Journal of Public Health Research

Journal of Public Health Research
2025, Vol. 14(4), 1–11

DOI: 10.1177/22799036251390936
journals.sagepub.com/home/phj
Sage

Developing inclusive, antiracist approaches to public health research: Guidelines for action

Tayla von Ash[1,2], David G. Zelaya[1,3,4], Diana S. Grigsby-Toussaint[1,2,5], Akilah Dulin[6], Chanelle J. Howe[5,7,8] and Christopher W. Kahler[1,3]

Abstract

The pervasive influence of racism confers on all public health researchers—even those for whom health disparities research is not their focus—a social responsibility to conduct research that is antiracist (i.e. to adopt research approaches that actively oppose racism and promote equity). This manuscript reviews the relevant literature and provides guidance for conducting antiracist public health research specifically for researchers for whom health disparities research is not a focus of their work. Drawing on Critical Race Theory, we propose a preliminary framework for conducting antiracist research in the form of five overarching guidelines, which were developed in the United States based on the American experience, but can be tailored/adapted to country-specific/cultural contexts: I. Frame race as a social (not a biological) construct; II. Actively solicit input and participation from individuals who are racial and ethnic minorities; III. Choose terminology carefully and be mindful of its implications; IV. Incorporate measures of contextual factors that may influence health-related behaviors and outcomes; and V. Be intentional with choices of theoretical frameworks, study design, and analytic approaches. We summarize relevant literature and provide recommendations and key references for how to follow each guideline. We also discuss how research that does not attend to these guidelines unintentionally supports racist structures and provide examples of how each guideline applies to research on the 2019 Coronavirus pandemic. Following the guidelines in this manuscript, though not exhaustive, will allow researchers to contribute to an antiracist public health agenda in pursuit of health equity regardless of content focus.

Keywords

racism, antiracism, antiracist, health equity, health disparities

Received: 25 October 2024; accepted: 6 October 2025

Introduction

The impact of racism is evident in persistent disparities in access to and engagement in health-promoting behaviors and health outcomes between racial and ethnic groups in the United States (U.S.) and is particularly consequential for individuals who are Black or African American.[1] Racism, a multilevel reciprocal process that differentially

[1]Department of Behavioral and Social Sciences, Brown University School of Public Health, Providence, RI, USA
[2]Center for Health Promotion and Health Equity, Brown University School of Public Health, Providence, RI, USA
[3]Center for Alcohol and Addiction Studies, Brown University School of Public Health, Providence, RI, USA
[4]Department of Psychiatry, Harvard Medical School, Boson, MA, USA
[5]Department of Epidemiology, Brown University School of Public Health, Providence, RI, USA
[6]Department of Social, Behavioral, and Population Sciences, Tulane University School of Public Health and Tropical Medicine, New Orleans, LA, USA
[7]Center for Epidemiologic Research, Brown University School of Public Health, Providence, RI, USA
[8]Department of Epidemiology, Boston University School of Public Health, Boston, MA, USA

Corresponding author:
Tayla von Ash, Department of Behavioral and Social Sciences, Brown University School of Public Health, Box G-S121-8, Providence, RI 02912, USA.
Email: tayla_ash@brown.edu

allocates value, power, opportunities, and resources based on categorizing and ranking social groups into races, has a long oppressive history in medicine and public health.[2] From the use of enslaved Africans for studies on pain thresholds and experimentation to improve obstetrics, to contemporary examples (e.g. discounting Black patients' pain and limited access to health care resources), racism remains pervasive as a determinant of health and well-being.[3] The inequitable impact of the Coronavirus disease 2019 (COVID-19) pandemic on racial and ethnic minority (also referred to as minoritized) groups and discussions around anti-Black racism have resulted in repeated calls for research to investigate and eliminate racism's impacts on health.[4,5] Specifically, researchers have advocated for expanding work on racism beyond examination of interpersonal and individual-level mechanisms, to include structural mechanisms, such as the impact of systems (e.g. criminal justice) and policies on health outcomes.[2,4,5]

In addition to calls to further understand how structures support racism, increased emphasis has been placed on individual accountability to engage actively in antiracist actions. Note, within U.S. scholarship and public discourse, the term "non-racist" historically referred to a neutral stance (e.g., someone not personally engaging in racist behaviors or beliefs). However, scholars and activists have increasingly emphasized that neutrality allows structural racism to persist. The term "antiracist" has thus gained prominence. In his award-winning book, "How to Be an Antiracist," Dr. Ibram Kendi defines an antiracist as someone who actively practices opposing racism and promoting racial equity.[6] He states there is no neutrality in the racism struggle; one either allows racial inequities to persevere (i.e. as a racist), or confronts racial inequities (i.e. as an antiracist). Building on this concept, we argue that there is no neutrality when conducting public health research, and that researchers should adopt antiracist research practices when carrying out their work regardless of content area. While the primary focus and expertise of public health researchers span countless topics, we argue that it is critical that all public health researchers intentionally incorporate features of antiracism into their program of research.

