

Reigniting Dr. Martin Luther King's call to action: the role of the behavioral scientist in the movement for social justice and racial equity

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Fifty-three years ago, Dr. Martin Luther King called behavioral scientists to action in his address entitled *The Role of Behavioral Scientists in the Civil Rights Movement* and decreed “Social science and social scientists are needed to explain new developments in both the White and Black community and how such developments will lead to the promotion of a nonracist democratic society” [1]. In his address, Dr. King comments on need for a shift in thinking and that during the American Civil Rights period “science should have been employed more fully” and the scientific effort to understand the plight of African-Americans fell short in “not seeking to understand the socially dominant White society.” He implored social and behavioral scientists and psychologists to explore and utilize science in order to “tell it like it is.” Now, we, as behavioral scientists, submit another call to action to address current social justice and inequities. As spoken through Dr. King’s poignant and still relevant words, we can and must utilize our field’s collective set of skills and knowledge to conduct and support research that will reduce the spread of what we now term the “other” viral pandemic.

WHY US? THE ROLE OF BEHAVIORAL SCIENTISTS IN COMBATTING RACISM

A tenet of behavioral medicine is to design health behavior interventions that can help prevent and help individuals manage chronic diseases. Discrimination and racism are well-established social determinants of health for gender, ethnic, and socially marginalized individuals [2–6]. Pathways identified for the effects of these determinants include structural, interpersonal, intrapersonal (i.e., emotional, stress, individual behavior) processes that catalyze biological systems that increase disease risk [7]. These pathways align with the socio-ecological model, which displays the potentiality for interconnections between pathways.

As dedicated professionals committed to serving communities through science, we are charged with drawing attention to cultural and social norms that

Implications

Practice: Behavioral scientists have an important role to play in ensuring social justice and racial equity, based on expertise in understanding behavioral drivers, science of behavioral change, and the complex interplay of social and cultural factors on behavior.

Policy: As dedicated professionals serving communities by implementing preventive and intervention strategies, we are charged with drawing attention to policies which support equity and cultivating attention to these approaches.

Research: Behavioral research should evaluate the individual and societal drivers of racial bias while also creating and implementing evidence-based interventions, developing partnerships with communities and public-facing institutions, and mitigating the effects of these behaviors, as aligned with behavioral medicine’s mission research.

disrupt equity and cultivate preventive approaches. Much as we have done in response to the COVID-19 pandemic [8], we have the power to create an evidence-based action plan that allows us to refocus on levying our field. Now is not the time to be bystanders when we have the tools, skills, and abilities to assess what preventive and intervention solutions are needed. In this commentary, we posit that based on the expertise of behavioral science researchers in understanding behavioral drivers, the science of behavioral change, and the complex interplay of social and cultural factors, we are in a unique position to reframe the current dialogue and thoughts about race by developing and implementing interventions that ameliorate equity and put a stop to racial bias [9,10]. We present compelling evidence from the literature for viewing racism through a behavioral lens and provide action steps to build and expand this evidence. Lastly, this commentary affirms and expands on recently published articles seeking to

reform healthcare and policing from the perspective of behavioral science [11,12].

THE HISTORICAL EMERGENCE OF A RACIAL HIERARCHY

To best understand racial bias, a historical understanding of the social, economic, and political forces involved in the development of race as representative of differential in access to power and resources [10]. Beginning in the 1630s, colonial assemblies in English colonies used legislation and constitutions, referred to as slave codes and black codes, to deny civil rights, including free movement, freedom of marriage, and occupation, citizenship, and the vote [13].

The construction of race is derived from the “great chain of beings” Enlightenment age-based concept. This concept was erroneously reinforced by science, notably the field of biological anthropology, through presenting observable variation in physical phenotypes into hierarchal traits by aligning specific physical phenotypes with moralized characteristics [14,15]. For example, despite the evolutionary origins and advantage of skin color for protection from UV radiation along equatorial regions and thus influenced by geography [16], in *Crania Americana*, Morton presents moral and value-based characteristics were linked to physical phenotypes initially presented as geography-based [14].

