Application of an antiracism lens in the field of implementation science (IS): Recommendations for reframing implementation research with a focus on justice and racial equity

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Abstract

Background: Despite the promise of implementation science (IS) to reduce health inequities, critical gaps and opportunities remain in the field to promote health equity. Prioritizing racial equity and antiracism approaches is critical in these efforts, so that IS does not inadvertently exacerbate disparities based on the selection of frameworks, methods, interventions, and strategies that do not reflect consideration of structural racism and its impacts.

Methods: Grounded in extant research on structural racism and antiracism, we discuss the importance of advancing understanding of how structural racism as a system shapes racial health inequities and inequitable implementation of evidence-based interventions among racially and ethnically diverse communities. We outline recommendations for explicitly applying an antiracism lens to address structural racism and its manifests through IS. An anti-racism lens provides a framework to guide efforts to confront, address, and eradicate racism and racial privilege by helping people identify racism as a root cause of health inequities and critically examine how it is embedded in policies, structures, and systems that differentially affect racially and ethnically diverse populations.

Results: We provide guidance for the application of an antiracism lens in the field of IS, focusing on select core elements in implementation research, including: (1) stakeholder engagement; (2) conceptual frameworks and models; (3) development, selection, adaptation of EBIs; (4) evaluation approaches; and (5) implementation strategies. We highlight the need for foundational grounding in antiracism frameworks among implementation scientists to facilitate ongoing self-reflection, accountability, and attention to racial equity, and provide questions to guide such reflection and consideration.

Conclusion: We conclude with a reflection on how this is a critical time for IS to prioritize focus on justice, racial equity, and real-world equitable impact. Moving IS towards making consideration of health equity and an antiracism lens foundational is central to strengthening the field and enhancing its impact.

Plain language abstract: There are important gaps and opportunities that exist in promoting health equity through implementation science. Historically, the commonly used frameworks, measures, interventions, strategies, and
approaches in the field have not been explicitly focused on equity, nor do they consider the role of structural racism in shaping health and inequitable delivery of evidence-based practices/programs. This work seeks to build off of the long history of research on structural racism and health, and seeks to provide guidance on how to apply an antiracism lens to select core elements of implementation research. We highlight important opportunities for the field to reflect and consider applying an antiracism approach in: 1) stakeholder/community engagement; 2) use of conceptual frameworks; 3) development, selection and adaptation of evidence-based interventions; 4) evaluation approaches; 5) implementation strategies (e.g., how to deliver evidence-based practices, programs, policies); and 6) how researchers conduct their research, with a focus on racial equity. This is an important time for the field of implementation science to prioritize a foundational focus on justice, equity, and real-world impact through the application of an anti-racism lens in their work.

**Keywords**

Community-based participatory research, health equity, racism, antiracism, evaluation, implementation strategy, implementation, conceptual framework

The COVID-19 pandemic and recent racial injustices have brought greater global recognition to the relationship between racial health inequities and racism as a determinant of health (Chowkwanyun & Reed, 2020; Gross et al., 2020; Williams & Cooper, 2020; Williams et al., 2019a). For Implementation Science (IS), a field established to improve the translation of evidence-based interventions (EBIs) into routine practice across diverse settings and populations (Brownson et al., 2018), it is imperative for researchers to reflect on and enhance their ability to consider and address racism in implementation research and practice (Shelton et al., 2021a).

**Racism as a Fundamental Driver of Racial Health Inequities:** Racism is a hierarchical structure of oppression that operates at multiple levels and across systems (e.g., housing, education, employment, credit, healthcare, criminal justice) to create, reinforce, and maintain social and health inequities (Bailey et al., 2017; Reskin, 2012). Structural racism has been defined as the totality of societal structures and policies that create and maintain inequities by unequally distributing access to opportunities and societal resources by race and ethnicity (Bailey et al., 2017; LeBrón & Viruell-Fuentes, 2019; Williams et al., 2019b). Research has elucidated the health impacts of structural racism (e.g., residential segregation, incarceration, immigration policy) across the life course (Bailey et al., 2017; Gee & Ford, 2011; Williams et al., 2019a). For example, a widely used algorithm for determining which patients with complex health needs would benefit from extra medical care favored white patients and underestimated the health needs of Black patients, because it was informed by data (i.e., costs) shaped by embedded societal and institutional biases (Obermeyer et al., 2019). This highlights how racism operates at interconnected levels within and across institutions and policies that are entrenched and adaptive in maintaining racial health inequities (Bailey et al., 2017, 2020; Hardeman et al., 2016; Reskin, 2012).

**Gaps and Opportunities for Addressing Racism through Implementation Science:** There is growing interest in health equity within IS (Annie E. Casey Foundation, Summer 2021; Brownson et al., 2021; Cooper et al., 2021; Eslava-Schmalbach et al., 2019; Galaviz et al., 2020). This interest includes modifications of frameworks to address equity (Baumann & Cabassa, 2020; Woodward et al., 2019, 2021), and promising approaches for incorporating social determinants of health (SDOH) (e.g., focus on context, adaptation of EBIs; Aschbrenner et al., 2021). Despite this interest, the core methods and frameworks commonly applied in IS have not emphasized equity or racism. Racism and resulting power dynamics are contextual implementation factors that shape the experiences, cultures, and history of the organizations and communities in which researchers work. Omitting structural racism as a key contextual factor in IS affects the effectiveness, feasibility, acceptability, adoption, implementation, and sustainability of EBIs in racially/ethnically diverse communities. Lack of consideration of racism can lead to inaccurate or incomplete explanations as to why racial inequities exist (Krieger et al., 2019), and suboptimal selection of EBIs and strategies (e.g., “solutions”) for addressing inequities. Making meaningful, sustained shifts in addressing and eradicating unjust and avoidable health inequities require identifying racism and other root causes of the disease, and incorporating social justice principles when addressing them (Braveman et al., 2011). Thus, explicitly applying an antiracism lens is essential to advancing the pursuit of racial health equity and justice through IS.