Previous literature demonstrates the consequences of scientific racism.[7] Examples include eugenics, the Tuskegee Syphilis Experiment, and the case of Henrietta Lacks, which have justified centuries of medical mistrust.[7,8] However, even small and subtle research practices, such as the constant underrepresentation of racial and ethnic minority participants in public health research, can stall science and have health consequences.[9,10] Not only does racist research fail to understand or address health disparities, it can also exacerbate them.[2] Central to the ethos of public health and medicine is a moral obligation to care for the wellbeing of all people and to do no harm. Researchers thus have a social responsibility to conduct research that is antiracist, noting that decisions made across all stages of the research process impact the science generated, who receives it and how, and ultimately whom it benefits.[11]

Racism is structurally and systemically entrenched in U.S. society, and it is therefore essential that all public health researchers consider how their research, and the ways in which they carry it out, perpetuates/sustains or combats racism. We argue that public health researchers who do not believe racism is relevant to their work inadvertently support racism and racist structures. We draw on Critical Race Theory,[12] which examines how racism is embedded within systems and policies, rather than solely individual actions, to advance racial equity and social justice, and propose a preliminary framework for conducting research that is intentionally antiracist in the form of five overarching guidelines to consider throughout the research process regardless of content focus (see Figure 1). The process for developing the guidelines, which was grounded in Critical Race Theory principles, focused on identifying gaps in existing research practices and translating Critical Race Theory tenets into actionable concepts. We briefly summarize relevant literature and provide specific recommendations for how to follow each guideline with key references for further reading. We also provide examples of how research that does not attend to these guidelines supports racist structures. Finally, we provide concrete examples of how each guideline applies to research on the COVID-19 pandemic. Where prior papers have focused on recommendations for increasing rigor of research on health inequities,[12-14] this paper was intentionally written for researchers who may not have a program of research on health equity but who do have an obligation to be responsible stewards of the possible impacts of their work.

Guidelines for action

Frame race as a social (not a biological) construct

Framing race as a social construct is necessary to advance understanding of how racial health inequities emerge. While Dr. W.E.B. Du Bois started building evidence that race is a social construct in the late 1800s, the wide acceptance of this conceptualization occurred much later.[11] Due to the countless contributions of Black and other racial and ethnic minority scholars, including in the development of Critical Race Theory in the 20th century, it is now widely accepted that race is a social construct.[11,12] Race scholars have demonstrated the ways in which race is deeply intertwined within sociocultural political contexts that influence a social hierarchy based on the assumed relative superiority and inferiority of different races, where White is the dominant racial group; this is referred to as racialization in Critical Race Theory.[12] At the same time, research from genetics and anthropology has demonstrated that race is not a meaningful biological category.[15] Further, there is strong evidence linking health inequalities between racial groups to disproportionate exposures to social determinants of health, rather than genetic differences.[2,15]

That racial categories have evolved and changed over time is further evidence that race is an arbitrary demographic

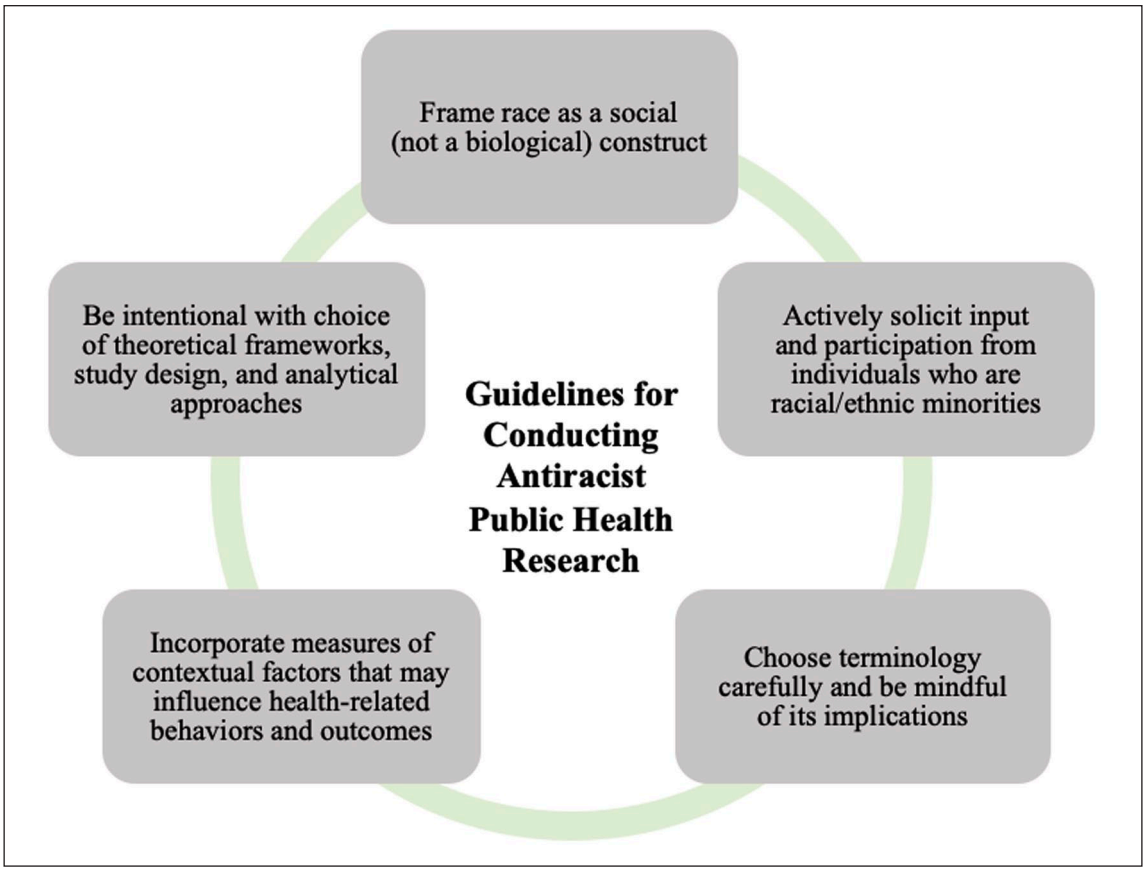

Figure 1. Framework for conducting antiracist public health research.

