Journal of Racial and Ethnic Health Disparities (2019) 6:265–272
https://doi.org/10.1007/s40615-018-0521-y

Perceived Race as Variable: Moderating Relationship Between Perceived Discrimination in the Workplace and Mentally Unhealthy Days

Alexis Jemal[1] · Myrtho Gardiner[2] · Katharine Bloeser[1]

Received: 22 December 2017 / Revised: 13 July 2018 / Accepted: 7 August 2018 / Published online: 23 August 2018

Abstract

Since race is a social construct, the experience of racial discrimination occurs based on perceived race. This study explores the moderating effects of self-identified race and perceived racial identity on the relationship between perceived discrimination in the workplace and mentally unhealthy days using data derived from the four states (Arizona, Minnesota, Mississippi, and New Mexico) that responded to the 2014 Reactions to Race module of the Behavioral Risk Factor Surveillance System. The study hypothesized that self-identified White people, also perceived as White (WW), would have less perceived workplace discrimination and less mentally unhealthy days than self-identified non-White people perceived as White (NWW); NWW would have less perceived discrimination associated with mentally unhealthy days than self-identified White perceived as non-White (WNW); and, WNW would have less perceived discrimination associated with mentally unhealthy days than self-identified non-White perceived as non-White (NWNW). The study was conducted under the regulating body of the City University of New York in 2017. Findings suggest that being perceived as White is a protective factor as analysis determined that NWW experienced less discrimination in the workplace associated with mentally unhealthy days than NWNW.

Keywords Perceived race · Mental health · Discrimination · Critical consciousness · Moderation · Health inequities

Introduction

Public health research documents health disparities among racial/ethnic groups, with African Americans and Latinos experiencing greater negative health consequences than their White counterparts [1, 2]. African Americans are plagued by chronic health conditions from obesity to diabetes to heart disease and have higher prevalence rates for related conditions (i.e., heart failure, coronary heart disease, hypertension, and stroke) than their White peers [1, 2]. Moreover, incidence and mortality rates for heart disease and treatable cancers are much higher for Blacks [2]. As noted, health disparities research uses the variable of race to examine differences in health outcomes between White and non-White populations. However, when studying these differences, some may be tempted to blame the individuals of non-White groups, and assume differences between groups are based on health risk behaviors, allowing invisible, inequitable socio-structural factors to continue unchallenged. When examining the obesity rates between Black and White women, for example, policies and interventions assert that individuals do not eat right or exercise, while ignoring the structural context of food deserts and lack of green spaces. When addressing health problems among marginalized populations, it is important to understand health as "a complex phenomenon interrelated with poverty, violence, and low social capital." [3]. Treatment of oppressed individuals and families in isolation from their sociopolitical contexts ignores the influence of oppressive forces on the daily experiences of these individuals [4]. Disparities in health status between socially constructed groups (e.g., male-identified/everyone else, White/everyone else) in the USA reflect the inequity of treatment rather than individual-level differences between members of different racial groups. Thus, the important question when studying health disparities is not *what is wrong with those non-*

✉ Alexis Jemal
AJ1423@hunter.cuny.edu

Myrtho Gardiner
Mgardiner@gradcenter.cuny.edu

Katharine Bloeser
Kb1568@hunter.cuny.edu

[1] Silberman School of Social Work at Hunter College, 2180 3rd Ave, New York, NY 10035, USA

[2] The Graduate Center, CUNY, 365 5th Ave, New York, NY 10016, USA

white people, but should be, *what is wrong with the way non-white populations are being treated*?

Racial disparities in health are rooted in and perpetuated by several intersecting socio-structural inequities that disadvantage marginalized populations. Such inequities include less access to quality health care, inadequate housing, poor access to nutrition, neighborhood segregation, community violence, lack of green space, toxic segregation, neglect of public services such as sanitation, and other health hazards and environmental factors disproportionately harming communities of color [1, 2]. Compounding socio-structural determinants are failures within the health care system, such as problems accessing services, lower quality of care, and oppressive beliefs and behaviors of health care providers [2]. For example, Black and White women are equally likely to have mammograms; however, health care professionals are less likely to adequately communicate the screening results to their Black patients, particularly if the mammogram results are abnormal [5]. One of the most striking health disparities is the prevalence of HIV/AIDS for Black adults and adolescents, which is 10 times greater than that for White adults and adolescents [6]. Yet, Black HIV patients are less likely to receive antiretroviral therapy than their White counterparts, even after controlling for access to care [6].

