The Lancet

Paper 4: Confronting the consequences of racism, xenophobia and discrimination on health and healthcare systems

--Manuscript Draft--

Manuscript Number:	THELANCET-D-20-19794R2
Article Type:	Invited Series
Keywords:	Racism; Xenophobia, Discrimination, Interventions
Corresponding Author:	Ibrahim Abubakar, FRCP University College London London, UNITED KINGDOM
First Author:	Ibrahim Abubakar, FRCP
Order of Authors:	Ibrahim Abubakar, FRCP
Manuscript Region of Origin:	UNITED KINGDOM
Abstract:	Racism, xenophobia and discrimination are key determinants of health and equity and must be addressed to achieve impact on health outcomes. We conclude that far broader, deeper, transformative action is needed. To tackle the structural drivers of racism and xenophobia, anti-racist action and other wider measures that target determinants should adopt an intersectional approach to effectively address the causes and consequences of racism within a population. Structurally, legal instruments and human rights law provide a robust framework to challenge the pervasive drivers of disadvantage linked to caste, ethnicity, Indigeneity, migratory status, race, religion and skin colour. Actions must take into account the historical, economic and political contexts in which the effects of racism, xenophobia and discrimination impact on health. We propose a number of specific actions; an intervention-based commission that explores how we action the approaches laid out in this paper; building a conversation and a series of events with international multi-lateral agency stakeholders to raise the issue and profile of racism, xenophobia and discrimination within health; and use our multiple platforms to build coalitions, expand knowledge, highlight inequities, and advocate for change across the world.

Paper 4: Confronting the consequences of racism, xenophobia and discrimination on health and healthcare systems

Prof Ibrahim Abubakar, FRCP, Institute for Global Health, University College London, London, UK

Lu Gram, PhD, Institute for Global Health, University College London, London, UK

Sarah Lasoye, MSc, Institute for Global Health, University College London, London, UK

Prof E. Tendayi Achiume, Juris Doctor, Professor of Law, UCLA School of Law, United Nations Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance

Laia Becares, PhD, Department of Social Work and Social Care, University of Sussex, Brighton, UK

Gurpreet Kaur Bola, MSc, Medact, London, UK

Rageshri Dhairyawan, FRCP**,** Barts Health NHS Trust, London, UK

Gideon Lasco, Department of Anthropology, University of the Philippines Diliman, Quezon City, Philippines

Prof Martin McKee, DSc, London School of Hygiene & Tropical Medicine, UK

Prof Yin Paradies, PhD, Alfred Deakin Institute for Citizenship and Globalisation, Deakin University, Melbourne, Australia

Nidhi S. Sabharwal, PhD, Centre for Policy Research in Higher Education, National Institute of Educational Planning and Administration, New Delhi, India

Sujitha Selvarajah, MBBS, Institute for Global Health, University College London, London, UK

Geordan Shannon, PhD, Institute for Global Health, University College London, London

Delan Devakumar, PhD, Institute for Global Health, University College London, London, UK

Corresponding author: Prof Ibrahim Abubakar, UCL Institute for Global Health, 30 Guilford St, London. WC1N 1EH Tel: +44 (0)20 7905 2122, i.abubakar@ucl.ac.uk

Key messages

- Beyond individualised interventions which aim to mitigate the health impacts of racism and xenophobia, there is need to prioritise transformative action which challenge and ultimately seek to dismantle existing political, economic, legal and social systems which uphold/reproduce racism, xenophobia and all forms of structural oppression. Transformative justice with interventions requiring community based, multisectoral and society-wide non-violent action and restorative justice with appropriately compensated historically wronged groups to tackle contemporary challenges are essential.
- To effectively tackle the structural drivers of injustice which underlies racism in economic, political and health systems, there is need to prioritise anti-racist interventions that can prevent and address the health impacts of racism and xenophobia through individual, organizational and community change as well as movement-building, legislation and race equity policies in institutions and nations.
- Interventions must look both at the intersectional and generational nature of discrimination by considering the interaction of multiple forms of oppression, and the historical contexts which produce contemporary racial dynamics among different populations.
- While specific individual and community interventions of variable effectiveness have been identified in this review, there is still much crucial work to do in investigating the impact of various interventions that seek to prevent or address the consequences of racism, xenophobia and discrimination on health.

Abstract

Racism, xenophobia and discrimination are key determinants of health and equity and must be addressed to achieve impact on health outcomes. We conclude that far broader, deeper, transformative action is needed. To tackle the structural drivers of racism and xenophobia, anti-racist action and other wider measures that target determinants should adopt an intersectional approach to effectively address the causes and consequences of racism within a population. Structurally, legal instruments and human rights law provide a robust framework to challenge the pervasive drivers of disadvantage linked to caste, ethnicity, Indigeneity, migratory status, race, religion and skin colour. Actions must take into account the historical, economic and political contexts in which the effects of racism, xenophobia and discrimination impact on health. We propose a number of specific actions; an intervention-based commission that explores how we action the approaches laid out in this paper; building a conversation and a series of events with international multi-lateral agency stakeholders to raise the issue and profile of racism, xenophobia and discrimination within health; and use our multiple platforms to build coalitions, expand knowledge, highlight inequities, and advocate for change across the world.