variable that reflects social, political, and ideological conventions, as opposed to meaningful natural distinctions.[16] The US Census, for example, has changed considerably over time regarding both the number (i.e. from two to seven) and labeling (e.g. Colored, to Black, to Negro, to eventually Black or African American) of racial categories.[17] Racial classification may also change for a given person depending on context and measure used.[16] For example, one's self-perceived or self-defined race might differ from their socially assigned race. With the US Census, it was not until 1960 that people could choose their own race, as opposed to it being socially assigned, and it was not until 2000 that people could select more than one racial category.[17] It is thus important to know the data source and type of information used to classify people (e.g. race as ascertained by), as each measure has limitations.[18,19]

Despite evidence, it may be easy for researchers to frame race as biological because race relations and social realities can manifest biological expressions, referred to as embodiment.[7,20] That is, the impact of historical, sociocultural, and political contexts can result in biological health differences across racial groups. However, biological expressions of race relations should not be confused with genetic variation. Instead, biological differences across groups can manifest and be maintained through various pathways, including economic deprivation, toxic substances and hazardous conditions, socially inflicted trauma, inadequate health care, and resistance to racial oppression.[20,21]

The clustering of genetic differences across groups may also lead researchers to incorrectly assert that race is a biological construct. While genetic variation within racial groups is indeed far greater than between them, race nonetheless correlates with genetic ancestry.[9] However, the complex intertwined relationship between ancestry and socially constructed racial categories requires nuanced thinking that avoids conflating the two.[9] For example, sickle cell disease has been considered a disease that only affects Black people because it disproportionately affects Black people in the U.S.[22] However, heredity of the sickle cell mutation is more accurately tied to geography and shared ancestry, as having the sickle cell trait provides a genetic advantage against malaria and is thus most prevalent in malaria-endemic areas.[22] Yet, the prevalence of sickle cell disease varies tremendously across Black-majority countries depending on malaria risk, and some countries with high rates of sickle cell disease have relatively few Black people. The social construct of race serves as an imperfect marker for genetic ancestry as well as

nongenetic factors as previously described, and consideration of both ancestry and race is needed to improve understanding of health risks.[9]

Framing race as a social construct is a practice of antiracism as it acknowledges the influence of social factors and the impacts of racism on health, whereas framing race as a biological construct ignores the systems of oppression that harm racially minoritized individuals. Framing race as a social construct thus facilitates examination of social determinants on racial health disparities.

Application to COVID-19: Framing race as a social construct allows for the assertion that social factors likely drive observed racial disparities in COVID-19 morbidity and mortality. Indeed, research has demonstrated that racial and ethnic COVID-19 disparities are the result of social determinants of health (e.g., economic stability, health care access and quality, neighborhood and built environment).[23,24] Ironically, at the start of the pandemic, notions of race as a biological construct were widely circulated via the Black immunity myth, which circulated after the first African to contract the virus, a Cameroonian student who resided in China, made a full recovery early in the pandemic. The consequential claim likely led some individuals to forgo necessary precautions further contributing to increased risk. Rates of COVID-19 soon after skyrocketed among Black people in the U.S.[24]

Actively solicit input and participation from individuals who are racial and ethnic minorities

Including people who are racial and ethnic minorities in public health research, both as study participants and active contributors to the research, is critically important, enhances the science, and decreases the likelihood of bias. Racial and ethnic minority individuals are largely underrepresented in health-related research, which raises ethical concerns given that they often have an increased risk for adverse health outcomes.[25] Although barriers exist to recruiting members of racial and ethnic minority groups, including justifiable feelings of fear and mistrust, research has also identified effective strategies to overcome them.[10,26] These include building rapport, being transparent about study procedures, and ensuring that recruitment materials are accessible. Having diverse research participants increases the generalizability of findings and enables sufficiently powered examinations of health inequities.

Research team diversity also increases participation and engagement of individuals from minoritized groups.[26] A research staff that represents the populations with whom they interact can help foster trust among potential participants and help ensure study materials and procedures are culturally appropriate. Diverse research teams additionally help diversify the pool of researchers and scholars entering academia by providing pathways to further opportunities for training and education. Importantly though, to avoid tokenism, efforts must be made to maintain authentic relationships, including fostering an inclusive environment where contributions are genuinely valued, investing in professional development, and being an active ally.[27] Furthermore, the language and images used in study materials can have considerable implications. Use language that is not pathologizing and is culturally congruent for populations who have been marginalized. For example, for a study on breastfeeding among Black women, language such as "This study aims to understand low breastfeeding rates among Black women" can be pathologizing as it is deficit-framed, offers no context, and may lead to the blame being placed on individuals. Alternatively, the following sentence contextualizes behavior within structural barriers and leaves room to also examine strengths and resilience factors: "This study aims to understand the social, historical, and structural factors influencing breastfeeding practices among Black women." We recommend researchers engage in reflexivity (i.e., examine their social positionality, potential biases, and assumptions) and ask for feedback on study materials from diverse individuals. Notably, reflexivity is important to practice throughout the research process and extends beyond positionality statements; we challenge researchers to consider how their own identities influence their access to participants, the theories guiding their work, and the interpretation and dissemination of findings.[28]

Another way to enhance recruitment of individuals who are racial and ethnic minorities, and to actively involve them in research, is through community-engaged research. Community engagement is the process of working collaboratively with and through groups of people to address issues affecting the well-being of those people.[29] It operates on a continuum, ranging from outreach, which is the lowest level of community engagement, to shared leadership, the highest. Many researchers conduct outreach (e.g. partnering with community organizations for recruitment purposes), but adopting components of the involve, collaborate and shared leadership models of community engagement, as done in community-based participatory research (CBPR) has added benefits.[30] At these levels of engagement, stronger partnerships are often formed and community members provide valuable input and may be involved in the research decision-making process.[29,30] Researchers may even choose to co-design, a specific method within participatory approaches, that focuses on collaboratively developing research tools, interventions, or study designs through equal partnership.[31] However, even co-design and CBPR are not exempt from the influence of inherent power differentials between university researchers and community members, which can be exacerbated by racial hierarchies.