**Application of an Antiracism Lens in Implementation Research:** Antiracism is a framework that can be applied in public health/healthcare to confront, address, and eradicate racism, unearned racial privilege, and their adverse effects on health by helping people to: (1) identify racism as a root cause of health inequities; and (2) critically examine how racism is embedded in policies, structures, and systems in ways that differentially affect racially and ethnically diverse populations (Bonnett, 2000; Come & Griffith, 2018; LeBrón & Viruell-Fuentes, 2019). As a racially and ethnically diverse transdisciplinary team that...
includes implementation and health equity researchers, we build on the long history of scholarship on health equity and antiracism led by racially/ethnically diverse scholars. We provide recommendations for applying an antiracism lens in implementation research (Table 1, Figure 1) and actionable guidance on addressing structural racism. We discuss the application of an antiracism lens to select core elements of implementation research as examples of key areas for researchers to leverage to advance health equity (Koh et al., 2020; Shelton et al., 2020b). These core elements include: (1) stakeholder engagement; (2) conceptual frameworks and models; (3) development, selection, and/or adaptation of EBIs; (4) evaluation approaches; and (5) implementation strategies. We also describe the grounding and self-reflection needed for implementation scientists to bring an antiracism lens to their work.

**Stakeholder Engagement: Applying an Antiracism Lens in Implementation Research Necessitates Early and Ongoing Inclusion and Engagement of Communities**

Community engagement in research provides a critical foundation for creating and sustaining structural change, promoting health equity, and avoiding the exacerbation of health disparities (Wallerstein & Duran, 2010). Community engagement involves approaches to developing relationships and working with stakeholders in the research process that exist along a continuum (Key et al., 2019), and includes community-based participatory research (CBPR). CBPR is an approach to research that: (1) is action-oriented and social justice focused; (2) builds on community assets; (3) meaningfully engages the community in decision-making and prioritization; (4) encourages bi-directional learning and capacity-building; (5) facilitates mutual benefit and trust; and (6) necessitates transparent, equitable distribution of power and resources (Israel et al., 2003; Michener et al., 2020; Minkler et al., 2012; Wallerstein & Duran, 2003, 2010, 2017). Aligned with this approach, Wolff et al. (2017) propose equity and justice-oriented principles for collaborating with historically marginalized, racially/ethnically diverse communities that prioritize: addressing social/economic injustice and structural racism; community development and organizing to facilitate equitable community ownership, power, and resources; and systems, structural, and policy changes (Kegler et al., 2019).

While stakeholder engagement (e.g., with patients, community members, providers, organizational leaders, policymakers) is a common approach for enhancing adoption and implementation (Pinto et al., 2021; Ramanadhan et al., 2018), how, when, and how long communities are involved in the research process varies, as does the racial/ethnic diversity of groups represented (Wells & Jones, 2009). While not sufficient to eliminate structural racism, we see community engagement and co-creation as central to implementation research efforts using an antiracism approach to pursue health equity, by creating structures and processes for incorporating community perspectives and priorities. Meaningful community engagement can increase the likelihood EBIs and strategies are relevant, acceptable, appropriate, sustainable, and trusted without reinforcing racism or exacerbating racial inequities (Wallerstein & Duran, 2006). Bringing an antiracism lens to stakeholder engagement in implementation research involves transparency, consideration of power dynamics, equitable sharing of resources, respect of community values, and inclusion of racially/ethnically diverse partners as equitable decision-makers early and often.

Given asymmetrical power relationships and resource allocation that can exist between researchers and communities, it is important to ground implementation research in community engagement. Incorporating community engagement can refine who defines the “problems” and

Figure 1. Application of an antiracism lens in implementation science.
Who are the community members, researchers, and stakeholders affected by the proposed research? What are the benefits, harms, and unintended consequences of the research?

Implementation Research and Practice
Recommendations, considerations, and key questions for reflection in bringing an antiracism lens to implementation research and researchers.

| Core elements and recommendations for implementation research | Current/historical approach commonly applied in implementation research | Contributions of and recommendations for applying an antiracism lens to implementation research | Key questions for reflection and consideration in applying an antiracism lens |
|---------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Stakeholder engagement (research)                            | Stakeholders broadly defined: patients, community members, providers, organizational leaders, policymakers. Stakeholder engagement often used to inform adaptations, enhance the likelihood of adoption and implementation. Engagement varies regarding how, when, and how long communities are involved in the research process and racial/ethnic diversity of groups represented, which has implications for asymmetry of resources/power. | Foundational grounding in community engagement and inclusion of racially/ethnically diverse communities as equitable decision-makers throughout increases likelihood strategies/EBIs are acceptable, sustained; builds capacity and power. Explicit orientation towards acknowledging and including community perspectives on how racial injustices and structural racism have shaped health to inform implementation research and evaluation. Values transparency, consideration of power dynamics, equitable sharing of resources, respect of community values, and meaningful inclusion. Application of social justice-oriented tools based in CBPR and community engagement to structure partnerships to equalize power and language. Funding, resources, and infrastructure changes that require grant budgets compensate community partners. | Who are the community members, researchers, and stakeholders that would benefit from or be influenced by the proposed research? What are the benefits, harms, and unintended consequences of the research? How do we (researcher and their teams) engage with racially/ethnically diverse communities? How are communities defined (e.g., geography, racial identity, sexual and gender identity)? How often and how early in the process are we engaging with communities? Who is included and who is excluded when important decisions are made? How are power and resources distributed among researchers and communities? What unintentional biases do researchers bring to the research with community partnerships? |
| Conceptual frameworks and models (research)                   | Large focus on role of organizational context with less attention to where racism and power may be operating through policies, norms, and institutions. Less focus on historical and social context at policy, community, societal levels (e.g., racism, mistrust, stigma) or how social and structural determinants shape health inequities at the organizational/system, provider/implementer, and patient levels. | Consider or directly examine structural racism and discrimination as contextual factors that influences adoption, implementation, and sustainability of EBIs at multiple levels. Prioritize assessment of structural racism and its impact as part of formative work and contextual inquiry in understanding historical and current factors shaping implementation, and barriers/facilitators to equitable implementation. Consider equity-focused IS frameworks or adaptations to IS frameworks that provide insight into how racism affects implementation and health. Learn from and integrate health equity-focused frameworks and theories that have included equity relevant constructs (e.g., discrimination, racism, stigma, medical mistrust) and related social determinants of health in IS and other disciplines as guiding examples. | In our conceptual frameworks, theories and models, are we considering structural racism and other contextual factors and determinants that are central for health equity (e.g., stigma, mistrust, social determinants of health)? As part of our contextual assessment, are we considering the role of racism and power in shaping barriers and facilitators to adoption, implementation, sustainability? Are we considering the role of racism, community context, institutional processes and norms, and overlapping systems that shape and reinforce health inequities? How does race and racism intersect with other social dimensions (e.g., age, gender, immigration, geography) to shape implementation and health inequities? Are we considering the mechanisms and processes through which structural racism creates and maintains health advantages for some and disadvantages for others? |
| Development, selection, and/or adaptation of evidence-based interventions (EBI) (research) | Many existing EBIs have not been developed for (or with) non-white racial/ethnic groups that experience inequities and may not have been developed to explicitly address racism, promote equity or antiracism, or even reduce inequities between groups. The foundation of the field’s EBIs reliance on randomized designs to establish efficacy can limit generalizability of findings for populations and settings that experience harms of racism. | Consider inequitable power dynamics if communities were not involved with the generation of that evidence; directly involve racially/ethnically diverse communities and populations in development, selection, adaptation of EBIs. Expand our evidence base to include “community-defined evidence” or “practice-based evidence” when defining and identifying EBIs for addressing structural racism. Requires trans-disciplinary thinking and focus on multilevel and multisector interventions that include | What counts as evidence? How do we select and prioritize EBIs? Who was involved in the development and selection of the intervention or EBI? Has the intervention or policy been found to be effective among populations experiencing inequities? Is the intervention or policy effective at reducing inequities and promoting health equity? |