Introduction

The first three papers in the series described the ubiquitous nature of racism, xenophobia, and discrimination on the grounds of caste, ethnicity, race, Indigeneity, migratory status, skin colour and religion.[insert reference to first 3 papers] They described the profound health consequences of racism and xenophobia in every context, and how these forms of oppression are based on centuries of historical atrocities. Earlier papers also highlighted the importance of taking an intersectional approach in order to address root causes of structural inequality. Encouraged by politicians and the media, there is increasingly visible othering of racialised and minoritised populations by those with power, which impacts health and wellbeing. Such othering demands a response from those concerned with improving health for all to prevent adverse outcomes. Any response to address health impacts of racism, xenophobia and other forms of discrimination must take account of historical and contemporary context. The need for the response to be multisectoral, society-wide and address historical injustices poses a challenge to global health, and requires critical rethinking of where future action should lead.[1] Rethinking future action and by whom has become urgent given recent events, including the election of far-right governments in some countries, the growth of the Black Lives Matter and other racial justice movements, and calls to decolonise health itself. To date, societal responses have ranged in scale - from the important but limited, such as calls for equality for minority healthcare workers, to a fundamental rethinking of society.[1]

There was a notable delineation between studies addressing specific health outcomes versus studies addressing broader drivers of health. Figure 1 highlights the importance of process and power in the formation of health; however, interventions identified across most levels were rarely process-oriented and employed limited approaches to understanding or changing power imbalances. This review consequently focusses on wider societal action to confront the health impacts of racism corresponding to the core of our model. We present evidence on legal and

human rights instruments and on systems and institutions, to build a case for what works to confront the health impacts of racism, xenophobia and discrimination. We review the limited evidence available on individual, community and health interventions aimed at improving health outcomes. We conclude by summarising key actions neccessary to tackle the health impact of racism, xenophobia and discrimination and a plan for future action. “Full definitions of the terms used can be found in the first paper of the series [ref]”.

Wider societal action to prevent adverse health outcomes from racism

As racism and its impact is often structural,[2] we surmise that the most impactful determinants of health outcomes, and consequently likely effective interventions, require broad action targeting the structural drivers of discrimination. Many of these are legal and political and require radical policy interventions. These broader structural drivers are underpinned by history and previous reviews of discriminition from a broader scope concluded that there is much focus on explanatory rather than solution directed research.[3] Much of medicine and health interventions have been developed on a foundation of injustice, cruelty and discrimination. Drawing on scholars such as Frantz Fanon[4], more radical approaches advocate the destruction of existing systems, including defunding established systems of authority which contribute to systemic racism and redistributing resources towards community-based and non-punitive solutions. For many societies, change is therefore only possible if historical injustices[5] are recognised and addressed through reparative[6] and transformative justice[7]. The global health community is beginning to engage with this challenge. Inspired by related issues such as environmental justice communities fighting for racial justice have added their voices to those confronting structures that uphold the status quo and calling for radical change in areas such as policing and prisons.

Whilst much existing research seeks to understand racism and discrimination within a specific sector or community, the root cause of many racialised health inequalities derive from macro-economic policies driven by political ideologies [Paper 1 reference]. Evaluating the health impacts of broad societal changes and generalist policies, such as reparations for historic injustice is challenging and will be addressed in the forthcoming Lancet Commission on Reparations and Redistributive Justice.[8] We believe we can learn from natural experiments and quasi-experimental studies. We examine two broader 'interventions', social movements for health and racial justice and affirmative action policies. First, contemporary and historical social movements – informal networks of individuals or groups engaged in political conflict on the basis of a shared identity[9]– have long interrogated the political economy driving racialised health inequalities. The South African Treatment Action Campaign mobilised thousands of Black, HIV-positive women to protest government inaction on HIV/AIDS and eventually succeeded in forcing international pharmaceutical companies to make life-saving drugs available at affordable prices.[10] The Civil Rights Movement campaigned against racist segregation laws preventing African Americans from using health facilities reserved for Whites.[11] The 1964 Civil Rights Act prohibited discrimination and segregation in all public institutions, including hospitals. An analysis of vital statistics from Mississippi found a considerable narrowing of racial differences in mortality between 1965 and 2002, resulting in an estimated 25,000 additional Black infants surviving in the rural South,[11] and improvements in life expectancy amongst Black women.[12] Second, affirmative action can address inequity and discrimination particularly in the domains of education and employment.[13] The US Civil Rights Movement played a major role in promoting affirmative action policy. In India, affirmative action to support those in the lowest caste was enshrined in the 1950 Constitution and the abolition of the customary rules of the caste system (Panel 1).[14]

In summary, the above examples suggest broader political and economic interventions can impact health outcomes, but the paucity of research underscores the need to further explore the

extent to which context affects the applicability of specific interventions for improving health outcomes. For example, affirmative action policies have long attracted controversy, including within medical communities.[15]

Indeed the societal marginalisation of racialised groups has the double effect of limiting the widespread adoption of legal and policy measures to improve health outcomes for minoritised communities, and of limiting the collection of empirical data to determine the specific effects of those policies that are in place. The limited analysis in this section reflects the dire reality of the failure of most governments to prioritise legal and policy measures targeted at substantive equality on racial and ethnic bases in access to health. Though unrealised to date, we hope that the COVID-19 pandemic[16,17] may result in some positive changes in light of the widely acknowledged unequal impact of this pandemic on many societies.

Legal and human rights frameworks

Applicable International Human Rights Frameworks

The right to health is enshrined in many international human rights instruments, most prominently the Universal Declaration on Human Rights and the International Covenant on Economic, Social and Cultural Rights (ICESCR). ICESCR guarantees everyone the right to the highest attainable standard of mental and physical health[18] and requires that this right be exercised "without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status."[18] There are also a number of international human rights treaties that prohibit discriminatory access to health, including the International Convention on the Elimination of Racial Discrimination, the Convention on the Elimination of All Forms of Discrimination Against Women, the Convention on the Rights of Persons with Disabilities,[19] and the Convention on the Rights of the Child.