In addition to socio-structural factors, health disparities are embedded in disparate, racialized treatment and the impact of that differential treatment. The relationship between negative, racial discrimination and negative impacts on individuals' health and mental health has been well-documented [7, 8]. Toxic stress and trauma present another pathway to poor health associated with racial oppression and inequity. Negative, racial/ethnic discrimination is a chronic stressor or trauma that can greatly compromise psychological and physical health and wellbeing by arousing physiological responses such as anger, frustration, and helplessness [7]. These stress responses, in turn, affect health directly through immune, neuroendocrine, and cardiovascular processes, or indirectly through ineffective psychological coping mechanisms [8, 9]. Biochemical markers of cellular injury from chronic exposure to stress that are related to and highly predictive of disease include chronic elevation of cortisol, hormones, blood pressure, and allostatic load [9]. Extensive evidence of the harmful impact of toxic stress provides insight into causal mechanisms linking adversity (e.g., negative discrimination) to impairments in biopsychosocial functioning such that self-destructive and maladaptive coping styles may develop to manage toxic stress [4, 8–11]. As a result, racial/ethnic discrimination has "received increasing attention as one of the main mechanisms to explain racial and ethnic inequities in health in the USA" [12]. What has been less studied are the health benefits of positive, racial discrimination (i.e., how White privilege affects health) [13].

In public health research, sociodemographic variables, such as race and socioeconomic status (SES), are used as control variables to isolate the relationships between some independent variable and health outcome [14]. However, these control variables hold explanatory power that should not be ignored. Race and socioeconomic status (SES) are two main predictors of health status; as SES increases, health status decreases [9]. The USA has historical practice with overtly linking race to employment and education opportunities. Laws, cultural norms, and personal pacts prohibited non-Whites from living in certain locations, working, and being educated regardless of individual aptitude and allowing Whites to live work and be educated regardless of merit [15]. Thus, race is integrally linked to and interdependent with socioeconomic status. Although, within the USA, these predictors are intimately intertwined, such that non-White people are disproportionately of lower socioeconomic status than their White counterparts; race, when controlling for SES, is still a statistically significant predictor of health [11, 16]. This suggests that there is something unique about race, perhaps the influence of racism, that goes beyond SES to predict health disparities between White and non-White populations, increasing the likelihood of chronic illness or disability for non-Whites when controlling for age and income [2]. The evidence suggests that racialized health disparities are not based on being a specific race, but the treatment, or lack thereof, received because of being a certain race. The social construction of race, reflecting social, economic, political power, and access to opportunities and the differential treatment based on these socially constructed phenomena (e.g., racism) has consequences as real as life and death.

For most people, racial designation was not a choice, but a social category assigned based on physical characteristics. Racialization based on phenotype has received limited attention in research on discrimination and health. In many cultures, dark skin tone is negatively stereotyped and darker skinned people experience more discrimination. In the USA, Caribbean Hispanics who are racialized as Black experience more structural discrimination in the form of residential segregation compared to Hispanics of mixed racial ancestry, contributing to a dynamic in which people with darker skin are placed at a higher risk to experience discrimination [17, 18]. Lightest skin immigrants of any background report 17% higher wages compared to those who have dark skin [19]. Studies indicate that along with skin tone, facial features also influence how individuals are perceived regarding their race [20]. In one study, individuals with identical skin tone were perceived to have brighter skin if they possessed stereotypically White facial features, when compared to individuals with stereotypically Black features. Similarly, research conducted in Brazil found that individuals with identical skin tone were perceived to be darker when paired with accents associated with a low socioeconomic status [17].