Nonetheless, positioning participants from marginalized groups as active members in the research process is a form

of "centering in the margins"[12] and can improve study design, increase adoption and uptake of interventions, ensure more appropriate and accurate interpretation of findings, help with cultural tailoring, and potentially generate new, innovative research questions.[29] For studies using existing datasets, community input can be garnered via advisory boards to inform analytical approach, interpretation of results, and dissemination efforts. Not engaging with diverse communities may contribute to racism by centering dominant perspectives and ideologies imposed by the researcher and personal and institutional biases. Sharing power and collaboration with racial and ethnic minority groups ensures that public health problems are not viewed entirely through the lens of a dominant culture that has perpetuated racism over centuries and ignored the wisdom and insight of marginalized groups.

Application to COVID-19: The need for engaging racial and ethnic minority participants in research on the COVID-19 pandemic response is clear. Consider that while the timeline for vaccine development and potential long-term side effects are cross-cutting concerns leading to vaccine hesitancy, a history of medical mistrust and the sociopolitical environment promoting racial injustice are also contributing factors for Black Americans specifically.[32] Input from Black participants is invaluable in strategizing ways to increase vaccine uptake, particularly among Black people. Without engaging with diverse populations, the unique experiences and perspectives of certain subgroups may be overlooked, which can exacerbate health disparities. Indeed, a systematic review of strategies to improve COVID-19 vaccine uptake among Black populations found that interventions that incorporated communication, community engagement, and culturally sensitive resources improved vaccine uptake, while incentive- and mandate-based interventions were less impactful.[33]

Choose terminology carefully and be mindful of its implications

As language regarding race and racism evolves, and contemporary terms become outdated, researchers should continuously consider the implications of the terminology they use. We recommend regularly reviewing the most recent guidance on reporting race and ethnicity to promote the use of inclusive language that fosters equity, consistency, and clarity.[34,35] This includes capitalizing the names of racial and ethnic groups and using person-first language (e.g., "Black participants" rather than "Blacks"). Note that preferred terminology may vary across individuals in a group. For example, while the terms *Black* and *African American* are often used interchangeably, some individuals prefer the former and others the latter. Further, the terms are not synonymous, as African American often refers to descendants of enslaved Africans, while Black is an umbrella term that includes individuals who may not be either African and/or American.[34] Researchers should carefully consider the terminology they choose and be aware of potential tensions that might impact their research. Notably, while the Black population in the U.S. has become more diverse, descendants of enslaved Africans have endured centuries of racism and have a different racialized experience than recent immigrants from Africa, for example, and worse health outcomes have subsequently been documented among African Americans.[36,37]

Chosen terminology also has implications for interpreting research findings and discussing generalizability. It is important to consider both between- and within-group differences. We advise against discussing racial and ethnic minority groups as a monolith given the vast diversity that exists across populations and underscore attending to within-group heterogeneity.[14] The cultural experiences, health behaviors, and outcomes of African Americans may differ considerably from recent immigrants from Africa, the Caribbean, etc. Notably, Afro Latinx may or may not be represented among Black participants, as they may instead be grouped with Hispanics/Latinx in analyses. Thus, when interpreting findings from specific groups and discussing the implications of findings, consider how the composition of the participants may contribute. We also recommend considering how intersectionality, an analytic framework developed by Dr. Kimberlé Crenshaw to understand the intersections of systems of privilege and oppression, can be used to capture and understand the unique experiences of individuals living at the nexus of intersecting oppressive systems (e.g. racism, sexism, misogynoir).[38]

In addition to the need for careful attention to labels, attention to language around racism and related constructs is also necessary.[35] Be intentional and explicit when discussing racism at specific levels (e.g. internalized, interpersonal, institutional, ideological, structural, or systemic).[14,34,35] Also, be aware of nuances in concepts like *health inequalities* and *health inequities* and aim to use accurate terminology. That is, while health inequality is a generic term to note differences and variations, health inequity refers to inequalities that are deemed unfair or stemming from injustice.[39] Thus, these terms should not be used interchangeably. Being careful in the use of terminology within research is antiracist as it allows for nuanced study of the experiences of individuals who are racial and ethnic minorities that may otherwise be obfuscated if not intentionally queried. A lack of attention towards terminology further perpetuates racism as disparities within certain subgroups may be overlooked which could further exacerbate racial disparities.

Application to COVID-19: Data from the Centers for Disease Control and Prevention shows that risk for COVID-19 infection and mortality is highest among Native American people.[40] Conceptualizing racial and ethnic minority people as a monolith (i.e., simply comparing White and "people of color" as a singular group) can obfuscate such findings and stall efforts to understand unique and contributing factors to COVID-19 risk among Native American populations. Likewise, research has demonstrated the importance of disaggregating subgroups within particular races to identify disparities. For example, a study found that South Asians in New York City had higher infection and hospitalization rates than other Asians, with employment in essential services, crowded housing, and lack of paid sick leave likely contributing factors.[41] Further, research has revealed disproportionate risk based on intersections of race and ethnicity, socioeconomic position, occupation, and gender, highlighting the importance of considering within group heterogeneity and supporting the conceptualization of differential risk for COVID-19 across groups as health inequities rather than simply inequalities.[42,43]

Incorporate measures of contextual factors that may influence health-related behaviors and outcomes

As communicated via modern social epidemiology theories, as well as ecological models of health behavior, individuals do not exist in vacuums.[20] Research that focuses solely on proximal influences without incorporating contextual and other "upstream" factors will be limited in its ability to understand and address health outcomes of interest.