Impact of International Human Rights Legal Interventions for Health Outcomes

Legal and policy frameworks, especially those anchored in international human rights norms, can play a major role in the fight against racism, racial discrimination, xenophobia and related intolerance, as they relate to health. As described in the Lancet Commission on Global Health and Law, law exerts a powerful influence on health by structuring, perpetuating, and mediating the risk factors and underlying social determinants of health.[20]

First, these frameworks set common standards, articulating shared normative commitments regarding what conduct, treatment and outcomes are acceptable so that persons, communities and societies can work in coordination towards a shared vision. Gaining common ground is particularly pertinent, given the different meanings among categories such as race, ethnicity and caste, and in light of the differential experiences and conceptions of discrimination and intolerance. Human rights-based approaches (HRBAs) to health include strategies "designed to redress deeply ingrained inequalities, and aim to enable everyone to participate fully in economic, social, and cultural affairs toward the progressive realisation of rights."[21]

Secondly, these frameworks also provide mechanisms through which governments, public officials, and to some extent private actors, can be held accountable for conduct and outcomes that violate applicable equality and non-discrimination frameworks. There is evidence that stronger racial equality and non-discrimination laws are associated with better outcomes for racially minoritised groups.[21,22] For instance, a study found evidence that HBRAs in part contributed positively to health gains for women and children in Nepal, Brazil, Malawi and Italy.[23]

Furthermore, law can be a detriment to health outcomes through criminal justice laws, criminalisation of sex work and infectious disease transmission, and immigration regimes.[20] Individual case studies have highlighted the transformative impact of HRBAs on government frameworks for provision of healthcare. Strategic litigation was used in Venezuela and Argentina resulting in requirements on the respective governments to concretise abstract legal commitments to the right to health via positive obligations to provide HIV treatment.[20] Meier et al

noted that “Litigation to enforce health-related rights has extended across tuberculosis in prisons in South Africa, maternal mortality in Uganda, the health insurance system in Colombia, and the regulation of medicines in India.”[24] A 2019 systemic review found broader evidence that human rights interventions improve HIV-related outcomes.[25] A Peruvian study found a citizen-led programme empowered Quechua-speaking women to monitor health care clinics and support other women facing medical discrimination resulted in improved right to health by democratising the process of identifying and acting on violations at the local level.[26] In addition to the above, the indivisibility of human rights is a necessary condition of rights-based health progress, especially when other sectors, like education, participation, and the environment, saw sizeable investments alongside human rights efforts.[27]

In summary, international human rights law holds great potential for improving health outcomes for minoritised populations. However, understanding this potential requires further research to investigate the transformation of legal frameworks into policy, including the independent regulation of their implementation. Unlocking this potential requires a redoubled effort to address the drivers of systemic racism, explored in the first paper in this series. Ultimately, developing and implementing human rights and legal instruments involves greater collaboration between health and legal professionals at all levels.

Institutions and systems

There was limited evidence on institution and system level interventions targeting the material conditions around minoritised groups with respect to social determinants and with one exception,[28] these exclusively studied Black and Latino groups in the United States. We present three illustrative studies that show what is possible: early childhood development programmes, housing mobility programmes, and income supplementation programmes. First, two studies examined interventions to promote early childhood development among African American households.[29,30] The Carolina Abecedarian Project, a randomised controlled evaluation of a

two-stage treatment: 1) children aged 0-5 years received cognitive and social stimulation interspersed with caregiving and supervised play; 2) as children became older, they received homeschool resource teachers who improved early math and reading skills.[29] The intervention has been credited with many different impacts on participants throughout the lifecourse including increases in childhood IQ, reductions in pregnancy, depression and substance use among teenagers, lower blood pressure and risk of hypertension among male 30-year-olds, and even measurable differences in brain structure among 40-year-olds.[31] As described above, and while limitations exist, the education system is potentially a good target for interventions.[32]

Second, several studies have evaluated the effect of US government assistance to relocate minoritised families from low-income, inner-city neighbourhoods to middle-class, suburban areas.[33–39] Using quasi-experimental approaches exploiting random variation in the selection of programme beneficiaries, these studies estimated health impacts from interventions such as the Moving to Opportunities project. Families selected by lottery in five cities were offered practical and financial support by government to move out of public housing into high-income neighbourhoods. This was associated, at three to seven years, with reductions in child injuries, accidents, and asthma attacks,[38] but evidence on impacts on child mental health was mixed.[35,37,38] Among adults, evidence for impact on self-reported physical and mental health was also mixed,[35–38] but large, sustained reductions in BMI and glycated haemoglobin were observed up to 15 years later.[35,39]

Third, multiple studies evaluated US income supplementation programmes,[40–44] all except one[40] showing positive benefits. Quasi-experimental evaluations of the Earned Income Tax Credit scheme and the Food Stamp Program found evidence for declines in low birthweight among beneficiary households, with larger effects for Black than White babies.[43,44] Studies of income supplementation for American Indian households found reductions in symptoms of adult and child psychiatric disorder.[41,42]

The one study outside the US examined the impact of expanding the South African Pension at the end of the apartheid era.[28] It estimated a 1.19 SD increase in weight-for-height and 1.16 SD

increase in height-for-age among girls under the age of five living in a household with a beneficiary grandmother, but not among boys or among girls living with a beneficiary grandfather. The inference was that grandmothers receiving direct transfers had greater influence over household spending. A review[2] with a specific focus on structural racism in the US identifies three promising intersectoral approaches: Place-based, multisector, equity-oriented initiatives including redevelopment of neighborhoods and housing, advocating for policy reform in areas such as prisons and drug use, and in the training of the next generation of physicians.