Many scholars have noted that darker skinned people in the USA often experience less prestige, greater difficulties in the criminal justice system, and lower SES; however, evidence supporting the mediating effect of skin color on the discrimination-health association is scant and has primarily focused on hypertension [21]. One study examined how discrimination and skin color interact to influence the mental health of African Americans [22]. Even though their findings did not reveal a skin color effect, the study nonetheless evoked the important question of whether and how this phenotypic characteristic may modify the discrimination-health association.

The exponential growth in the number of empirical studies on discrimination and health over the last two decades has led to the publication of exhaustive reviews on the subject [23, 24]. These reviews highlight three main themes. First, ample evidence supports the presence of a positive association between racial discrimination and poor health. Second, though there is empirical support for the link between discrimination and hypertension, low birth weight, and self-rated health, the strongest evidence corroborates the effect of discrimination on mental health and psychological distress. Third, the association between discrimination and poor health is conditional, whereby its strength varies by individual, group identity, and contextual influences.

This third theme brings a variable into question that has largely been overlooked in research: perceived racial/ethnic identity. Perceived racial/ethnic identity is the perception by others of one's individual and group identity. Perceived race can be identified in two ways: (1) the actual perception of a person's race (the subject) by another (the perceiver) or (2) the assumed perception that another (the perceiver) has of a person's race by that person (the subject). The question of perceived race is similar to the question of perceived race/ethnic discrimination. The target of the discrimination reports whether or not discrimination was based on their race or ethnicity without confirmation from the discriminator [25]. Because the USA has historical and contemporary practices of treating people differently based on racial categorization and racial categorization has generally been assigned based on visible characteristics, it can be assumed that people have a good idea of when they are being treated as belonging to one race or another. For example, a person may self-identify as Black but have lighter skin such that others perceive that person to be White. If this is the case, then perceptions and the meaning associated with those perceptions may play a powerful role in the discrimination-health association. Again, because race is a social construct determined not by one's genetic or biological make-up but by how one is perceived by others, perception of one's race is important for the experience and impact of racial discrimination. It is an important distinction to note that it is not one's race that determines the experience of racial discrimination, but one's perceived race, the racial classification to which one is assumed to belong. Thus, mistaken racial identity can be oppressive (risk factor) or privileging (protective factor) depending on the error.

Since the association between perceived race and mental health outcomes has not been explored, the purpose of this paper is to explore the moderating effects of self-identified race and perceived racial identity on the relationship between perceived discrimination in the workplace and mentally unhealthy days. In this study, we expected to discover a hierarchy, hypothesizing that (1) self-identified White people who are generally perceived as White (WW) by others would have less perceived discrimination in the workplace and less mentally unhealthy days than self-identified non-White people, who are perceived as White (NWW), (2) NWW will have less perceived discrimination associated with mentally unhealthy days than self-identified White, perceived as non-White (WNW), and (3) WNW will have less perceived discrimination associated with mentally unhealthy days than self-identified non-White perceived as non-White (NWNW).

This racial hierarchy was decided upon by the authors based on the history of race in the USA. During the second half of the nineteenth century, there were significant efforts from natural and social scientists to establish racial superiority to the White race and inferiority to non-White races [24]. As research from these scientists were often accepted without question, their findings were frequently used to influence policy [24]. The national paradigm of White racial superiority and keeping the White race "pure" was at the root of Jim Crow laws [26, 27], laws that were constructed to protect the privileges for the White race and exclude those privileges from other races, but specifically the Black race [28]. Early in the twentieth century, states began to adopt a "one drop rule," implying that anyone with at least one drop of sub-Saharan African blood is considered Black [28], therefore, reinforcing the hierarchy and associating lighter skin with access and darker skin with repudiation [28]. Hence, NWW had access to freedoms that others in their identified race group did not. Similarly, WNW were refused freedoms, where others in their identified race group had access. Thus, because race is a social construct and because of the history in the USA defining racial categories (e.g., phenotype, skin color), treatment based on racial categorization is based on the race one is perceived to be. As such, perceived race is a variable of great importance and value that should be given more attention in health disparities research.