(Continued)
Table 1. (Continued)

| Core elements and recommendations for implementation research | Current/historical approach commonly applied in implementation research | Contributions of and recommendations for applying an antiracism lens to implementation research | Key questions for reflection and consideration in applying an antiracism lens |
|---------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| **Does the intervention or policy address structural racism directly or indirectly? Or other related SDOH?** | • Most EBIs applied in IS research do not focus on addressing structural racism or its manifests or bring a focus on anti-racism. | • Sectors and systems beyond healthcare, building off of a growing evidence-base for programs/policies to address racism. | • Does the intervention or policy address structural racism directly or indirectly? Or other related SDOH? |
| **If not, can the intervention or policy be adapted to address racism or lessen the effects of racism on health?** | • Consider multilevel approaches and include structural and policy-level interventions to address racism and prioritize the dissemination and implementation of EBIs that target root causes of racial/ethnic inequities, including racism. | • Contribute to advancing and application of de-implementation science to remove harmful practices/programs and policies. | • Does the intervention multiple levels of change? |
| **Does the intervention consider systems, structural or policy levels?** | • Partner with health equity researchers from the beginning of the research process to embed IS questions in early research stages and inform the development and testing of new interventions explicitly focused on dismantling racism and mitigating its health effects. | •Does implementation of the EBI impact trust or mistrust between research and community? |
| **Does the intervention implementation exacerbate disparities or biases?** | • Contributions of and recommendations for applying an antiracism lens to implementation research |
| **Evaluation approaches (measures & methods) (research)** | • Racism, discrimination, and power are not commonly measured or assessed and racial/ethnic inequities in health outcomes and implementation indicators are not always explicitly tracked. | • Include measures that align with the inclusion of racism as a determinant in conceptual frameworks, in understanding health inequities and inequitable implementation. | • Are we measuring racism and other contextual factors that have implications for adoption, implementation, sustainability? |
| **An antiracism lens will explicitly include measures and evaluation approaches to assess racism and health equity.** | • Recognition that traditional RCTs are not always the norm for health equity research, and may not be possible or acceptable given ethical reasons or real-world constraints | • Transparent metrics and data sharing or open access to track improvements towards health equity outcomes (e.g., effectiveness outcomes and implementation science outcomes), founded in anti-racism principles. | • How are we operationalizing racism and its effects on health? |
| **Some consideration of study designs with an eye towards addressing disparities.** | • Some consideration of study designs with an eye towards addressing disparities. | • Mixed-methods and qualitative research approaches needed for dismantling racism, advancing understanding of intersectionality, amplifying voices of those experiencing harm of racism. | • How are methods selected so that they do not exacerbate uneven power dynamics or ownership over data, findings, and dissemination? |
| **Implementation strategies (research)** | • Little research has examined feasibility, effectiveness, uptake, acceptability of strategies or mechanisms through with they work with an eye towards equity or antiracism. | • Engagement of stakeholders in identifying metrics of importance and value and communicating evaluation findings back to stakeholders. | • What methods are we using to capture and center the voices of populations experiencing racism? |
| **Applying an antiracism lens in IS will require application and testing of implementation strategies to advance the spread and scale of antiracism, equity-focused solutions.** | • Some strategies for promoting equity and antiracist policies/practices may align with existing implementation strategy taxonomies in IS including building equitable and diverse teams, community | • Prioritization of policy implementation research and natural experiments to understand the impact of policies and policy changes that promote or hinder racial equity. | • How are methods selected so that they do not exacerbate uneven power dynamics or ownership over data, findings, and dissemination? |
| **Shortage of explicit testing of antiracist and equity-focused implementation strategies, and assessment of their impact on health equity and implementation outcomes.** | • Little research has examined feasibility, effectiveness, uptake, acceptability of strategies or mechanisms through with they work with an eye towards equity or antiracism. | • Need for more explicit testing of antiracist and equity-focused implementation strategies, and assessment of their impact on health equity and implementation outcomes. | • What implementation strategies might be effective in promoting equity and addressing racism? |
| **IS researchers should consider explicitly testing antiracist strategies and frameworks in the context of their own research.** | • Some strategies for promoting equity and antiracist policies/practices may align with existing implementation strategy taxonomies in IS including building equitable and diverse teams, community | • Training is an important component of multilevel antiracism strategies, and may improve uptake of EBIs that reinforce or reduce racism or health inequities. | • What implementation strategies are perceived as feasible, acceptable, appropriate among populations experiencing inequities? |
| **What are the mechanisms through which strategies reinforce or reduce racism or health inequities?** | • Little research has examined feasibility, effectiveness, uptake, acceptability of strategies or mechanisms through with they work with an eye towards equity or antiracism. | • Little research has examined feasibility, effectiveness, uptake, acceptability of strategies or mechanisms through with they work with an eye towards equity or antiracism. | • Are there adaptations that can be made to strategies to address racism or racism's effects on health? |
| **(Continued)** | • Little research has examined feasibility, effectiveness, uptake, acceptability of strategies or mechanisms through with they work with an eye towards equity or antiracism. | • Little research has examined feasibility, effectiveness, uptake, acceptability of strategies or mechanisms through with they work with an eye towards equity or antiracism. | • What are the mechanisms through which strategies reinforce or reduce racism or health inequities? |
Table 1. (Continued)