In summary, despite some limitations of the studies in this section, there are sufficient grounds to seek further evaluation of specific measures and implement action to alter the material conditions that lead to poor health outcomes of minoritised groups, that stem from institutional or systemic discrimination. The root causes of poor housing and income among minoritised groups requires political, social policy, and legislative action to resolve, however, some of the specific examples identified here, such as income supplementation, improved rehousing, better pensions and teacher-delivered help could be adapted to the local context.

Individual, Community and Healthcare Interventions

Our review of individual, community and healthcare interventions suggests the published evidence is limited and is summarised in the appendix. Table A1 in the appendix summarises the key findings of intervention studies identified from the academic health literature in relation to their context, mechanisms, and outcomes. It is important to also acknowledge the limits of the analyses that we have conducted. We recognise that a wealth of intervention work that may result in improvements to health exists outside of health related journals. Furthermore, while we have searched the literature widely, we have not, for example, considered the economic impacts of racism, xenophobia or discrimination or interventions such as reparations that may

address these. We recognise that there is literature on demonstrating effective interventions on wider determinants of health such as those targeted at socioeconomically deprived communities in the US or the UK, many of whom are predominantly minoritised that we have only partially evaluated in this review.

First, we surmise that there is an urgent need to increase high quality research addressing the causes, determinants and consequences of adverse health impacts of racism, xenophobia and discrimination. Second, in considering what works to confront the health impacts of racism, targeted individualised health interventions may be important to mitigate the 'symptoms' of racism, but they do not address root causes or transform power imbalances. Third, whilst developing a targeted body of literature is important to evidence action, focusing on one specific population may reinforce rather than overcome their marginalisation and continue to perpetuate power hierarchies. Additionally, isolating intervention efforts to specific forms of racism or discrimination risks silencing or devaluing forms of minoritisation which are left off the research agenda. This may also obfuscate or detract from the task of addressing fundamental hierarchies of racial power which underlie racism. Ultimately, a diverse and balanced body of research across population groups and contexts has the potential for the most traction and health impacts should be central to all intervention studies addressing racism, xenophobia and discrimination. Finally, we gathered literature from across the world on interventions to address multiple forms of discrimination. In doing so, we seek to highlight similarities in interventions. However context matters and each intervention should be adapted to specific minoritised groups, taking into account their social location and needs.

Key Principles to Address the Health Harms of Racism, Xenophobia and Discrimination

We suggest six key principles, focused on the upstream causes, to address the health harms caused by racism, xenophobia and discrimination.

First, decolonisation must be adopted to challenge the societal structures that we live in to create a fairer society. Decolonisation is a process of active efforts that recognise, examine and undo the legacies of colonialism, across all domains of society including the social, political and epistemological [Paper 1 appendix reference]. It cannot be done without challenging the ingrained colonial-logics that persist today. Perhaps the most challenging aspect of decolonisation is the pervasive nature of ideas around “the other”; generated by centuries of injustice against minoritised groups.[45] Colonial ideas underpin the current social construction of race, ensuring ideas of Black inferiority and White supremacy. Interrogating colonial logic is our route to decolonising our understanding of inequality, and the powers that drove those ideas in the first instance. For example, most authors of this series are beneficiaries and a part of the institutions that have created existing unequal global health systems through either our training or employment. Truly tackling these systems and health inequalities will require wealthy societies to rethink existing paradigms of knowledge creation and structures in global health, challenging the very concept of global health.

Second, global health must address both reparative and transformative justice.[6,7] To achieve true change, we must also draw on ideas from political science and a wider pool of researchers outside current western dominant institutions and concepts. In this way, we will move to a more active view of racialisation, interrogating power in both ideology and process of knowledge

development and “evidence”. For example, Escobar and colleagues[46] drew on the experience of Indigenous and Afro-descendant activist-intellectuals to illustrate how colonial notions have limited our ability to imagine what is possible in order to bring about health justice. To deal with the many inequalities in global health, scholars and activists need to take a pluriverse of perspectives to craft different possible futures that could bring about the profound social transformations that are needed to inform better health. In addition, a decolonial approach to anti-racism invites us to embrace social justice in a way that is deeply intertwined with community healing.[47] Such an approach also requires undoing structures of racialised subordination, and remaking social, political and economic institutions on more equitable terms. Another approach that minoritised groups champion is transformative justice which takes a non violent approach to deliver justice as opposed to state enforced systems such as the police and prisons. Transformative justice approaches avoid violence by encouraging support for survivors, healing, building communities, and supporting the development of skills to avoid violence.

Second, increasing diversity and inclusion to improve social cohesion and resilience will help to address the health inequalities caused by racism, xenophobia and other forms of discrimination. Diversity should be seen as a precursor to an equal society, and not as a final endpoint.[48] Minoritised communities must be at the centre of designing interventions and policies to improve their health. It is the responsibility of global health institutions and organisations to reflect on the diversity of experience and background brought to bear upon the design of interventions and policies, particularly at a leadership level. This should be underpinned by active engagement and collaboration with activists, community groups, non-governmental organisations, and scholars from fields beyond health. Diversity should not mean virtue signalling nor tokenism, bringing different faces into the room sometimes in leadership positions without addressing decision making power, injustice and accountability. In practice, it will require global health institutions to involve different stakeholders within a broad inclusive framework, with support

from leaders to resource and implement outcomes. It should ultimately involve addressing the systems that result in the under-representation of minoritised populations.

Third, interventions must include an understanding of the intersections between racism, xenophobia, and related forms of discrimination alongside other axes of discrimination, such as gender, class and disability.[49] Intersectionality, as described in the first three papers of the series, must be applied when conducting research and interventions in ways that break open preconceived ideas around whole groups of people. Examples of this within global health include placing all racialised individuals in the same group, without viewing the different levels of privilege and entitlement across, for example, gender, ability or class. The specific situation and needs of an individual must be taken into account. Equal treatment, such as colour blind policies,[50] ignores the existing power imbalances at the core of all these systems and categorisations.

