.

Third, sociological research has begun to characterize how risk factors and resources in immigrant populations can affect the health of immigrants. Specifically, stressors and strains associated with migration and adaptation, inadequate health care in the country of origin, and factors linked to larger social structures and context (e.g., institutional racism and interpersonal discrimination) can affect health among immigrants (Angel and Angel 2006). For example, a study of adult migrant Mexican workers in California found that stressors linked to discrimination, legal status, and problems speaking English were inversely related to self-reported measures of physical and mental health, and that they partially accounted for the declines in these health indicators with increasing years in the United States (Finch, Frank, and Vega 2004).

Finally, sociologists have also shown that a full understanding of the health effects of migration requires an assessment of the ways in which migration impacts the health of sending communities. For example, a study of infant health in two high-migration sending states in Mexico found that infants born to fathers who had migrated to the United States had a lower risk of low birth weight and prematurity compared to infants born to fathers who had never migrated (Frank 2005). This study

also found that women with partners in the United States had lower levels of social support and higher levels of stress during pregnancy than women with nonimmigrant partners, but the benefits of the receipt of remittances and the practice of better health behaviors led to improved infant health outcomes. These findings highlight the importance of attending to the bidirectional effects of migration processes.

At the same time, the good health profile of immigrants highlights how much we still need to learn regarding the determinants of health and the policies needed to improve the health of all Americans and to reduce inequities in health across population groups. Especially striking and intriguing are the data for Mexican immigrants. Despite having levels of poverty comparable to those of African Americans, and despite having among the lowest levels of access to health care of any racial-ethnic group in the United States, Mexican immigrants nonetheless have levels of health that are often equivalent and sometimes superior to those of whites (Williams et al. 2010). These data emphasize that health is not primarily driven by medical care but by other social-contextual factors. However, precisely what these social determinants of health are, and how they may operate in the absence of high levels of SES, and why they change over time is less clear. Accordingly, for both research and policy reasons, there is an urgent need to identify the relevant factors that shape the association between migration status and health for Mexicans and other immigrants. Moreover, we need to identify and implement the interventions, if any, that can avert or reverse the downward health trajectory of immigrants with increasing length of stay in the United States.

CONCLUSIONS AND POLICY IMPLICATIONS

Sociological research on racial disparities in health has many important lessons for policies that seek to address social inequities in health. First, there are implications for how data on social inequalities in health are reported. For over 100 years, the U.S. public health system has routinely reported national health data by race. Instructively, although SES differences in health are typically larger than racial ones, health status differences by SES are seldom reported, and only very rarely are data on health status presented by race and SES simultaneously. Moreover, striking differences are also evident by

sex. Given the patterns of social inequalities and the need to raise awareness among the public and policy makers of the magnitude of these inequities and their social determinants, we strongly urge that health data should be routinely collected, analyzed, and presented simultaneously by race, SES, and gender. This will highlight the fundamental contribution of SES to the health of the nation and to racial disparities in health. Failure to routinely present racial data by stratifying them by SES within racial groups can obscure the social factors that affect health and reinforce negative racial stereotypes. The inclusion of gender must be accompanied by research that seeks to identify how biological factors linked to sex and social factors linked to gender relate to each other and combine with race and SES to create new identities at the convergence of multiple social statuses that predict differential access to societal resources.

Sociological research indicates that race and SES combine in complex ways to affect health. There has been some debate regarding the advisability of race-specific versus universal initiatives to improve outcomes for vulnerable social groups. Extant research that clearly documents residual effects of race at every level of SES suggests that race-specific strategies are needed to improve outcomes for disadvantaged racial groups. The research reviewed here indicates that both the legacies of racism and its continued manifestations matter for health. For example, unless and until serious attention is given to addressing institutional racism such as residential segregation, reducing racial inequities in health will likely prove elusive. More research and policy attention should be given to identifying and implementing individual and, especially, institutional interventions that would be effective in reducing the levels and consequences of racism in society. For instance, state or federal policies that expand the stock of safe, stable, low-income and mixed-income housing or funding for section 8 vouchers could increase access to high-opportunity neighborhoods, while more robust enforcement of housing and financial regulations could help curb predatory lending and housing discrimination practices in minority or underserved neighborhoods.