Methods

The 2014 Behavioral Risk Factor Surveillance System (BRFSS), an annual national telephone survey used to monitor health and risk factors among US adults, was used to analyze whether perceived and self-identified race could

moderate the relationship between perceived discrimination in the workplace and mentally unhealthy days. Responses from four states (Arizona, Minnesota, Mississippi, and New Mexico) were used as these four states used the Reactions to Race module in 2014. This is the most recent data available with this module.

Data

All data were analyzed using SAS version 9.4 survey procedures. This study used publicly available data from the CDC and therefore was not considered for human subjects protections review per City University of New York policy. Data were stratified and weighted in accordance with CDC recommendations. Statistically significant moderation terms at the 0.05 level in the multiple regressions were then graphed to foster interpretation [26].

Variables

Respondents were asked about demographic characteristics, general health, and mental health (i.e., how many days during the past 30 days was their mental health not good). This mental health variable was dichotomized to indicate that 14 or more mentally unhealthy days could indicate a potential mental health problem [27].

The BRFSS asked how the respondent thinks people in the USA classify their race. This variable was split into four categories based on the self-identified race variable (found using demographic variables) and the perceived race variables: self-identified White perceived as White (WW), self-identified non-White perceived as White (NWW), self-identified White perceived as non-White, and self-identified non-White perceived as non-White (NWNW). Respondents were asked how people usually classify [them] in this country and were provided with categories (e.g., White, Black or African American, Hispanic or Latino) as well as a response for other groups. Respondents were also asked two questions about perceived discrimination in the past 12 months at work (among the employed) or when seeking health care (among those who received health care). They were also asked how frequently they thought about their race and if in the past 30 days they had a physical response (e.g., a headache, an upset stomach, tensing of muscles, or pounding heart) and if they felt emotionally upset (e.g., angry, sad, or frustrated) because of how they were treated based on their race.

Statistical Analysis

Univariate analyses were run to describe the sample followed by a series of chi-square tests used to test the association between self-identified and perceived race and reactions to racial discrimination. Six multiple regressions were run to determine the moderating effects of self-identified and perceived race on the relationship between health care and workplace discrimination and mentally unhealthy days.

Results

Demographic information about the sample appears in Table 1. Most respondents self-identified as White, non-Hispanic (66%). Roughly 70% of respondents reported that they are perceived as White, non-Hispanic. Slightly more than half of the sample identified as female (51%). Most respondents indicated that they have a household income of more than $50,000 per year and have more than a high school education.

Table 1 Demographic characteristics of study sample, BRFSS 2014

	Total unweighted *n* (%)
Self-identified race/ethnicity	
White, non-Hispanic	27,923 (66.4)
Black, non-Hispanic	2259 (9.3)
Asian, non-Hispanic	443 (2.6)
American Indian/Alaskan Native	1204 (3.0)
Hispanic	4238 (17.1)
Other race, non-Hispanic	604 (1.5)
Sex	
Male	15,640 (49.0)
Female	21,031 (51.1)
Age	
18–24 years	1968 (13.0)
25–34 years	3542 (17.4)
35–44 years	4375 (16.3)
45–54 years	6235 (17.1)
55–64 years	8265 (16.4)
65+ years	12,286 (19.7)
Income	
< $15,000	3463 (10.3)
$15,000–$24,999	5536 (16.2)
$25,000–$34,999	3555 (10.0)
$35,000–$50,000	4651 (12.3)
> $50,000	14,249 (36.6)
Do not know/not sure/refused	5217 (14.7)
Education	
Less than high school	2835 (14.3)
High school graduate	9482 (26.9)
Some college	10,728 (34.3)
College degree	13,391 (24.5)
Perceived race/ethnicity	
White	26,152 (69.5)
Black or African American	2061 (9.1)
Hispanic or Latino	2989 (13.3)
Asian	380 (2.5)
Native Hawaiian/Pacific Islander	50 (0.2)
American Indian/Native American	878 (2.5)
Do not know/not sure	353 (1.1)
Some other group	271 (1.0)
Refused	314 (0.9)
State	
Arizona	7028 (38.8)
Minnesota	16,399 (32.0)
Mississippi	4202 (17.3)
New Mexico	8862 (12.0)

Responses came from the states of Arizona (39%), Minnesota (32%), Mississippi (17%), and New Mexico (12%). A series of chi-square test statistics were then used to determine if experiences of discrimination differed across the four self-identified and perceived race variables (Table 2).