Fourth, interventions must take an anti-racism approach across all levels, i.e. one that actively promotes racial equity by opposing racism addressed from the perspective of multiple cultural contexts.[51] Actions to broadly tackle racism such as bystander anti-racism would indirectly impact health outcomes.[52] For large scale and meaningful health improvements, interventions must take into account structural drivers with implementation in a supportive political, legal and policy ecosystem to ensure lasting effects. At the core of our model, we must challenge the link between money and power that stem from racial capitalism and the histories of colonisation [paper 1 ref], whereby those who stand to make a financial profit have the ability to influence policy makers. From tobacco to climate change, this influence has repeatedly been shown to have negative and discriminatory health consequences.

Finally, human rights based approaches should be supported. Societies must engage in these policy processes in the following ways:

- Policy making and monitoring, including through the global human rights platforms provided by the United Nations. Many of the human rights treaties are accompanied by monitoring processes that subject countries to international reviews for compliance, including obligations related to the right to health, and equality and non-discrimination rights. Policymakers and human rights advocates should actively engage public health researchers and clinicians in these processes. New policies should have a health impact assessment that includes an estimation of equity for distinct minoritised people.
- Processes that strengthen the capacity of HRBAs to improve health outcomes. For example, international human rights frameworks have been used to underpin recommendations that all states adopt national action plans to combat racism, xenophobia and discrimination in all spheres of public life including healthcare.
- Using international human rights accountability mechanisms such as treaty bodies and courts. This may be a fruitful way to promote government accountability for the right to health especially for racially and ethnically minoritised populations.

Conclusion and Post-Publication Actions

To address inequities and improve health outcomes, we must take account of structural and institutional causes and the historical, economic and political contexts in which they occur. As we have described throughout the series, racism, xenophobia and discrimination are independent causes of ill health but we live in societies which promote discriminatory ideologies as the norm, while continuing to deny their significance. Interventions to improve the socioeconomic status of minoritised people are required but these will not be adequate alone.

To achieve improvements in health outcomes, we must tackle racism, xenophobia and discrimination as a determinant of global health.

Through this Series, and related initiatives, we commit to future action to improve the evidence base and achieve impact. We also recognise that substantial gaps remain in the evidence base and have outlined specific research recommendations in Panel 2. A series on racism, xenophobia and discrimination, especially one as broad ranging as this, can only set the scene and scratch the surface of what should be done. In every context minoritised communities are struggling against the inequities that they face, largely individually and in the institutions that they live and work in. Interventions should exist at all levels, but, as we have emphasised, the problems and key solutions lie upstream, in the 'core' of our model. This series is only the first step in our process and we make a commitment to continue in the work. We propose a number of mid-term objectives. These would be: (1) an intervention-based commission that explores and attempts to address how we action the approaches laid out in this paper; (2) work with an international multi-lateral agency to raise the issue and profile of racism, xenophobia and discrimination within health; (3) host an event that draws together diverse partners and forms of discrimination that will serve to expand knowledge, highlight inequities, and build a coalition of collaborators; and (4) use the Race & Health platform (www.raceandhealth.org) to educate and advocate for change across the world, through the development of regional hubs.

Panel 1. Case study - India

While caste-based discrimination still exists in India, a number of affirmative action provisions are laid down in the Constitution of India, which guarantees 'equality before law' (1950),[53] overturning the customary rules of the caste-system. Based on the constitutional provisions, the government of India has employed legal safeguards against untouchability-based discrimination in public spaces, violence, and atrocities. These include the Anti-Untouchability Act 1955 (renamed the Protection of Civil Rights Act in 1976)[54] and the SC/ST Prevention of Atrocities Act 1989.[55] Along with legal safeguards, affirmative action in the form of reservation policy in public employment, higher education, and legislature, as well as other government spheres like public housing have been initiated to improve the economic and educational status of the scheduled castes (former untouchables), other "backward" classes (lower in the caste hierarchy) and the scheduled tribes (Indigenous groups).

In the political arena, seats are reserved for people from the scheduled castes and scheduled tribes in village panchayats (local village councils) and in municipalities, with one-third reserved for women; legislative assemblies of the State, and in the House of People. Members of the disadvantaged social groups are enabled to exercise their power and authority, which can contribute towards ensuring non-discriminatory access to various public health programmes relating to health and nutrition. The Constitution Act, 1992 empowers the village councils and municipalities to function as institutions of self-government with responsibility for implementation of programmes for economic development and social justice. Panchayats are considered as the key last mile link in facilitating delivery of public services to the poor and the most disadvantaged.[56]

While there has been much work on the economic impacts of affirmative action,[57] there has been little on health outcomes. An evaluation of a programme which reserved public sector

jobs for people from disadvantaged castes since 1993,[58] showed decreased under-5 mortality (U5MR). The “political reservation” system for political positions and university posts had a similar effect on child mortality –a 40% reduction in U5MR- suggesting the important role of inclusive decision-making.[59]

Panel 2. Research and data collection recommendations

The evidence collated in this paper and across the series clearly shows a bias towards certain types of discrimination and interventions. In response to this, we make eight distinct but related recommendations for future research:

1. Population and location: Research must be conducted in all parts of the world, in particular low- and middle-income countries (LMICs) where evidence is lacking. A systematic review of racism on health, found that of the 333 articles reported, 271 (81%) were from the United States of America. There were no studies from LMICs.[60] Within a country, research may be confined to a particular group, while other minoritised populations are ignored, for example there is little work on racism affecting members of the East and Southeast Asian diaspora.