| Core elements and recommendations for implementation research | Current/historical approach commonly applied in implementation research | Contributions of and recommendations for applying an antiracism lens to implementation research | Key questions for reflection and consideration in applying an antiracism lens |
|---------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| • Variable training, education, reflection or foundation in health equity, addressing structural racism, and/or promoting antiracism approaches with respect to our research, institutions, and community partnerships. | • Capacity building and trust, training, and organizational/policy change. | • Dismantle racism if it explicitly considers structural racism and helps professionals apply an antiracism lens in their work.  
• Evaluation of strategies that address more covert forms of institutional racism underlying racial inequities and outer contextual/policy factors that reinforce inequities are imperative. | • In considering positionality and reflexivity, how is racism, power and privilege operating here on my research team, in my research, within my research institution and within funding institutions?  
• How are racist policies and processes operating in the context of my research and research environment?  
• How has racism influenced the research questions that I ask or not?  
• How has racism influenced the solutions and interventions that I select, and the methods I prioritize?  
• How are we framing and explaining health inequities (the causes and solutions)?  
• How are we being accountable to communities experiencing racism?  
• Am I using my voice and privilege to address racism? If so, how am I doing so?  
• How can research findings be used to inform collective action?  
• How can research and knowledge be shared with communities? And have I done this equitably?  
• What is the extent to which we are prioritizing the inclusion of populations and settings experiencing inequities and what are the impacts of structural racism in these contexts? |

Individual researcher and research context
To conduct IS research on health equity, self-reflection and attention to racial equity, justice, and race and racism consciousness should be foundational and ongoing grounding for implementation scientists.

• Applying an antiracism lens requires accountability and ongoing self-reflection and to actively acknowledge one’s own racial, economic, cultural biases and privilege as well as to actively combat systems of oppression within our disciplines, our research, and the institutions where we conduct our research.  
• Consider how application of an antiracism lens includes an analysis of power and access to and ability to leverage power varies by race/ethnicity.  
• An antiracism lens focuses on understanding the history and ongoing experiences of racism in broader societal contexts and in specific contexts in which we live and conduct research.  
• Researchers would benefit from training and application of Public Health Critical Race Praxis and other related antiracism frameworks to facilitate a racial consciousness to consider how racial context and asymmetrical power distributions influence research and the contexts where we conduct research.  
• How have we framed and explaining health inequities (the causes and solutions)?  
• How are we being accountable to communities experiencing racism?  
• Am I using my voice and privilege to address racism? If so, how am I doing so?  
• How can research findings be used to inform collective action?  
• How can research and knowledge be shared with communities? And have I done this equitably?  
• What is the extent to which we are prioritizing the inclusion of populations and settings experiencing inequities and what are the impacts of structural racism in these contexts? |

*Brownson et al., (2021).*
“solutions”, who is at the table to decide (and who is excluded), metrics for what counts as “evidence-based”, and what settings/populations are represented in research (Freudenberg & Tsui, 2014). Community engagement approaches are not inherently antiracist, but can be applied as an antiracism approach if they include reflection on racism and power, confronting hard truths, and openness to shifting how we conduct research (Came & Griffith, 2018; Glasgow, 2020). For example, academic language that privileges researchers over the community can operate as a form of oppressive power (Wallerstein et al., 2019), and the ever-expanding lexicon in IS may operate similarly in an exclusionary way. Implementation researchers may benefit from applying user-centered design approaches to communicate research (Dopp et al., 2020), similar to approaches from the Patient-Centered Outcomes Research Institute’s Dissemination and Implementation Toolkit (Mathematica Policy Research, 2015). Researchers using antiracism approaches recognize the folly that can exist if communities are not involved with evidence generation, and the potential for disempowering communities if the evidence does not reflect their lived experiences and reinforces concerns about the trustworthiness of medical, public health, and research institutions (Griffith et al., 2020a, 2020b). Tools from the NIH-funded Engage for Equity (E2) study can facilitate reflection and action towards strengthening community/academic partnerships and operationalizing social justice goals (http://engageforequity.org/; Parker et al., 2020; Wallerstein, 2020).

It may not be possible to achieve the benefits of community engagement in implementation research seeking to promote antiracism if there is not adequate compensation or direct benefit to partners. Antiracism-informed implementation research must be coupled with funding and/or infrastructure changes that require research budgets to pay community-based organizations indirect costs, compensate partners for their time and expertise, and engage them in determining fair and appropriate compensation. Researchers may consider developing a memorandum of understanding (MOU) with community stakeholders to facilitate explicit discussion and expectations regarding the distribution of resources, costs, and data ownership. Additionally, implementation researchers must be attuned to how power, racism, and privilege are affecting the collaborative partnerships in their own community-engaged research (Ortiz et al., 2020; Yonas et al., 2006).