When testing the moderation effects of self-identified and perceived race on the relationship between workplace and health care discrimination and mentally unhealthy days, none of the interaction terms were significant. There were however significant moderation effects of self-identified and perceived race on the relationship between workplace and health care discrimination and the probability of a potential mental health problem (Table 3). Statistically significant moderation terms at the 0.05 level in the multiple regressions were then graphed to foster interpretation (Fig. 1; Dawson 2017) [29]. Figure 1 suggests that in the face of workplace discrimination, non-White individuals who are perceived as White report more mentally unhealthy days than White individuals who are perceived as White. Similarly, in the face of workplace discrimination, non-White individuals who are perceived as non-White report more mentally unhealthy days than individuals who identify as non-White and are perceived as White.

Discussion

The null hypothesis was partially rejected. We were prevented from testing the full hypothesis because self-identified White perceived as non-White (WNW) did not have a large enough N to obtain a result. However, if this category is removed, we provided preliminary evidence for our stated hypothesis with results supporting a hierarchy: WW (top), NWW, NWNW (bottom). The relationship between perceived discrimination in the workplace and mentally unhealthy days was different for self-identified non-Whites perceived as non-White (NWNW) and self-identified non-Whites perceived as White (NWW), such that NWNW experienced more perceived discrimination in the workplace associated with more mentally unhealthy days than NWW. This demonstrates that self-identified non-Whites were perceived to be treated differently based on their

Table 2 Experiences of discrimination and race by self-identified and perceived race categories, BRFSS 2014

	Self-identified White perceived as White (ref.) unweighted *n* (%)	Self-identified White perceived as non-White unweighted *n* (%)	Self-identified non-White perceived as non-White unweighted *n* (%)	Self-identified non-White perceived as White unweighted *n* (%)
Total	25,035 (65.8)	442 (1.3)	6540 (28.6)	1117 (4.3)
Frequency of thinking about one's race				
Never	16,601 (67.1)	257 (52.2)**	1690 (41.8)**	521 (46.7)**
Once a year	2920 (11.0)	42 (9.5)	629 (9.0)	170 (17.1)
Once a month	2172 (8.4)	30 (5.9)	576 (8.6)	125 (8.9)
Once a week	1292 (5.6)	24 (8.1)	390 (7.4)	85 (7.6)
Once a day or more	818 (3.8)	27 (11.9)	634 (8.6)	87 (7.5)
Do not know/not sure	790 (2.9)	35 (5.7)	352 (5.1)	39 (2.8)
Constantly	288 (1.2)	17 (6.8)	1238 (19.6)	80 (9.5)
Discrimination in health care[a]				
Worse than other races	428 (2.4)	28 (8.5)**	392 (6.3)**	34 (4.0)
Same as other races	17,579 (86.3)	264 (83.1)	4815 (83.9)	826 (82.2)
Better than other races	2789 (11.3)	32 (8.5)	484 (9.8)	109 (13.9)
Discrimination in workplace[b]				
Worse than other races	373 (3.7)	17 (8.1)*	384 (11.1)**	23 (5.2)*
Same as other races	11,405 (92.7)	166 (89.8)	2682 (83.0)	494 (82.4)
Better than other races	540 (3.6)	8 (2.2)	165 (5.9)	29 (12.4)
Physical reaction because of how treated based on race	299 (1.6)	30 (14.7)**	454 (7.9)**	44 (4.3)*
Emotional reaction because of how treated based on race	594 (3.2)	42 (17.4)**	722 (12.5)**	74 (9.6)**
Possible mental health problem	2055 (9.8)	63 (18.4)**	794 (12.9)**	143 (15.1)**