2. Types of discrimination: The majority of research investigates the effects of discrimination based on race, ethnicity or colour. The evidence base is limited on discrimination due to caste, religion, Indigenous health, and xenophobia towards migrants.

3. Disaggregated data: There is rightly concern over the disaggregation of routine data by race and some countries forbid this. Simply categorising outcomes by racial groups is unlikely to be effective and, in some cases can lead to harm, for example the use of race corrections in clinical algorithms.[61] But knowledge of health disparities is the first step in understanding and then tackling the issues that may exist. Care must be taken not to further stigmatise groups.

4. Study quality: Robust intervention design and well thought-through evaluation process allows for a deeper understanding of possible health and social impacts and facilitates more effective cross-research comparisons. Where quantitative studies are conducted, they must be of an adequate sample size. A number of the studies reviewed were small and underpowered. Evaluations of interventions seeking to directly improve health often did not

measure hard health outcomes and did not include a control group. Evaluations of interventions to promote anti-racist attitudes and behaviours often relied on convenience samples of undergraduates.

5. Follow-up period: Long-term evaluation of interventions is required to assess durability of the effects and adverse effects. Studies must also include an appreciation for latent periods, where outcomes may not avail themselves. In the individual interventions, very few evaluated whether effects were sustained more than two weeks later.

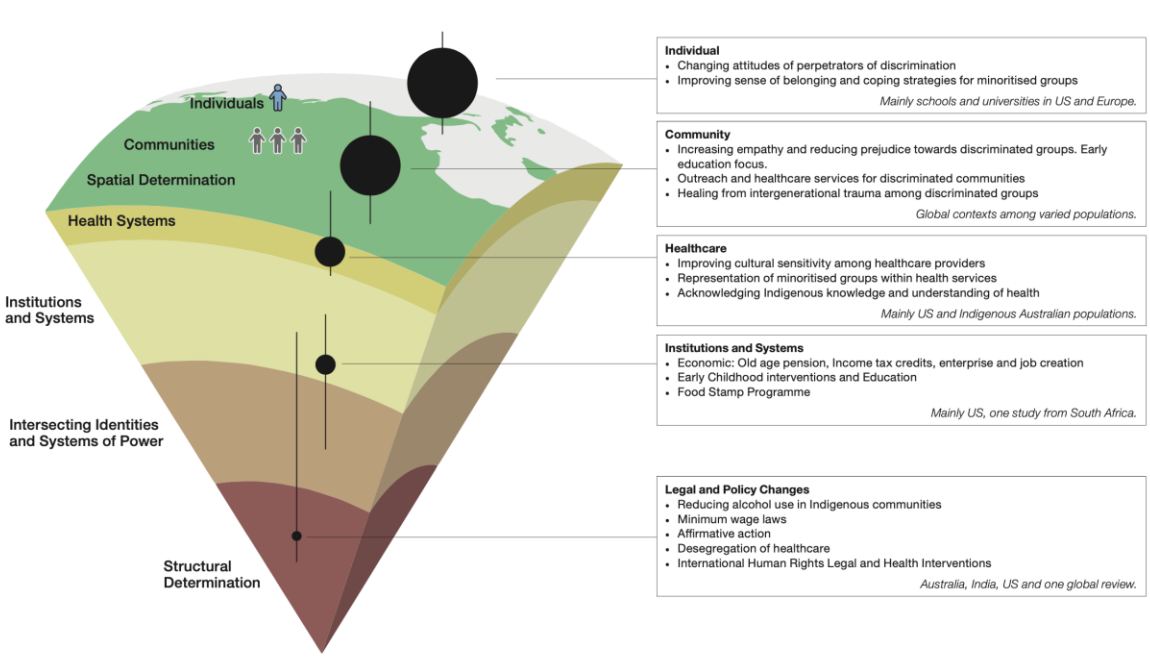
6. Lifecourse approach: Research must consider all aspects of the lifecourse, highlighting how discrimination may present and act differently in different stages of life and how outcomes may differ over the lifecourse and intergenerationally.

7. More economic studies and policy and legal work is needed. Public health and legal researchers, and racially and ethnically minoritised communities, supported by governmental and non-governmental organisations, should further understand and amplify the benefits of human rights-based approaches to combating inequity and discrimination in access to and enjoyment of the right to health.

8. Engagement: Minoritised populations must be central to the research process through sustained dialogue and engagement. This includes co-creation and design, as well as conducting research. Minoritised populations must be included as participants in health research, especially those who may respond differently to treatments and interventions.

Figure 1 - Interventions targeting the health impacts of racism, xenophobia and discrimination: what, where and at which level of society?

Figure 1 is a visual representation and summary of the interventions identified which aim to reduce the health effects of racism, xenophobia and discrimination. It maps out the interventions based on the level of society at which they operate, and the circles represent the amount of evidence at each level. Vertical lines indicate the range of levels of society covered by an intervention - for example, healthcare interventions affect both health systems and spatial determination. The skewing towards individual and community level interventions is evident. Further details on the mechanisms underpinning these interventions can be found in Table A1.



Funding

There was no specific funding for this work.

Conflicts of interest

We declare no competing interests.

Author contributions

IA and DD conceived the series and produced the first draft. SS developed the conceptual model. Searches and data extraction were conducted by ETA, LB, LG, SL. Individual sections were drafted by ETA, LB, RD, LG, GL, SL, NSS, GS. GKB, MM, YP and SS edited and critically revised the draft. All authors reviewed the manuscript.

Acknowledgments

We would like to acknowledge Siddharta Mehta for his support in reviewing the policy literature.

References

1 Abimbola S, Pai M. Will global health survive its decolonisation? *Lancet* 2020; **396**. DOI:10.1016/S0140-6736(20)32417-X.