**Conceptual Frameworks and Models: An Antiracism Lens Considers Racism as a Determinant and Key Aspect of Context in Implementation Frameworks, Theories, Models**

Many IS determinant frameworks (e.g., Consolidated Framework for Implementation Research, CFIR; Damschroder et al., 2009) emphasize multilevel context (Nilsen & Bernhardsson, 2019), yet implementation researchers often focus on organizational or “inner” context (e.g., implementation climate) without attention to how racism and power are operating. There has been insufficient focus on aspects of extra-organizational or *social context* that shape communities, institutions, and provision of care (e.g., racism, regulations, healthcare system norms, bias, stigma, medical mistrust; Griffith et al., 2007; Stangl et al., 2019). These aspects of racism operate within institutional norms, organizational/funding structures and policies, and healthcare systems (e.g., lack of racial/ethnic diversity of healthcare workforce) to influence implementation and outcomes (Griffith et al., 2007). The role of historical and ongoing racism in shaping SDOH is critical to address the given implications it has for differential resource allocation, healthcare utilization, and structural barriers to health (Krist et al., 2019).

Racism affects everyone in society (Gee & Ford, 2011); as such, implementation researchers should consider and examine structural racism as a contextual factor influencing implementation. Specifically, they should consider how structural racism shapes equitable or inequitable adoption, implementation, and sustainability of EBIs at the policy, system, organizational, community, provider, and individual levels (Alcaraz et al., 2020). Structural racism should be assessed as part of a contextual inquiry or formative work in understanding current and historical factors that may influence implementation (e.g., historical relationships between researchers/community; social conditions in the geographic context), or in assessing barriers/facilitators to equitable implementation (e.g., structural racism as a driver of disparate mental health outcomes and suboptimal access to and adoption of evidence-based mental health treatments in settings that serve diverse communities; Blas & Kurup, 2010; Cross et al., 2019; Harnett & Ressler, 2021; Moise & Hankerson, 2021). Even if a study’s research question does not directly focus on societal context, an antiracist approach would acknowledge, assess, or address how structural racism may shape implementation and modify downstream determinants of EBs. IS may benefit from CBPR approaches that include assets-based contextual assessments, such as an Action-Oriented Community Diagnosis (AOCD), to inform efforts to leverage existing community strengths and mitigate root causes of racial health inequities (Eng & Blanchard, 2006; Eng et al., 2012).

Equity-focused determinant frameworks (e.g., The Health Equity Implementation Framework; Woodward et al., 2019) and adaptations to existing IS theories, frameworks, and models may elucidate how racism affects implementation and health outcomes (e.g., see Allen et al., 2021 for racism-conscious adaptation of CFIR). For example, Bendall et al. (2016) used CFIR and community engagement to tailor the implementation of a community chronic disease program to reflect the worldview of a historically marginalized Indigenous Aboriginal population in British Columbia. Etherington et al. (2020) developed a tool to use alongside the Theoretical Domains...
Framework to bring an intersectionality lens to understanding how social identities (race, gender) and power structures (racism, sexism) influence barriers/facilitators to implementation. Further, Stanton and Ali (2020) explained how forms of formal and informal power operate across implementation phases using the Exploration, Preparation, Implementation, and Sustainment (EPIS) framework. Adapting IS frameworks or integrating existing frameworks and theories from outside of IS to include consideration of structural racism provides opportunities to advance this study (Alcaraz et al., 2020; Bowleg, 2017a; Ford et al., 2019; Griffith et al., 2021; Snell-Rood et al., 2021). Prioritizing the inclusion of structural racism in contextual inquiries and research, particularly for communities experiencing inequities, allows IS to build an evidence base around how racism influences implementation outcomes (e.g., adoption, implementation, sustainability) and health equity.

Implementation of Evidence-based Interventions: Applying an Antiracism Lens in Implementation Research Requires the Development, Selection, and/or Adaptation of Multilevel & Structural Interventions that Include a Focus on Health Equity and Addressing Racism

An antiracism lens requires reflection on how we select and prioritize EBIs. Many EBIs have not been developed with explicit consideration of how structural racism shapes differential opportunities for people to be healthy, experience stress, or engage in health-promoting behaviors. Even research conducted with diverse racial/ethnic groups often lacks attention to racial/ethnic heterogeneity of the sample and there is a tendency to prioritize randomized designs to establish efficacy (with strict protocols, narrow eligibility). Important questions about EBIs must be answered in partnership with communities, which include: What “counts” as an EBI?; For whom is an intervention “evidence-based”?; Who was involved in evidence generation?; Does the EBI reduce inequities and/or target SDOHs or racism?; and How can EBIs be developed and adapted to promote equity? (Alvidrez et al., 2019).

Interventions are needed to address structural racism directly or explicitly mitigate its health effects, and evidence in this area is growing. If the goal is to use IS and EBIs to promote health equity, it is critical to prioritize disseminating and implementing EBIs that target the root causes of racial/ethnic health inequities or to target interventions further upstream towards structural racism and other root causes. Because there are few existing EBIs with demonstrated efficacy in achieving these goals, it will be necessary to develop and test new interventions explicitly focused on dismantling racism and mitigating its health effects (e.g., applying frameworks like Transcreation Framework for Community-Engaged Behavioral Interventions to Reduce Health Disparities; Napoles & Stewart, 2018). Even when unable to address structural racism directly, implementation researchers should consider how interventions may differentially affect populations and health outcomes because of structural racism.

Given that knowledge production has valued certain types of evidence in determining what is included in EBI repositories, implementation researchers may consider partnering with stakeholders to identify existing “community-defined evidence” or “practice-based evidence” when examining promising practices and interventions for addressing or attenuating the health effects of structural racism (Green, 2008; Martinez et al., 2010). There is also an opportunity to test adaptations to EBIs and policies that seek to address racism and SDOH, and elucidate whether such adaptations to existing EBIs are sufficient to address structural racism and other root causes.