When framing a study and discussing results, consider the context in which individuals live and the fact that race is an arbitrary demographic variable that can be a proxy for many things. Considering key historical events that have disproportionately impacted groups demonstrates race consciousness, an important Critical Race Theory characteristic.[12] Consider how stress, discrimination, and availability and access to resources directly impact health outcomes and behaviors. Reflect on why certain groups might engage in some health-related behaviors more or less than others, not just at a given point in time, but over the life course (e.g. life course approach, political ecology framework).[39,44] Move beyond explanations that simply attribute findings to cultural differences and do not shy away from explicitly naming *racism* as a contributing factor to observed differences across groups.[13] Beyond conceptualizing the various social factors that race may be a proxy for, consider adding relevant measures so that interpretations of racial patterns and differences are not only based on unmeasured factors. The Handbook of Multicultural Measures[45] and recent reviews on methods to quantify structural racism[46–48] may be useful in identifying appropriate measures of discrimination and racism specifically.

In addition, think critically about measures. When possible, use measures that have psychometric support with racial and ethnic minority populations to reduce the likelihood of measurement error, given that most measures have been developed and validated with non-Hispanic White participants of higher socioeconomic position.[49] While self-reported measures are commonly used in public health research, the meaning of measured constructs may differ across groups, which can lead to bias.[50] Appraisal of measures early in the research process is critical as measurement error and unmeasured confounders may lead to inaccurate conclusions.[49]

Attending to context and using relevant measures takes an antiracist stance by examining how health behaviors and outcomes are impacted by systems of oppression (e.g. racism, discrimination). Not attending to context may lead to placing blame on racial and ethnic minority populations for health disparities, perpetuating stigma and marginalization, and reifying disparities as resulting from innate biological differences.

Application to COVID-19: Studies have demonstrated how various contextual factors contribute to COVID-19 morbidity and mortality.[51] That such factors are not evenly distributed across racial and ethnic groups has implications for health equity. For example, living in a larger household, having a job that requires going to work in person, and using public transportation are associated with increased COVID-19 risk, and each of these factors is more commonly experienced by Black and Hispanic individuals than White individuals.[52] Differences in these factors across racial and ethnic groups may explain findings in studies where racial and ethnic COVID-19 disparities were attenuated after adjusting for contextual factors (e.g. baseline comorbidities and socioeconomic status).[53]

Be intentional with theoretical frameworks, study design, and analytical approaches

Intentionally choosing theoretical frameworks that lend themselves well to examining race as a social construct will inform selection of the best analytical approaches and help advance science in the pursuit of health equity.[50] Researchers should be intentional in their selection and utilization of theory when conducting studies that include racial and ethnic minority participants. Many commonly used theories (e.g. Social Cognitive Theory) do not explicitly consider the experiences of racial and ethnic minority people as they were created for individuals with majority and privileged identities and post-hoc applied to other populations. We encourage researchers to consider integrating these widely used theories with theories that have a health equity framework to better capture unique stressors and contributors across groups.[54] For epidemiologic research, especially when making

comparisons across groups, consider Critical Race Theory,[12] Decolonization Theory,[55] Life Course Theory,[56] Fundamental Cause Theory,[57] Cumulative Advantage/Disadvantage Theory,[58] and related social epidemiology theories (e.g. Social Production of Disease, Psychosocial Theory, and Ecosocial Theory).[20] For intervention studies, consider whether the application of behavior change theory accounts for different experiences across groups, including environmental and social factors. Also consider how interventions may differentially impact individuals by race and ethnicity, recognizing that some interventions may simultaneously improve health at the population level and widen health inequalities.[59,60] This is important as moving beyond understanding inequities to eliminating them is a core tenet of Critical Race Theory.[12] Notably, as previously alluded to, how researchers measure race and ethnicity, such as the inclusion of disaggregated racial and ethnic categories[61] (e.g. African American, Afro Caribbean, Afro Latinx) and the method of classification for individuals who choose more than one category[62] (e.g. Department of Finance method, rarest group method) will have implications.[63]

Providing detailed recommended approaches for the treatment of race and ethnicity variables in quantitative analyses is beyond the scope of this paper given that recommendations will vary depending on the research question.[64,65] However, regardless of the research objectives, theory should guide study design and statistical analyses. Specifically, conceptual models should guide the data collection process as well as how data are analyzed. Theory can also guide the interpretation of findings, including contributing mechanisms. For those with limited background and training in conducting health equity research, Dr. Camara Jones' work is a great place to start,[14] followed up by more recent literature.[49,50,65–68]

Utilizing theoretical frameworks and analytical approaches that are inclusive of the experiences of individuals who are racial and ethnic minorities is antiracist as it avoids superimposing dominant and privileged research paradigms that may not fully capture the experiences of groups who have been marginalized. Insufficient consideration of theoretical frameworks, study design, and analytical approaches can perpetuate racism by yielding misleading results that obfuscate interpretation of racial inequities and interpretations of results that ignore how systems of oppression impact health.

Application to COVID-19: The World Health Organization's Conceptual Framework for Action on Social Determinants of Health can provide an avenue to assess and systematically examine contributors to racial and ethnic disparities in COVID-19 exposure and care.[23] For example living in a shelter that prevents social distancing or a crowded household poses challenges in isolating after an exposure. Careful and complementary analyses when reporting COVID-19 disparities data are needed because data in a vacuum can give rise to biologic explanations and those grounded in racial stereotypes, undermining the goal of eliminating health inequities.[69] Additionally, the debate about whether COVID-19 disparities should be standardized by age illustrates the importance of carefully articulating research questions and choosing an analytical approach.[70,71]

Conclusions

We proposed five guidelines for conducting antiracist public health research and explained why conducting antiracist research is something all public health researchers should actively pursue. The application of each guideline to the COVID-19 pandemic, while not comprehensive, provides examples of the practice implications of implementing the proposed framework. This paper builds on work by others in the field (e.g. Drs. Rhea Boyd[13] and Camara Jones[14]) to provide guidelines specifically for researchers for whom health disparities research is not a focus of their work. Following the guidelines and recommendations summarized in Table 1 will allow researchers to contribute to an antiracist public health agenda in pursuit of health equity.