2 Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *Lancet* 2017; **389**: 1453–63.

3 Bertrand, Duflo. Field experiments on discrimination. *Handbook of economic field experiments* https://www.sciencedirect.com/science/article/pii/S2214658X1630006X?casa_token=EjWTlcAAipoAAAAA:XRQ9QXyfRQ4aE6tzfxYFRiBJd9FH_fhYTvlFzykidsTyYtjKpVIz2-65RsVIBqILOoOW831oZA.

4 Fanon F. The Wretched of the Earth. Grove Press, 2004.

5 Downs J. Maladies of Empire: How Colonialism, Slavery, and War Transformed Medicine. Harvard University Press, 2021.

6 Bassett MT, Galea S. Reparations as a Public Health Priority - A Strategy for Ending Black-White Health Disparities. *N Engl J Med* 2020; **383**: 2101–3.

7 Eniasivam A, Pereira L, Dzeng E. A Call for Restorative and Transformative Justice Approaches to Anti-Racism in Medicine. *J Gen Intern Med* 2022; published online April 28. DOI:10.1007/s11606-022-07605-2.

8 Lancet commission on reparations and redistributive justice. https://projects.iq.harvard.edu/lancet-reparations (accessed July 22, 2022).

9 Diani M. The Concept of Social Movement. *Sociol Rev* 1992; **40**: 1–25.

10 Heywood M. South Africa's Treatment Action Campaign: Combining Law and Social Mobilization to Realize the Right to Health. *J Hum Rights Pract* 2009; **1**: 14–36.

11 Almond D, Chay KY, Greenstone M. Civil Rights, the War on Poverty, and Black-White Convergence in Infant Mortality in the Rural South and Mississippi. 2006; published online Dec 31. DOI:10.2139/ssrn.961021.

12 Kaplan G, Ranjit N, Burgard S. Lifting Gates--Lengthening Lives: Did Civil Rights Policies Improve the Health of African-American Women in the 1960's and 1970's? 2008. http://hdl.handle.net/2027.42/134322 (accessed Oct 19, 2020).

13 Skrentny JD. The Ironies of Affirmative Action: Politics, Culture, and Justice in America. University of Chicago Press, 2018.

14 Deshpande A. Affirmative action in India and the United States. 2005. https://openknowledge.worldbank.org/handle/10986/9038.

15 Chatterjee P. India's doctors protest over caste quota plans. *Lancet* 2006; **367**: 1892.

16 Sze S, Pan D, Nevill CR, *et al.* Ethnicity and clinical outcomes in COVID-19: A systematic review and meta-analysis. *EClinicalMedicine* 2020; **29**: 100630.

17 Bhui K. Ethnic inequalities in health: The interplay of racism and COVID-19 in syndemics. *EClinicalMedicine* 2021; **36**: 100953.

18 OHCHR International Covenant on Economic, Social and Cultural Rights. https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx (accessed Nov 10, 2020).

19 OHCHR Convention on the Rights of Persons with Disabilities. https://www.ohchr.org/en/hrbodies/crpd/pages/conventionrightspersonswithdisabilities.aspx (accessed Dec 1, 2020).

20 Gostin LO, Blagojevic A, Bland S, Dhaliwal M, Guerra R, Monahan JT. Launching the Universal Health Coverage Legal Solutions Network. *Lancet* 2020; **395**. DOI:10.1016/S0140-6736(19)32221-4.

21 Assessing the Impact of a Human Rights-Based Approach across a Spectrum of Change for Women's, Children's, and Adolescents' Health. 2015; published online Nov 22. https://www.hhrjournal.org/2015/11/assessing-the-impact-of-a-human-rights-based-approach-across-a-spectrum-of-change-for-womens-childrens-and-adolescents-health/ (accessed Nov 10, 2020).

22 Hahn RA, Truman BI, Williams DR. Civil rights as determinants of public health and racial and ethnic health equity: Health care, education, employment, and housing in the United States. SSM - Population Health. 2018; **4**: 17–24.

23 Bustreo F, Hunt P, Gruskin S, *et al.* Women's and Children's Health: Evidence of Impact of Human Rights. World Health Organization, 2013 https://apps.who.int/iris/bitstream/handle/10665/84203/9789241505420_eng.pdf (accessed Nov 26, 2020).

24 Meier BM, Evans DP, Kavanagh MM, Keralis JM, Armas-Cardona G. Human Rights in Public Health: Deepening Engagement at a Critical Time. *Health Hum Rights* 2018; **20**. https://pubmed.ncbi.nlm.nih.gov/30568404/ (accessed Nov 26, 2020).

25 Stangl AL, Singh D, Windle M, *et al.* A systematic review of selected human rights programs to improve HIV-related outcomes from 2003 to 2015: what do we know? BMC Infectious Diseases. 2019; **19**. DOI:10.1186/s12879-019-3692-1.

26 Samuel J, Frisancho A. Rights-Based Citizen Monitoring in Peru: Evidence of Impact from the Field. *Health Hum Rights* 2015; **17**. https://pubmed.ncbi.nlm.nih.gov/26766854/ (accessed Nov 10, 2020).

27 Assessing the Impact of a Human Rights-Based Approach across a Spectrum of Change for Women's, Children's, and Adolescents' Health. 2015; published online Nov 22. https://www.hhrjournal.org/2015/11/assessing-the-impact-of-a-human-rights-based-approach-across-a-spectrum-of-change-for-womens-childrens-and-adolescents-health/ (accessed Nov 10, 2020).

28 Duflo E. Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa. *World Bank Econ Rev* 2003; **17**: 1–25.

29 Campbell F, Conti G, Heckman JJ, *et al.* Early childhood investments substantially boost adult health. *Science* 2014; **343**: 1478–85.