Science does not occur in a vacuum and is affected by the greater culture [14]. A noted gap in the history of science is understanding the role of societal influences on scientists who contributed to this field [17]. Nevertheless, a result of this now-refuted science is the construction of thoughts and attitudes related to race [15], which led to the rationalization of preferential or deferential treatment of certain groups. It is not difficult to see the lingering effects of these norms and beliefs today in the forms of voter suppression, redlining, mass incarceration, institutional racism in education and healthcare, as well as the recent practice of calling the police on Blacks gathering in public places [18,19].

In the United States, race, ethnicity, origin, ancestry, and immigration status are markers for social, economic, and political divisions [20] as evidenced by the Census Bureau’s collection of racial data that follows guidelines provided by the U.S. Office of Management and Budget (OMB). The racial categories included in the U.S. census questionnaire generally reflect a social definition of race and not an attempt to define race biologically or genetically [20]. As can be viewed on this interactive graph [21], concepts of race, ethnicity and ancestry are based on fluid and changing constructs that reflect the social, economic, and political climate of the times in the United States [22]. Therefore, race over time in the Census is shown to be mutable. However, current OMB-established racial and ethnic categories do not adequately reflect our society nor have they kept up

with advances from the genome era in our understanding of ancestry [23,24].

OPERATIONALIZATION OF RACISM IN SOCIETY

The historical legacy of African Americans being the recipients of prejudicial, discriminatory, and racially based exclusionary practices led many African Americans to have life experiences rooted in racial injustice at individual, structural, and institutional levels [10,20,25,26]. Individual racism refers to individuals’ attitudes, beliefs, or behaviors that result in unequal treatment or opportunities for racial/ethnic minorities. Likewise, at the individual level, internalized racism [27,28] occurs when individuals, who are the recipients of other forms of racism, develop acceptance of negative messages and narratives, including embracing dominant cultures (i.e., “pro-White”) actions and beliefs and exhibiting self and within-group devaluation and resignation. Institutional racism refers to the processes embedded in laws (local, state, and federal), policies, and practices of society and its institutions that provide advantages to racial groups deemed superior while providing unequal consequences for racial/ethnic groups viewed as inferior [20,25]. Structural racism refers to the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice. Additionally, all forms of racism lay the framework for racial bias, including implicit bias, which is based on cues that we consider indicative of the group to which others belong.

FRAMING RACISM AND BIAS THROUGH A BEHAVIORAL LENS

Stemming from the achievements of the civil rights era, in today’s society, openly expressing racial discriminatory behavior and practices tends not to be widely acceptable. This paves the way for gaps in expressed behaviors regarding race (explicit) and what is thought: implicit bias. Yet studies show that as early as the age of six, pro-White and anti-Black biases can form in both Black and White children [29,30]. As evidenced in the geo-coded county-level study by Lietner et al. [7], explicit bias by Whites was more of a predictor for health outcomes of Blacks than implicit bias. Although it does not exist in a vacuum away from societal and systemic influences, understanding the interplay between explicit and implicit bias demonstrates that individual-level racism warrants attention through neurologic and behavioral lenses. During functional MRI (fMRI) studies in which participants are provided outgroup race faces (faces perceived as belonging to a racial group different from oneself), a connection with biased responses, and the emotional-memory related subcortical structure, amygdala, occur [31–34]. The anterior cingulate cortex (ACC), a region

of the pre-frontal cortex involved in monitoring competition between responses, can engage executive control when a conflict in response occurs [35]. In the context of racial bias, a conflict between automatic, prepotent feelings and conscious intentions may explain the studies in which the ACC is activated upon visualizing images of outgroup faces in the setting of responding to one's perception of bias. These studies suggest a convergence between neural activity and behavior and provide a context to explore behavioral interventions through mapping neural activity.