Scientific knowledge is generated by people, and thus socially produced.[49] While researchers may aim to be objective, our beliefs and values, as well as those of our institutions and funders, affect science.[11] We must ask ourselves how might we be colluding with racist systems? From the ways we are trained, to how we conceptualize and conduct studies, social forces, including racism, influence science. These forces influence the questions asked and who asks them, who is recruited and who is left out, how data are analyzed, findings interpreted, and what steps are taken next.[28] Therefore, it is essential that public health researchers acknowledge their biases and examine how these biases impact their work. While additional research on how to mitigate the effects racial bias has on research is needed, we implore public health researchers to commit to continued growth in this area via attending trainings and revisiting a literature that continues to develop. Cultural humility, defined as the process of openness, self-awareness, being egoless, and incorporating self-reflection and critique after willingly interacting with diverse individuals, is a lifelong process of learning.[72]

While systemic changes are needed, scientists nonetheless have agency to shape their respective fields of research and the system. Not all public health researchers will or necessarily should become experts on examining the effects of racism, and it is worth noting that even research that focuses on racism and racial health inequities can be prone to shortcomings. However, antiracism as praxis in public health is much bigger than research examining racism, and researchers have a social responsibility to consider how the

Table 1. Five guidelines with recommended actions for conducting antiracist public health research.

Guideline:	Do:	Do NOT:
I. Frame race as a social (not a biological) construct	• Conceptualize race within the context of socially constructed hierarchies • Draw on evidence linking health inequalities between racial and ethnic groups to disproportionate exposures to adverse levels of various social determinants of health, including racism	• Conceptualize race within the context of biological traits or conflate it with genetic ancestry • Forget genetic variation within racial groups is far greater than between them • Confuse biological expressions of race relations as genetic differences between races
II. Actively solicit input and participation from individuals who are racial and ethnic minorities	• Adopt strategies that have been evidenced to enhance the recruitment of individuals from racial and ethnic minority groups, including having a diverse research team • Seek feedback on study materials from diverse individuals • Adopt components of the *Involve, Collaborate and/or Shared* Leadership models of community engagement	• Use language that is pathologizing and culturally incongruent • Conduct underpowered racial and ethnic subgroup examinations without first reviewing methodological suggestions for analysis and interpretation
III. Choose terminology carefully and be mindful of its implications	• Periodically review the most recent guidance on the reporting of race and ethnicity • Recognize that preferred terminology may vary across individuals in a group • Consider how the composition of groups analyzed, including both between and within group heterogeneity and tenets of intersectionality, may contribute to findings • Give careful attention to language around racism and related constructs	• Use outdated and potentially offensive terms • Discussing racial and ethnic minority people as a monolith
IV. Incorporate measures of contextual factors that may influence health-related behaviors and outcomes	• Consider how both proximal and distal contextual factors impact health-related behaviors and outcomes • Incorporate measures of discrimination, racism, and other factors for which race may be a proxy • Consider how groups may differentially respond to measures or interpret constructs	• Rely on explanations that simply attribute findings to cultural differences • Use measures and scales that have not been validated for racial and ethnic minority participants
V. Be intentional with choice of theoretical frameworks, study design, and analytical approaches	• Utilize theories that have a health equity framework and take into consideration unique experiences and stressors of racial and ethnic minority groups • Consult literature before deciding on study design and analytical approach	• Design study, analyze data, or interpret findings without consulting a health equity-based conceptual model

decisions they make may or may not perpetuate racism. We urge researchers to dedicate attention and effort into conducting research that does not perpetuate racist ideologies that harm the public's health. The guidelines described in this paper, while not exhaustive, can be used as a preliminary framework for conducting antiracist research. We all bear this responsibility, and the time for accountability is now.

ORCID iDs

Tayla von Ash https://orcid.org/0000-0001-7621-3545
David G. Zelaya https://orcid.org/0000-0002-3173-3499
Christopher W. Kahler https://orcid.org/0000-0002-6248-4149

Author contributions

TvA and DGZ conceptualized the manuscript and wrote the first draft. TvA created the table and figure. DGT, AD, CJH, and CWK contributed drafted paragraphs to specific guidelines, reviewed the entire manuscript, and made suggested edits. TvA and DGZ then made revisions and finalized the manuscript. All authors read and approved the final manuscript.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data availability statement

Not applicable.[a]