Bringing an antiracism lens to IS also requires trans-disciplinary and multilevel approaches that prioritize interventions and policies extending beyond healthcare settings. A growing evidence base for programs and policies to address racism can provide examples of EBIs to consider prioritizing for dissemination, implementation, and scale-up. Reviews of antiracism interventions and policies show promise to address and mitigate the effects of structural racism and promote more equitable health outcomes (Bailey et al., 2017; Williams & Cooper, 2019; Williams et al., 2019a). Examples include implementation of early childhood development initiatives and policies with demonstrated positive lifelong health and social consequences around reducing childhood poverty (e.g., transfers to enhance family income; Zimmerman et al., 2021), and place-based solutions for improving neighborhood/housing conditions, including affordable housing vouchers (Bailey et al., 2017; Williams & Cooper, 2019). There are also opportunities within the healthcare system to reduce inequities and address the effects of racism through the implementation of programs to address patients’ social needs (e.g., Bailey et al., 2017; Medical-Legal Partnership, Nurse-Family Partnership; Williams & Cooper, 2019). To address structural racism and its effects, IS researchers may consider prioritizing the implementation of policies that reduce health inequities and actively address SDOH and racism, including those related to criminal justice reform (Hardeman et al., 2021).

From a systems perspective, because of the insidious, interconnected, dynamic, multilevel nature of structural racism (Bailey et al., 2017; Reskin, 2012), IS researchers should stretch beyond the traditional boundaries of healthcare sectors and work across other systems (e.g., schooling, employment, housing, justice). For example, Corburn et al. (2015) used a co-production health equity planning process and integrated strategy to promote equity by addressing structural racism and place-based “toxic stressors” through neighborhood-based interventions, violence reduction programs, and drafting a “Health in All Policies” (Association of State & Territorial Health
Officials, 2018) equity-focused strategy and city ordinances. Critical to this process were workshops and discussions analyzing how structural racism operated through policies and practices across multisectors to disempower communities, and the generation of practical strategies to dismantle racism and mitigate its impact, including through interinstitutional dynamics and daily governmental and system decisions.

Now is the time to address structural racism in public health and healthcare through an enhanced focus in IS. Health inequities and collective racial trauma have been amplified by COVID-19 and the mental health effects of police killings and their media coverage (Bor et al., 2018). As such, IS researchers should prioritize the implementation of mental health-focused EBIs that reduce inequities and meet the needs of racially diverse communities (e.g., culturally tailored trauma-informed therapies; collaborative care; Cenat, 2020; Comas-Díaz, 2016; Fullilove et al., 2004; Lee-Tauler et al., 2018; Wells et al., 2008).

Implementation researchers can also identify policies and practices that have differential harmful effects on specific racial/ethnic groups and further develop and apply de-implementation science to remove such programs/policies (Agénor et al., 2021; Helfrich et al., 2019). Researchers may benefit from the application of Health Impact Assessment tools which have been used to assess the impact of policy and investment decisions, including whether health impacts of such decisions are equitably distributed (Povall et al., 2014; Prasad et al., 2015; Welch et al., 2017). Ultimately, to change deeply entrenched patterns and address root causes like structural racism, researchers have highlighted that maximally “disruptive” interventions may be necessary (e.g., Browne et al., 2018; Hawe, 2015; Hawe et al., 2009), including new organizational structures, practices, policies, and processes within and across systems to shift power dynamics that structure routine patterns in organizations and societies to reinforce racism.

**Evaluation Approaches: An Antiracism Lens Explicitly Includes Measures and Study Designs to Assess Racism and Health Equity**

To date, measuring or operationalizing racial equity or racism in IS is not routine. While there is debate on how to appropriately measure racism (Came & Griffith, 2018), and recognition that measuring racism depends on scale, domain, and/or historical context (Bailey et al., 2017; Cross et al., 2019; Groos et al., 2018; Krieger, 2014), it is critical that implementation frameworks and studies include metrics and measures aligned with the inclusion of racism as a contextual determinant of health inequities and inequitable implementation. Beginning to conceptualize and measure racism within implementation research with specificity will inform where and how to intervene; identify potential mechanisms through which racism shapes inequities; and help to determine whether the implementation of EBIs or strategies could reduce racism and its impacts. There are validated measures to capture individual discrimination, including the everyday discrimination measure (Williams, 2016) and experiences of discrimination measure (Krieger et al., 2005), and measures operationalizing structural racism or its effects on SDOH and health outcomes, such as administrative data (e.g., indices of segregation, data on redlining/housing discrimination), and self-report measures (e.g., the Perceived Racial Composition Scale, the Perceived Structural Racism Scale) (Adkins-Jackson et al., 2021, in press; Alson et al., 2021; Ford et al., 2019; Groos et al., 2018; Krieger, 2020).

An antiracism lens requires evaluation metrics to track improvements in health equity outcomes by race/ethnicity, informed by antiracism principles. It requires IS researchers to clarify and operationalize the ways that racism is shaping their study components and outcomes. An antiracism lens would extend the engagement of community stakeholders in determining which measures should be prioritized and ensure that data is disseminated to communities to promote transparency. Transparency and accountability in measuring the impacts of racism on racial inequities are essential for dismantling racism and promoting equity.

To this end, evaluation helps to enhance the assessments of equitable reach, effectiveness, adoption, implementation, and sustainability of EBIs in addressing racism or modifying its effects on health. This has been highlighted in frameworks like RE-AIM, which has been extended to track health and implementation outcomes with an explicit focus on equity and sustainability (Shelton et al., 2020a). Other efforts include reframing Proctor’s IS framework to apply an equity lens to implement indicators like feasibility, costs, fidelity, adoption (Baumann & Cabassa, 2020). Further study is needed to advance the operationalization and validation of these measures in implementation research.