*$p \leq 0.05$, **$p \leq 0.01$

[a] Those who did not receive health care in past 12 months coded as missing

[b] Only asked of respondents who reported being employed

Table 3 Adjusted regression coefficients and standard error of the moderating effect of self-identified and perceived identity on the relationship between perceived discrimination in the workplace and mentally unhealthy days, BRFSS 2014

Reference group	Self-identified White perceived as White	Self-identified White perceived as non-White	Self-identified non-White perceived as non-White	Self-identified non-White perceived as White
Self-identified White perceived as White	1.0	− 2.4 (2.4)	− 2.2 (1.2)	− 6.8 (1.9)** (Fig. 1a)
Self-identified White perceived as non-White	2.4 (2.4)	1.0	0.1 (2.3)	− 4.5 (2.7)
Self-identified non-White perceived as non-White	2.2 (1.2)	− 0.1 (2.3)	1.0	− 4.6(1.8)* (Fig. 1b)
Self-identified non-White perceived as White	6.8 (1.9)** (Fig. 1a)	4.5 (2.7)	4.6 (1.8)* (Fig. 1b)	1.0

*$p \leq 0.05$, **$p \leq 0.01$

perceived race. This finding suggests that being perceived as White is a protective factor.

Research often focuses on the side of disadvantage of being non-White but rarely do scholars assess the privilege associated with being White. With few exceptions, the White racial category has received limited attention in the literature on racial/ethnic health disparities. It is often assumed that the White category is racially neutral (the reference group or standard) and individuals included are perceived to match their self-identification [29, 30].

The statistically significant relationship from perceived discrimination in the workplace to mentally unhealthy days indicated that racial discrimination is harmful to one's mental health regardless of one's racial classification. We found no significant difference between Whites and non-Whites and the relationship between workplace discrimination and mentally unhealthy days. However, it should be noted that both non-Whites and Whites perceived as non-White have statistically significant results for physical reactions because of race-based treatment, emotional reactions because of race-based treatment, and a possible mental health problem, whereas Whites perceived as White do not have statistically significant results in any of these categories. This suggests that the traumatizing and stressful nature of race-based treatment is a reality for both non-Whites and for Whites perceived as non-White. Racial discrimination for people who identify as White but believe they are perceived as non-White seems to produce greater harm. Perhaps, because they are self-identified as White, they are not prepared to encounter racial discrimination reserved for non-Whites. They also may not have the community of support that develops around shared narratives of discrimination [31].

Limitations This study has some limitations. First, the results only included data from four states as these four states most recently used the BRFSS Reactions to Race module. Second, this is a cross-sectional survey making conclusions about causality challenging. The BRFSS also uses single-item self-report measures: Respondents may underreport health conditions especially those that may seem socially undesirable [30]. Similarly, respondents were asked to self-report on the race they thought others perceived them as. There is no way to