References

1. Williams DR. Miles to go before we sleep: racial inequities in health. *J Health Soc Behav* 2012; 53: 279–295.
2. Williams DR and Mohammed SA. Racism and Health I: pathways and scientific evidence. *Am Behav Sci* 2013; 57.
3. Yearby R. Structural racism and health disparities: reconfiguring the social determinants of health framework to include the root cause. *J Law Med Ethics* 2020; 48: 518–526.
4. Collins FS, Adams AB, Aklin C, et al. Affirming NIH's commitment to addressing structural racism in the biomedical research enterprise. *Cell* 2021; 184: 3075–3079.
5. Jones CP. Toward the science and practice of anti-racism: launching a national campaign against racism. *Ethn Dis* 2018; 28: 231–234.
6. Kendi IX. *How to be an antiracist* One World, 2019.
7. Krieger N. Discrimination and health. In: Berkman LF KI (ed) *Social epifemiology*. Oxford University, 2000, pp.36–75.
8. Lee MJH, Reddy K, Chowdhury J, et al. Overcoming the legacy of mistrust: African Americans' mistrust of medical profession. *J. Healthcare Ethics and Admin* 2018; 4.
9. Borrell LN, Elhawary JR, Fuentes-Afflick E, et al. Race and genetic ancestry in medicine - a time for reckoning with racism. *N Engl J Med* 2021; 384: 474–480.
10. Yancey AK, Ortega AN and Kumanyika SK. Effective recruitment and retention of minority research participants. *Annu Rev Public Health* 2006; 27: 1–28.
11. Krieger N. *Epidemiology and the people's health: theory and context*. Ocford University Press, 2011.
12. Ford CL and Airhihenbuwa CO. The public health critical race methodology: praxis for antiracism research. *Soc Sci Med* 2010; 71: 1390–1398.
13. Boyd RW, Lindo EG, Weeks LD, et al. On racism: a new standard for publishing on racial health inequities. *Health Aff Blog*. 2020.
14. Jones CP. Invited commentary: "race," racism, and the practice of epidemiology. *Am J Epidemiol* 2001; 154: 299–304; discussion 305–296.
15. Smedley A and Smedley BD. Race as biology is fiction, racism as a social problem is real: anthropological and historical perspectives on the social construction of race. *Am Psychol* 2005; 60: 16–26.
16. Howell J and Emerson MO. So what "should" we use? Evaluating the impact of five racial measures on markers of social inequality. *Sociol Race Ethn* 2017; 3: 14–30.
17. Center PR. *What Census Calls Us*, https://www.pewresearch.org/interactives/what-census-calls-us/ (2020, accessed 24 March 2025).
18. Ross PT, Hart-Johnson T, Santen SA, et al. Considerations for using race and ethnicity as quantitative variables in medical education research. *Perspect Med Educ* 2020; 9: 318–323.
19. Roth WD. The multiple dimensions of race. *Ethnic and Racial Studies* 2016; 39: 1310–1338.
20. Krieger N. Theories for social epidemiology in the 21st century: an ecosocial perspective. *Int J Epidemiol* 2001; 30: 668–677.
21. Williams DT. Racism and the mechanisms maintaining racial stratification in Black families. *J Fam Theory Rev* 2023; 15: 206–218.
22. Desai D and Dhanani D. Sickle Cell Disease: History And Origin. *Internet J Hematol* 2003; 1.
23. Thakur N, Lovinsky-Desir S, Bime C, et al. The structural and social determinants of the racial/ethnic disparities in the U.S. COVID-19 pandemic. What's Our Role? *Am J Respir Crit Care Med* 2020; 202: 943–949.
24. Laurencin CT and McClinton A. The COVID-19 pandemic: a call to action to identify and address racial and ethnic disparities. *J Racial Ethn Health Disparities* 2020; 7: 398–402.
25. Fontanarosa PB and Bauchner H. Race, ancestry, and medical research. *JAMA* 2018; 320: 1539–1540.
26. Ibrahim S and Sidani S. Strategies to recruit minority persons: a systematic review. *J Immigr Minor Health* 2014; 16: 882–888.
27. Martinez-Cola M. Collectors, nightlights, and allies, oh my: white mentors in the academy. *Underst. & Dismantl Priv* 2020; 10: 61–82.
28. Secules S, McCall C, Mejia JA, et al. Positionality practices and dimensions of impact on equity research: a collaborative inquiry and call to the community. *Journal of Engineering Education* 2021; 110: 19–43.