CONDITIONING AND OBSERVATIONAL LEARNING REINFORCING RACE-BASED BIASES

Although sociological and psychological factors play a role in establishing and maintaining racism, classical and operant conditioning may also contribute. Classical conditioning posits that when a neutral stimulus is paired with an aversive stimulus, we develop a conditioned response to the neutral stimulus. Classical conditioning can also occur in the absence of direct “real-life” encounters, leading to respondent generalization [36]. The inability to individuate information, and thus the use of racial heuristics, may occur because of differences in lack of personal experiences or because of motivated ingroup attention. Manifestations of this can further negative implicit evaluations.

Emerging research shows that evaluations of race are indeed changeable and contextual. Farmer et al. [37] showed through fMRI studies that individuals could learn to perceive a person as an individual rather than merely as a member of a racial group through tasks that promote individuation rather than categorization [38]. Another study found that alterations of stimuli, context and task demands could change race-related neurobiological responses [39]. A change in stimuli to pictures of familiar Black and White individuals, or change in tasks to focusing on the individual instead of the race group, can diminish differential amygdala activation to outgroup race faces and its relation to measures of implicit race preference. Moreover, game-based studies with partners of different races show greater inner conflict occurs when within group social exclusion occurs, suggesting that there may be an increase or decrease in internal goals for reducing race-based discrimination [36].

The findings of these studies challenge notions that our perception of race is an immutable entity and thus challenges interpersonal racism as an immutable consequence of society. Therefore, if studies challenge the perception that race is an immutable construct it could follow that interpersonal racism as an immutable consequence of society should also be challenged. Observational learning may inform science about the role of interpersonal pathways in evaluating racial bias, for people can

acquire racially biased behaviors through observing the actions of others and witnessing consequences or lack of consequences that follow these actions. As evolutionary studies show observational behavior is highly conserved, observational learning may be significantly involved in the acquisition, shaping, and maintenance of socially framed behaviors, like racial bias. Observational learning can be influenced at multiple levels and roles—parental and peer, particularly when the modeler is perceived to be in the same group as the observer [38]. Society can also be a modeler of behavior, especially one in which society at large is regarded as unpunished despite the undisputable presence of institutional racism. This connection may serve as a pathway worthy of further exploration to evaluate links between systemic racism and behavior. Another example of this connection is that a highly regarded or valued modeler has an impact on how likely the behavior is to be repeated by the observer [38]. This highlights the need to center anti-racial bias efforts within institutions where highly valued person-based roles in a community are present, such as law enforcement, healthcare, educational and faith-based institutions.

Observational learning may also be a factor in leveraging action towards social justice. In a 2002 naturalistic experiment, almost predictive of social responses to the killing of George Floyd from the summer of 2020, Hamilton et al. showed the role of highly regarded citizens calling out racial injustice in garnering behavioral intentions of support for racial justice efforts [40]. Behavioral scientists should incorporate and utilize the knowledge acquired from behavioral studies on racial bias to drive applications in interventions and policy.

RACISM AND SOCIAL DETERMINANTS OF HEALTH

Individually, racism exerts its deleterious effects through negative cognitive and emotional phenomena leading to psychobiological responses and morbidity, as posited by McEwen's Allostatic Load Model [41]. At the societal level, being a recipient of racism is correlated with disparities in employment, housing, education, income, and access to healthy foods and health services. Understanding the interconnections between individual and social consequences of racism as exemplified through Social Determinants of Health can provide contextual understanding, beyond just “racial categories” for why differences in health behaviors and health outcomes are present. Attention to these factors should be encouraged as not only as supplemental but as a mainstay of our research.

Furthermore, experimental studies suggest that racial bias may negatively impact individuals who harbor prejudicial attitudes and is related to community mortality when communities are classified by aggregated responses regarding attitudes on Black employment, income, and housing

compared to Whites [7,42]. Thus far, identified mechanisms for these health outcomes include stress as measured by cortisol among individuals exhibiting implicit prejudice [43] and reduction of social capital that can stem from reduced trust and mutual reciprocity [42].