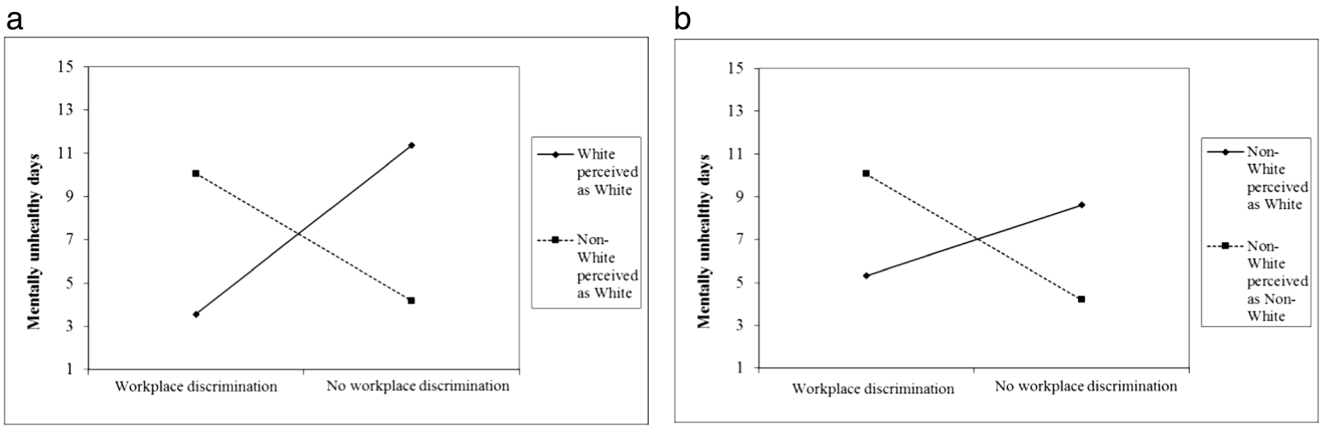

Fig. 1 Self-identified and perceived race by workplace discrimination, BRFSS 2014

confirm these perceptions of perceived race were accurate. Third, studies of this size and nature often miss difficult-to-reach populations [31].

Future Research Future research would include testing the hypothesis that people who self-identify as White but are perceived as non-White have similar health consequences as those who self-identify as non-White and perceived as non-White. Currently, race is used as categorical variable, but perhaps race should be included as a continuous variable along a spectrum of Whiteness (from non-White to White) to test the association with health. A person could identify how White or non-White they are and how White or non-White they believe they are perceived. A continuous variable of racial classification would be more sensitive to light skin privilege and more in line with today's increase population of mixed race people. This analysis would allow the testing of whether perceived race or self-identified race would be a stronger predictor of health.

Public Health Implications

We suggest health researchers acknowledge the role of racial discrimination in health disparities by highlighting the role of perceived race in addition to self-identified race. Interventions to reduce health disparities can then address the genuine, underlying cause that is racism, inequitable treatment based on one's perceived racialization. Inequitable treatment includes the positive discrimination that is afforded those who are perceived to be White, bringing to light the protective power of Whiteness for health outcomes.

This issue is two-fold and includes both the disadvantaging treatment that non-White identified/perceived individuals receive and the advantaging treatment that White identified/perceived individuals receive. When analyzing and addressing causes of health disparities, policy and practice interventions tend to focus on the individual as the agent of change, suggesting only the individual is responsible for their health outcomes. For example, if unprotected sex is thought to be the cause of the disproportionate incidence of HIV/STI rates in the "Black" community, then instructing individuals to use condoms may seem like an appropriate response. However, that response fails to address the inequitable systemic issues that drive the disparity. Service providers, public health researchers, and policy makers should raise their critical consciousness of the systemic factors at play and work to eradicate systemic inequity rather than controlling for race or, more accurately, removing the impact of racism from the analysis [32]. This understanding and acknowledgment that controlling for race is controlling for racism (both White privilege and non-White oppression) is of the utmost importance for developing effective and sustainable changes in public health.