There are many good reasons for reducing societal racism and improving the racial climate of the United States. The substantial health benefits of such interventions are an important benefit that is not widely recognized. Similarly, some evidence suggests that many of the most promising efforts to

improve health are likely to widen disparities because the most advantaged social groups are likely to extract the greatest benefit from them (Mechanic 2002). Accordingly, policies are needed that improve the health of vulnerable social groups more rapidly than that of the rest of the population so that health gaps can be narrowed.

The evidence documenting that race is primarily a social rather than a biological category provides insight into the types of interventions that are needed to improve the health of disadvantaged racial populations. Effective interventions will be those that are targeted not at internal biological processes, but those that seek to improve the quality of life in the places where Americans spend most of their time: their homes, schools, workplaces, neighborhoods, and places of worship (Williams, McClellan and Rivlin 2010). For example, incentive programs for farmers' markets and full-service grocery stores, along with more stringent regulations on fast food and liquor stores, could increase availability of nutritious, affordable foods in underserved areas. Other potential interventions include (1) restructured land-use and zoning policies that reduce the concentration of environmental risks (e.g., close proximity of bus depots to schools or daycares); (2) public transportation options that encourage physical activity and minimize pollution risks; (3) the creation of public green spaces that promote walking, exercise, and community cohesion; and (4) educational initiatives aimed at equalizing access to K-12 education and higher education, improving teacher quality, raising graduation rates, and reducing the achievement gap.

Historically, sociological research on racial disparities in health has directly contributed to action and debate in the policy arena. For example, informed by Robert Bullard's groundbreaking research on environmental racism (Bullard 2000; Bullard and Johnson 2000), President Clinton signed an executive order which required federal agencies to ensure that their policies and programs did not disproportionately adversely affect minorities or the poor (Clinton 1994). More recently, an influential report co-authored by sociologist Thomas LaVeist (LaVeist, Gaskin, and Richard 2009) is helping to transform the policy debate about racial disparities in health by emphasizing that these differences in health have substantial economic costs for society. This report estimated that the medical care and lost productivity costs for racial disparities in health amount to a \$309 billion annual loss to the economy. These economic costs

are a compelling additional policy justification for eliminating health inequities. Sociologist David Williams also recently served as the staff director for the Robert Wood Johnson Foundation Commission to Build a Healthier America, a national bipartisan initiative focused on improving Americans' health and reducing socioeconomic and racial disparities in health. The recommendations of this commission have shaped recent federal spending and budget priorities on nutrition and investments in early developmental support for children (Williams, McClellan and Rivlin 2010).

Since health is embedded in policies far removed from traditional health policy, success will depend on integrative and collaborative efforts across multiple sectors of society that seek to leverage resources to enhance health. It was earlier noted that black women experienced a large decline in life expectancy between 1950 and 2006. This success was likely due to improvements in the SES of African American women. A review of studies of the health effects of the civil rights movement found that black women experienced larger economic gains than black men during the 1960s and 1970s. Further, the study showed that during this period of the narrowing of the income gap between blacks and whites, blacks, especially black women, experienced larger improvements in health, relatively and absolutely, than whites (Williams et al. 2008).

The magnitude and persistence of racial inequities in health call on U.S. policy makers to seriously confront what Du Bois ([1899] 1967) referred to as the "peculiar indifference" to the magnitude of human suffering that racial disparities in health reflect. Policy makers need to identify the real and perceived barriers to implementing comprehensive societal initiatives that are necessary to eliminating racial differences in health. More systematic and sustained attention should be given to how to frame such efforts in ways that resonate with dominant American ideals. Widely cherished norms of equal opportunity and the dignity of the individual could be creatively harnessed to build the needed political support to improve the health of all Americans, including those that currently live shorter and sicker lives than the rest of the population.

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