The evidence base for interventions and policies to reduce health inequities and dismantle racism are growing, but further development and testing are needed. This presents a unique opportunity for IS researchers to partner with intervention/policy developers seeking to address racism earlier in the process to design antiracist interventions with implementation in mind. Depending on the nature of existing evidence of a policy or EBI to address racism and equity, a range of hybrid effectiveness-implementation trials and systems modeling may be helpful in growing this evidence base (Chinman et al., 2017; McNulty et al., 2019); given that racism is reinforced across interconnected systems (e.g., housing, education, healthcare), a systems approach might help to identify potentially impactful leverage points with high potential for dismantling racism and promoting equity across the system (Brownson et al., 2021; Reskin, 2012). This may include evaluation of the implementation of innovations, practices, and policies already underway using natural experiments, adaptive designs, and rapid-
cycle assessments. As policy plays a critical role in addressing structural racism, policy-focused implementation research may provide insight into the extent to which policies that promote or hinder health equity get implemented, enforced, sustained, and dynamically adapted over time (Emmons & Chambers, 2021; Hoagwood et al., 2020).

Qualitative methods amplify the voices and experiences of those affected by racism and unpack the intersection of multiple social identities (e.g., age, gender) that are proxies for structures affecting health through moderating access to power and privilege (Bowleg, 2017a, 2017b; Hamilton & Finley, 2019; Palinkas & Zatzick, 2019). Qualitative approaches may help document racism and unintended yet important contextual factors that shape the implementation of EBIs, as well as unplanned consequences, and the mechanisms through which policies and practices rooted in racism advantage some and disadvantage others (Bowleg et al., 2020; Griffith et al., 2017; Shelton et al., 2017).

**Implementation Strategies: Applying an Antiracism Lens in Implementation Research Requires Application and Testing of Implementation Strategies to Advance Spread and Scale of Antiracist, Equity-focused Solutions**

There is value in identifying, implementing, evaluating, and scaling implementation strategies seeking to promote equity and dismantle or attenuate the health effects of racism. Some strategies for promoting equity and antiracist policies/practices may align with existing implementation strategy taxonomies (e.g., ERIC taxonomy; Powell et al., 2015), including building equitable and diverse teams, building trust and community capacity, training/education, and organizational/policy change (Gaia et al., 2021; Gittelsohn et al., 2020; Hassen et al., 2021). However, there is a need for more development and testing of strategies grounded in antiracism principles and evaluation of impacts on equity. One strategy is clinician and practitioner training focused on critical self-reflection, power imbalances between professionals/providers and patients/communities, and recognition of structural racism in shaping health (Bailey et al., 2017; Came & Griffith, 2018; Duerme et al., 2021; Hardeman et al., 2016). While training alone is insufficient to dismantle racism when working in structurally racist systems (Griffith et al., 2007), it is an important component of multilevel antiracism strategies, and may improve uptake of EBIs that dismantle racism if it explicitly considers structural racism and helps professionals to apply an antiracism lens in their work.

Came and Griffith (2018) propose an antiracist framework to address public health inequities and inform institutional support and training of allies, with five elements: reflexive relational praxis (reflection and action), structural power analysis, socio-political education, monitoring/evaluation, and systems change approaches. We strongly encourage IS researchers and practitioners to explicitly test or learn how best to employ antiracist strategies in their work. For example, Browne et al. (2015) applied multilevel implementation strategies (organizational integration and tailoring, practice facilitation, staff training) to build capacity and support practice and policy changes within primary care and facilitate the provision of equity-oriented care in Canada (EQUIP, Research to Equip Primary Healthcare for Equity). To address structural determinants including racism, practitioners were trained on “cultural safety” to address power inequities and historical racial injustices. Browne et al. (2016) have also used an ethnographic approach to identify dimensions of equity-oriented healthcare and ten strategies as the foundation for organizational-level interventions that address power differentials and provide equitable, antiracist healthcare services for Indigenous populations.

Evaluation of implementation strategies that address institutional racism underlying racial inequities is another approach. As one IS-relevant example informed by CBPR, Cykert et al. (2020) conducted a pragmatic quality improvement (QI) trial across five cancer centers (ACCURE: The Accountability for Cancer Care through Undoing Racism and Equity) to address potential bias among clinicians shaping differential decision-making for Black and white patients. In addition to training medical and administrative staff on antiracism and healthcare equity (Black et al., 2019), researchers found that the use of a real-time electronic health record registry that signaled unmet care/missed appointments combined with race-specific measurement and clinical feedback on cancer treatments and nurse navigation enhanced treatment completion among breast/lung cancer patients and decreased racial inequities. Other promising health system studies have used implementation strategies (e.g., on-site coaching, facilitation, audit/feedback), race-specific data, and stakeholder engagement to build capacity around implementing evidence-based QI methods to target racial inequities (Cooper et al., 2013; Halladay et al., 2013; Purnell et al., 2016). Policy-oriented strategies that address outer contextual determinants that shape health inequities, including adaptive policies that are dynamic and based on a feedback system are also promising (Carey et al., 2015). These examples highlight opportunities to examine whether implementation strategies that promote or hinder health equity are equitably feasible, culturally acceptable, and effective across racial/ethnic groups, and how best to elucidate mechanisms through which strategies operate (e.g., directly or indirectly address racism).

**Application of antiracism lens among researchers and within research contexts**

Implementation research promoting health equity requires foundational and ongoing self-reflection, accountability, and attention to racial equity and racism consciousness (i.e., awareness of one’s racial position and positional identity; Ford & Airhihenbuwa, 2010b; Smith, 2021). For some, it may be difficult to open themselves to think about
racism. In these instances, Griffith and Semlow (2020) suggest utilizing art to facilitate understanding of what racism is, how it feels to experience privilege or oppression, and how to understand the implications of policies and practices that affect health. Self-reflection helps acknowledge one’s own racial, economic, cultural biases and privilege and combat systems of oppression within our disciplines and research (Griffith & Came, in press). Critical to antiracism is understanding the history and ongoing experiences of racism in broader societal contexts and in specific contexts in which we live and conduct research (Griffith et al., 2020a). Awareness of historical and ongoing socio-political contexts can contextualize deep-seated mistrust of medicine and public health. In the United States, this would include educating oneself about racial injustices, including the “Tuskegee Study of Untreated Syphilis in the Negro Male” (Centers for Disease Control & Prevention, 2020), HeLa Cells from Henrietta Lacks (Skloot, 2017), and forms of racism (e.g., residential segregation, redlining) that have ongoing health implications (Hicken et al., 2019; Smith, 2021). Dismantling racism necessitates researcher reflection to identify where visible and invisible racist policies and processes are operating within and across systems.