INTERVENTION SCIENCE

Implicit bias trainings focus on making individuals aware of their own racial biases, but not necessarily gauging participants' desire to change their biases [44]. Individuals with an *internal* motivation to decrease implicit bias are more likely to change their behaviors than those with a high external motivation to avoid appearing biased [45]. We should therefore consider developing tools to accurately assess participants' motivation to change their implicit biases. Based on what we know from conditioning responses, implicit bias trainings could also provide cognitive strategies and skills for countering biased thinking [44]. Further, recognizing the role for continual stimuli and practice of skills to instill behavior change, evidence exists for the role of continuous longitudinal follow-up and periodic "refresher" implicit bias trainings [45]. In line with the role of conditioning and observational learning on bias, the development of intentional strategies based on the evaluation of conditioning and exposure to counterstereotypes are identified as research worthy of further attention [46].

Through a recent review of the literature on interventions related to racial bias and prejudice, Matsuda et al. [9] highlight acceptance and commitment therapy (ACT) interventions as a way to change classically conditioned or respondent racial behaviors through teaching mindfulness, acceptance, diffusion strategies, and realignment of values as well as providing skills for goal achievement. Internalized racism may additionally be addressed with ACT interventions [28]. Even with the use of ACT, there are intriguing questions to ask that build on the aforementioned conditioning studies: what would be the effect of conditions in which stimuli are changed from negative to positive? Would participation in ACT interventions remove or displace the original negative association, eliminating the need for ongoing cognitive control and reappraisal? In addition to individual-level interventions, is there a role to intervene at the group or community level to help malleate social group pressures and environments? For example, Primac showed that individual change of prejudicial behavior in response to positive verbal reinforcement by the experimenter dissipated once the participants returned to prejudiced group settings [47]. Additionally, favorable roles for the racially integrated neighborhood, employment, and educational environments to lessen racial discrimination [48], the use of language for interrupting social environments that propagate racial bias [49], and for out-group friendships [43] are also reported.

CALL TO ACTION: THE ROLE OF BEHAVIOR SCIENTISTS AND RESEARCHERS

Utilization of Theoretical Frameworks

Theoretical frameworks and contexts often inform behavioral and social science research for explaining behavior and creating theory-driven interventions. Evaluating racial bias through a behavioral lens needs such a theoretical approach. The use of theoretical frameworks may assist in designing mechanistic and implementation interventions related to attitudes on racial bias. For example, cognitive theories such as the Social Cognitive Theory could be applied when evaluating modeling and reciprocal determinism related to racial bias. The theory of perceived behavioral control could apply in situations in which an individual is in a social environment that tolerates racial bias. There may also be a role for theories on attitude: research conducted by Orpen and Tsapogas suggested that anti-African biases in South Africa fall within one of Katz's classic categories of attitudes: utilitarian [50].

Measurement tools to assess bias

Tools for implicit bias measurement have been well-validated [51,52]. As well, so have tools for measuring explicit bias, especially in healthcare settings [53], and internalized racism measures [54]. As done in other fields of behavior research, studies are needed to address contextual factors for tools used to measure bias. As with any measurement, ecological validity outside of research settings is important. Findings from behavioral studies on racial bias measurements should incorporate partnerships with community-facing and serving occupations to bridge inherent implementation gaps. Stated outcomes could include measurable goals, such as decreasing racial disparities in police violence or medical treatment recommendations. The role of stress is also important to examine in these settings since stress increases impulsive behaviors by lowering an individual's ability to self-regulate a prejudiced response [55]. Lastly, there will be a need for collections of open repositories to help ease the use of these tools and further promote their inclusion in research.

Racism and health behaviors

Since racism pervades into all spheres of life, behavioral researchers can also contribute to anti-racial bias efforts through their own research, even if not topically related to racial bias. For example, there is an overlap between adverse health behaviors and explicit bias which receives less attention in the literature, yet is worthy of exploration within the behavioral medicine field. For instance, college students may exhibit increased expression of racial prejudice when drinking alcohol [56,57]. Yet most studies on alcohol use behaviors do not consider

how this adverse health behavior contributes to racial prejudice, nor consider racial bias as a negative outcome. Given the aforementioned role of racism on health, if not measured then we can expect underestimation of the societal impact of explicit bias from alcohol intake.