29. Bracic A. For better science: The benefits of community engagement in research. *PS Polit Sci Polit* 2018; 51: 550–553.
30. Clinical and Translational Science Awards Consortium Community Engagement Key Function Committee Task Force on the Principles of Community Engagement. *Principles of Community Engagement - Second Edition*. National Institues of Health (U.S.). Centers for Disease Control and Prevention (U.S.), 2011.
31. Vargas C, Whelan J, Brimblecombe J, et al Co-creation, co-design, co-production for public health - a perspective on definition and distinctions. *Public Health Res Pract* 2022; 32: 20220615.
32. Bogart LM, Ojikutu BO, Tyagi K, et al. COVID-19 Related medical mistrust, health impacts, and potential vaccine hesitancy among Black Americans living with HIV. *J Acquir Immune Defic Syndr* 2021; 86: 200–207.
33. Adeagbo M, Olukotun M, Musa S, et al. Improving COVID-19 Vaccine uptake among black populations: a systematic review of strategies. *Int J Environ Res Public Health* 2022; 19: 20220922.
34. American Psychological Association. *Inclusive Language Guide*. 2nd ed., https://www.apa.org/about/apa/equity-diversity-inclusion/language-guidelines.pdf (2023, accessed 24 March 2025).
35. Flanagin A, Frey T, Christiansen SL, et al. Updated guidance on the reporting of race and ethnicity in medical and science journals. *JAMA* 2021; 326: 621–627.
36. Amuta-Jimenez AO, Jacobs W and Smith G. Health disparities and the heterogeneity of Blacks/African Americans in the United States: why should we care? *Health Promot Pract* 2020; 21: 492–495.
37. Read JG and Emerson MO. Racial context, black immigration and the US black/white health disparity. *Soc Forces* 2005; 84: 181–199.
38. Crenshaw K. Demarginalizing the intersection of race and sex: a Black Feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *Univ Chic Leg Forum* 1989; 1989(1): 139–167.
39. Kawachi I, Subramanian SV and Almeida-Filho N. A glossary for health inequalities. *J Epidemiol Community Health* 2002; 56: 647–652.
40. Centers for Disease Contorl and Prevention. *Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity*, https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html (2021, accessed 3 October 2022).
41. Marcello RK, Dolle J, Tariq A, et al. Disaggregating Asian race reveals COVID-19 disparities among Asian American patients at New York City's public hospital system. *Public Health Reports* 2021; 137: 317.
42. Bowleg L. We're not all in this together: on COVID-19, intersectionality, and structural inequality. *Am J Public Health* 2020; 110: 917. 20200528.
43. Griffith DM, Holliday CS, Enyia OK, et al. Using syndemics and intersectionality to explain the disproportionate COVID-19 mortality among Black men. *Public Health Rep* 2021; 136: 523–531.
44. Chitewere T, Shim JK, Barker J, et al. How Neighborhoods influence health: lessons to be learned from the application of political ecology. *Health Place* 2017; 45: 117–123.
45. Gamst GC, Liang CTH and Der-Karabetian A. *Handbook of multicultural measures*. Sage Publications, 2010.
46. Groos M, Wallace M, Hardeman R, et al. Measuring inequity: a systematic review of methods used to quantify structural racism. *J Health Dispar Res Pract* 2018; 11: 13.
47. Dean LT and Thorpe RJ, Jr. What structural racism is (or is not) and how to measure it: clarity for public health and medical researchers. *American J Epidemiol* 2022; 191: 1521–1526.
48. Hing AK, Chantarat T, Fashaw-Walters S, et al. Instruments for racial health equity: a scoping review of structural racism measurement, 2019-2021. *Epidemiol Rev* 2024; 46: 1–26.
49. Howe CJ. Reducing HIV racial/ethnic disparities: what's good data got to do with it? *Epidemiol* 2017; 28: 221–223.
50. Howe CJ, Dulin-Keita A, Cole SR, et al. Evaluating the population impact on racial/ethnic disparities in HIV in adulthood of intervening on specific targets: a conceptual and methodological framework. *Am J Epidemiol* 2018; 187: 316–325.
51. Zhang CH and Schwartz GG. Spatial disparities in Coronavirus incidence and mortality in the United States: an ecological analysis as of May 2020. *J Rural Health* 2020; 36: 433–445.
52. Dickinson KL, Roberts JD, Banacos N, et al. Structural Racism and the COVID-19 Experience in the United States. *Health Secur* 2021; 19: S14–S26.
53. Batty GD, Gaye B, Gale CR, et al. Explaining ethnic disparities in COVID-19 mortality: population-based, prospective cohort study. *medRxiv* 2021 20210210. DOI: 10.1101/2021.02.07.21251079.
54. Liburd LC, Hall JE, Mpofu JJ, et al. Addressing health equity in public health practice: frameworks, promising strategies, and measurement considerations. *Annu Rev Public Health* 2020; 41: 417–432.
55. LT S. *Decolonizing methodologies: Research and indigenous peoples*. 3rd ed. Bloomsbury Publishing Plc, 2013.
56. Gee GC, Walsemann KM and Brondolo E. A life course perspective on how racism may be related to health inequities. *Am J Public Health* 2012; 102: 967–974.
57. Phelan JC and Link BG. Is racism a fundamental cause of inequalities in health? *Annu Rev Sociol* 2015; 41: 311–310.
58. Dannefer D. Cumulative advantage/disadvantage and the life course: cross-fertilizing age and social science theory. *J Gerontol B Psychol Sci Soc Sci* 2003; 58: S327–337.
59. Gregorich SE. Do self-report instruments allow meaningful comparisons across diverse population groups? Testing measurement invariance using the confirmatory factor analysis framework. *Med Care* 2006; 44: S78–S94.
60. Williams DR and Purdie-Vaughns V. Needed Interventions to reduce racial/ethnic disparities in health. *J Health Polit Policy Law* 2016; 41: 627–651.
61. Kauh TJ, Read JG and Scheitler AJ. The critical role of racial/ethnic data disaggregation for health equity. *Popul Res Policy Rev* 2021; 40: 1–7.
62. Mays VM, Ponce NA, Washington DL, et al. Classification of race and ethnicity: implications for public health. *Annu Rev Public Health* 2003; 24: 83-110.
63. National Academies of Sciences E, and Medicine. *Rethinking Race and Ethnicity in Biomedical Research*. The National Academies Press, 2025.

64. Kaufman JS and Cooper RS. Commentary: considerations for use of racial/ethnic classification in etiologic research. *Am J Epidemiol* 2001; 15: 291-298.
65. Howe CJ, Bailey ZD, Raifman JR, et al. Recommendations for using causal diagrams to study racial health disparities. *Am J Epidemiol* 2022; 191: 1981–1989.
66. Jackson JW, Hsu YJ, Greer RC, et al. The target study: a conceptual model and framework for measuring disparity. *Sociol Methods Res* 2025; 00491241251314037.
67. Jackson JW. Meaningful causal decompositions in health equity research: definition, identification, and estimation through a weighting framework. *Epidemiology* 2021; 32: 282–290.
68. VanderWeele TJ and Robinson WR. On the causal interpretation of race in regressions adjusting for confounding and mediating variables. *Epidemiology* 2014; 25: 473–484.
69. Chowkwanyun M and Reed AL, Jr. Racial health disparities and COVID-19 - caution and context. *N Engl J Med* 2020; 383: 201–203.
70. Siegel M, Critchfield-Jain I, Boykin M, et al. Actual racial/ethnic disparities in COVID-19 mortality for the non-hispanic black compared to non-hispanic white population in 35 US states and their association with structural racism. *J Racial Ethn Health Disparities* 2022; 9: 886–898.
71. Zalla LC, Martin CL, Edwards JK, et al. A geography of risk: structural racism and coronavirus disease 2019 mortality in the United States. *Am J Epidemiol* 2021; 190: 1439–1446.
72. Foronda C, Baptiste DL, Reinholdt MM, et al. Cultural humility: a concept analysis. *J Transcult Nurs* 2016; 27: 210–217.