We encourage IS researchers to employ antiracism approaches in their research. The Public Health Critical Race Praxis (PHCRP), based on Critical Race Theory (CRT), is one example of a grounding approach for addressing racism-related factors that may influence research conduct (Crenshaw et al., 1995; Ford & Airhihenbuwa, 2010a, 2010b, 2018). The PHCRP focuses on: (1) contemporary race relations (salience of structural racism during study time/context); (2) knowledge production (a field’s cumulative understandings including potential racial biases); (3) conceptualization/measurement (operationalization of racism-related variables, including intersectionality); and (4) action (how findings help to dismantle power differentials between community and researchers, benefit community, and build off of community assets). Application of PHCRP benefits implementation researchers as it encourages recognition that racism may underlie assumptions, methods, and theories, and facilitates racial consciousness around how aspects of racial context and inequitable power differentials influence research (e.g., race or racism shape framing of research questions or funding) and disciplinary norms. Further, it grounds the work in the lived experiences of populations that have been marginalized (“Centering in the Margins”; Bradley, 2020; Ford & Airhihenbuwa, 2010a).

There is value in having implementation researchers engage in ongoing critical self-reflection, as it shapes our field, research, and communication. For example, are we using inclusive language to reflect diverse communities? What biases, power, and experiences do we bring to research? This includes opportunities to create spaces within our teams and partnerships for collective reflection. An antiracism lens includes an analysis of power and how the access and ability to leverage power varies by race/ethnicity (Came & Griffith, 2018). Building off of the work of Lukes (1974, 2005), researchers can critically examine how power is used within their research team and institutions regarding: (1) overt decision-making; (2) agenda setting and prioritization; and (3) shaping meaning and value. Informed by Freire’s (1972) pedagogical texts and CBPR, “reciprocal dialogues” applied in IS may enable stakeholders and researchers to collaborate to identify the root causes of inequities, and engage in ongoing reflection and dialogue. These concepts have implications for analyzing who has formal and informal power in our institutions and research, and determining how racism and power are operating, which includes: how inequities are framed and by who; who sets the agenda; whose voices are heard; what types of policies and research are valued and rewarded; and who benefits.

**Conclusion**

Implementation science is uniquely positioned to apply an antiracism lens in efforts to achieve population health equity. Here, we highlight opportunities to bring an antiracism lens to several core elements in implementation research and encourage the IS field to prioritize and reflect on the role we are playing in efforts to achieve health equity. Selecting frameworks or methods that do not consider racism, overlooking inequitable community-academic power dynamics in determining the evidence, conducting research that excludes settings and diverse racial/ethnic populations that face more structural barriers, and inattention to racial/ethnic patterns in our research are some ways that IS could inadvertently exacerbate health inequities. To be a part of the solution in helping to achieve racial/ethnic justice, IS needs to ground the field in extant scholarship on health equity and racism, and reframe a foundational focus on social justice, equity, and real-world impact.

To achieve these aims, we recognize that there are many more questions to address in IS. For example, what does it mean that dissemination efforts encouraging adoption typically focus on gatekeepers and those who already hold power? How could an antiracism approach facilitate the sustainability of EBIs? Could one of the reasons we struggle to sustain interventions, particularly, in communities experiencing inequities is because of the lack of examination of structural racism? What would it mean to center the values and experiences of individuals experiencing racism in adaptation and de-implementation efforts (Shelton et al., 2021b)? How has structural racism shaped the field of implementation science itself? We also recognize that while racism and its manifests are specific to particular historical and sociopolitical contexts (Came et al., 2019; Gee et al., 2019; Lentin, 2016), there
is tremendous heterogeneity that exists within racial/ethnic groups and across geographic settings (e.g., urban or rural contexts; Zahnd et al., 2021) and globally, which require further explication.

It is important to acknowledge that our research is embedded within and influenced by broader institutions that form and influence research. This study requires commitment from funders and institutions to address racism and inequity in promoting and sustaining racially diverse scholars. We guide readers to pieces that have focused on this in more depth (Airihinenbuwa et al., 2019; Carnethon et al., 2020; Chaudhary & Berhe, 2020). Efforts are underway at the National Institutes of Health (NIH; Collins et al., 2021), including recent funding opportunities to examine the role of structural racism on health (NIH, 2021b, 2021d) that calls for information on addressing health equity (NIH, 2021c), and diversity/inclusion efforts to establish an equitable research workforce through the NIH UNITE initiative (NIH, 2021a). Racial diversity in the scientific workforce is central to addressing structural racism in IS, and structural changes are needed to enable the recruitment, support, and retention of a diverse workforce (Green et al., 2021; Yousif et al., 2020).

IS must also consider that some of the foundations and data that inform our field may not center on the principles of equity (e.g., race/ethnicity categories, standards for scientific “rigor” and “evidence”). Collaborating with stakeholders across disciplines (e.g., epidemiologists, clinical trialists) earlier along the research continuum with a focus on antiracism and equity is essential. Aligned with recent disciplinary critiques and recommendations for addressing structural racism in related fields (Alang et al., 2021; Bowlag, 2021; Boyd et al., 2020; Breland & Stanton, 2021; Buchanan et al., 2020; Hardeman & Karbeah, 2020; Merchant et al., 2021; South et al., 2020), we encourage implementation researchers to reflect critically and with care on their efforts around equity, invest in the implementation of policies, practices, and systems that are justice-centered, and consistently seize the opportunity to be more explicitly antiracist.

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