References

1. Jackson JS, Knight KM, Rafferty JA. Race and unhealthy behaviors: chronic stress, the HPA axis, and physical and mental health disparities over the life course. Am J Public Health. 2010;100(5):933–9.
2. Mead H, Cartwright-Smith L, Jones K, Ramos C, Woods K, Siegel B. Racial and ethnic disparities in U.S. Health Care: A Chartbook. New York: The Commonwealth Fund; 2008.
3. Windsor L, Pinto RM, Benoit E, Jessell L, Jemal A. Community wise: the development of an anti-oppression model to promote individual and community health. J Soc Work Pract Addict. 2014;14(4):402–20.
4. Windsor LC, Benoit E, Dunlap E. Dimensions of oppression in the lives of impoverished black women who use drugs. J Black Stud. 2010;41(1):21–39.
5. Jones BA, Reams K, Calvocoressi L, Dailey A, Kasi SV, Liston NM. Adequacy of communicating results from screening mammograms to African American and White women. Am J Public Health. 2007;97(3):531–8.
6. Gebo KA, Fleishman JA, Conviser R, Reilly ED, Korhuis PT, Moore RD, et al. Racial and gender disparities in receipt of highly active antiretroviral therapy persist in a multistate sample of HIV patients in 2001. J Acquir Immune Defic Syndr. 2005;38(1):96–103.
7. Williams DR, Mohammed SA. Racism and health II: a needed research agenda for effective interventions. Am Behav Sci. 2013;57(8):1200–26.
8. Carter RT. Racism and psychological and emotional injury: recognizing and assessing race-based traumatic stress. Couns Psychol. 2007;35(1):13–105.
9. Barr D. Health disparities in the United States: social class, race, ethnicity, and health. 2nd ed. Baltimore: The Johns Hopkins University Press; 2014.
10. Speight SL. Internalized racism: one more piece of the puzzle. Couns Psychol. 2007;35:126–34.
11. Shonkoff JP, Garner AS, Siegel BS, Dobbins MI, Earls MF, McGuinn L, et al. The Lifelong Effects of Early Childhood adversity and toxic stress. Am Acad Pediatr. 2012;129(1)
12. Abdulrahim S, James SA, Yamout R, Baker W. Discrimination and psychological distress: does Whiteness matter for Arab Americans? Soc Sci Med. 2012;75(12):2116–23.
13. Kwate NO, Goodman MS. An empirical analysis of White privilege, social position and health. Soc Sci Med. 2014;116:150–60.
14. Gómez LE. Mapping race: critical approaches to health disparities research. New Brunswick: Rutgers University Press; 2013.
15. Liu WM. White male power and privilege: the relationship between White supremacy and social class. J Couns Psychol. 2017;64(4):349–58.
16. Williams DR, Priest N, Anderson NB. Understanding associations among race, socioeconomic status and health: patterns and prospects. Health Psychol. 2016;35(4):407–11.
17. Denton NA, Massey DS. Racial identity among Caribbean Hispanics: the effects of double minority status on residential segregation. Am Sociol Rev. 1989;54:790e808.
18. Crimmins EM, Hayward MD, Seeman TE. Critical perspectives on racial and ethnic differences in health in late life. National Research Council. 2004.
19. Hersch J. Profiling the new immigrant worker: the effects of skin color and height. J Labor Econ. 2008;26(2):345e386.
20. Levin DT, Banaji MR. Distortions in the perceived lightness of faces: the role of race categories. J Exp Psychol. 2006;135(4):501–12.

21. Williams DR, Mohammed SA. Discrimination and racial disparities in health: evidence and needed research. J Behav Med. 2009;32:20–47.
22. Klonoff EA, Landrine H. Is skin color a marker for racial discrimination? Explaining the skin color-hypertension relationship. J Behav Med. 2000;23(4):329e338.
23. Krieger N. Embodying inequality: a review of concepts, measures, and methods for studying health consequences of discrimination. Int J Health Serv. 1999;29:295–352.
24. Haller JS. Outcasts from evolution; scientific attitudes of racial inferiority, 1859–1900. Urbana: University of Illinois Press; 1971.
25. Carter RT. Race-based traumatic stress. Psychiatr Times. 2006;23(14):37–8.
26. Dawson JF. Interpreting interaction effects. 2017. Retrieved http://www.jeremydawson.co.uk/slopes.htm.
27. Moriarty DG, Zack MM, Kobau R. The Centers for Disease Control and Prevention's healthy days measures- population tracking of perceived physical and mental health over time. Health Qual Life Outcomes. 2003;1:37.
28. Jones T. Shades of brown: the law of skin color. Duke Law J. 2000;49:1487.
29. Bhopal R, Donaldson L. White, European, Western Caucasian, or what? Inappropriate labeling in research on race, ethnicity, and health. Am J Public Health. 1998;88(9):1303e–1307.
30. Daniels J, Schulz AJ. Constructing whiteness in health disparities research. In: Schulz AJ, Mullings L, editors. Gender, race, class, and health: intersectional approaches. San Francisco: Jossey-Bass; 2006.
31. Kwon P. Resilience in lesbian, gay, and bisexual individuals. Personal Soc Psychol Rev. 2013;17(4):371–83.
32. Jemal A. Transformative consciousness of health inequities: oppression is a virus and critical consciousness is the antidote. J Hum Rights Soc Work. 2018:1–14. https://doi.org/10.1007/s41134-018-0061-8.