Use of racial and ethnic categories

As stated by Collins [23], “Race” and “ethnicity” are poorly defined terms that serve as flawed surrogates for multiple environmental and genetic factors in disease causation, including ancestral geographic origins, socioeconomic status, education and access to health care. Research must move beyond these weak and imperfect proxy relationships to define the more proximate factors that influence health.” Framed by how behavioral conditioning informs neurobiology and responses on race, we must be cognizant of the biased societal lens by which racial categories in research can be interpreted. Consumers of our research may mistakenly assume that race-based biological factors lead to worsened behavioral health outcomes, missing the mediating role of social factors, such as access to healthcare, socioeconomic status, and stress levels. Providing more granular ethnicity data could inform the development and targeting of interventions to reduce disparities in health care that contribute to disparities in health outcomes [58]. Data on race and ethnicity are a fundamental requirement for disparity reduction initiatives. Without these data, it is impossible to identify disparities and track the impact of initiatives over time, and it is difficult to target those aspects of interventions that involve direct contact with individuals. The presence of data on race and ethnicity does not, in and of itself, guarantee any subsequent actions in terms of analysis of quality-of-care data to identify disparities or any actions to reduce or eliminate disparities that are found. The absence of data, however, essentially guarantees that none of those actions will occur.

Reflective practice and self-work

As researchers we are susceptible to bias. We are capable of error and are susceptible to our own lived experiences. As we meet the challenge of anti-racism work, the evaluation of these biases is paramount to initiate and continue. Our goal should not only be to forge the evidentiary path forward, but to also avoid pitfalls that have occurred in the past within our field. For example, the use of social and behavioral science to justify imposition of eugenics, to evaluate communities of color as monoliths, and to view observable cultural traditions with externalized value systems that lead only to confirmation of racialized stereotypes [59–61].

Practicing reflexivity provides a method for researchers to become aware of subjectivity. Reflexivity can include self-examination such as assumptions

and emotional reactions, through specific actions that are intrapersonal such as journaling or interpersonal actions, such as debriefing with others [62]. Although often connected with qualitative studies, it may be used in qualitative or quantitative methods [62]. Moreover, whether viewed from the positivist perspective to minimize bias, or the non-positivist study view to reveal and include researcher bias [63], having a reflexive practice may be fundamental when developing anti-racism study concepts, evaluating and analyzing data, and disseminating findings. The promotion of a reflexive practice is also an opportunity for professional societies to play a role in developing self-reflection trainings for researchers engaging in anti-racism work.

CONCLUSION

Through this commentary, we hope to spark discussions and research around how to view and evaluate racial bias not as a predetermined, immutable character state but instead as a modifiable and preventable behavior. While we are carefully documenting injustices deeply rooted in our systems/society, we should also find and propose novel solutions to perpetuate equity. Many behavioral scientists have a unique skill set of use in this effort, such as qualitative and mixed methodological approaches to understanding individuals’ lived experiences. As shown through the ACT intervention by Hudson Banks et al. [28], we can utilize our field’s use of community-based and community-engaged research roots to understand and listen to communities regarding moving research in this area forward.

There exists a wealth of evidence supporting the fact that racial bias is rampant in our society: in our schools, in our justice system, in our neighborhoods. While behavioral scientists may not be trained as advocates, we must become advocates by the nature of our role. As behavioral scientists, whether conducting research in the education system, the judicial system, or healthcare, we share a responsibility to “fully employ” our science [1]. Further, we must conduct research to depoliticize systemic racism and underscore the social necessity of researching racism’s insidious impact on all levels of our society. While some may wait for the social justice movement to “die down,” people are quite literally dying. We must forge the evidence-based path—learn by doing—and then train others.

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