30 Muennig P, Schweinhart L, Montie J, Neidell M. Effects of a prekindergarten educational intervention on adult health: 37-year follow-up results of a randomized controlled trial. *Am J Public Health* 2009; **99**: 1431–7.

31 Ramey CT. The Abecedarian approach to social, educational, and health disparities. *Clin Child Fam Psychol Rev* 2018; **21**: 527–44.

32 Grapin SL, Griffin CB, Naser SC, Brown JM, Proctor SL. School-Based Interventions for Reducing Youths' Racial and Ethnic Prejudice. Policy Insights from the Behavioral and Brain Sciences. 2019; **6**: 154–61.

33 Fauth RC, Leventhal T, Brooks-Gunn J. Short-term effects of moving from public housing in poor to middle-class neighborhoods on low-income, minority adults' outcomes. *Soc Sci Med* 2004; **59**: 2271–84.

34 Votruba ME, Kling JR. Effects of neighborhood characteristics on the mortality of black male youth: Evidence from Gautreaux, Chicago. *Soc Sci Med* 2009; **68**: 814–23.

35 Kling JR, Liebman JB, Katz LF. Experimental analysis of neighborhood effects. *Econometrica* 2007; **75**: 83–119.

36 Ludwig J, Duncan GJ, Gennetian LA, *et al.* Neighborhood effects on the long-term well-being of low-income adults. *Science* 2012; **337**: 1505–10.

37 Leventhal T, Brooks-Gunn J. Moving to opportunity: an experimental study of neighborhood effects on mental health. *Am J Public Health* 2003; **93**: 1576–82.

38 Katz LF, Kling JR, Liebman JB. Moving to opportunity in Boston: Early results of a randomized mobility experiment. *Q J Econ* 2001; **116**: 607–54.

39 Ludwig J, Sanbonmatsu L, Gennetian L, *et al.* Neighborhoods, obesity, and diabetes—a randomized social experiment. *N Engl J Med* 2011; **365**: 1509–19.

40 Riccio J, Dechausay N, Miller C, Nuñez S, Verma N, Yang E. Conditional Cash Transfers in New York City: The Continuing Story of the Opportunity NYC-Family Rewards Demonstration. *MDRC* 2013.

41 Costello EJ, Erkanli A, Copeland W, Angold A. Association of family income supplements in adolescence with development of psychiatric and substance use disorders in adulthood among an American Indian population. *JAMA* 2010; **303**: 1954–60.

42 Costello EJ, Compton SN, Keeler G, Angold A. Relationships between poverty and psychopathology: A natural experiment. *JAMA* 2003; **290**: 2023–9.

43 Hoynes H, Miller D, Simon D. Income, the earned income tax credit, and infant health. *American Economic Journal: Economic Policy* 2015; **7**: 172–211.

44 Almond D, Hoynes HW, Schanzenbach DW. Inside the war on poverty: The impact of food stamps on birth outcomes. *Rev Econ Stat* 2011; **93**: 387–403.

45 Besson EK. Confronting whiteness and decolonising global health institutions. *Lancet* 2021; **397**: 2328–9.

46 Kothari A, Salleh A, Acosta A, Escobar A, Demaria F. Pluriverse: A Post-Development Dictionary. Tulika Books, 2019.

47 Chioneso NA, Hunter CD, Gobin RL, Smith SM, Mendenhall R, Neville HA. Community Healing and Resistance Through Storytelling: A Framework to Address Racial Trauma in Africana Communities. Journal of Black Psychology. 2020; **46**: 95–121.

48 Stanford FC. The Importance of Diversity and Inclusion in the Healthcare Workforce. *J Natl Med Assoc* 2020; **112**: 247–9.

49 Fisher DR, Rouse SM. Intersectionality within the racial justice movement in the summer of 2020. *Proc Natl Acad Sci U S A* 2022; **119**: e2118525119.

50 Yi J, Neville HA, Todd NR, Mekawi Y. Ignoring race and denying racism: A meta-analysis of the associations between colorblind racial ideology, anti-Blackness, and other variables antithetical to racial justice. *J Couns Psychol* 2022; published online May 23. DOI:10.1037/cou0000618.

51 Came H, Kidd J, McCreanor T. Re-imagining anti-racist theory for the health sector. *N Z Med J* 2022; **135**: 105–10.

52 Nelson JK, Dunn KM. Bystander Anti-Racism: A Review of the Literature. *Analyses of Social Issues and Public Policy* 2011; **11**: 263–84.

53 Government of India. Constitution of India. Legislative Department, Ministry of Law and Justice. 1950.

54 Government of India (GOI). The Protection of Civil Rights (PCR) Act. 1955.

55 Government of India (GOI). The Scheduled Castes and Scheduled Tribes (Prevention of

Atrocities) Act. Ministry of Tribal Affairs. 1989.

56 Government of India. Towards holistic Panchayat Raj: Twentieth anniversary report of the expert committee on leveraging Panchayats for efficient delivery of public goods and services. New Delhi: Ministry of Panchayati Raj, 2013.

57 Holzer H, Neumark D. Assessing Affirmative Action. *J Econ Lit* 2000; **38**: 483–568.

58 van den Berg GJ, Bergemann A, Gupta S. Impact of an Affimative Action Program in Employment on Child Mortality in India. 2010. https://www.econstor.eu/handle/10419/37394 (accessed Sept 17, 2020).

59 Dhakal R. Education and Health Impacts of an Affirmative Action Policy on Minorities in India. 2017. https://scholarcommons.usf.edu/etd/7017/ (accessed Sept 17, 2020).

60 Paradies Y, Ben J, Denson N, *et al.* Racism as a Determinant of Health: A Systematic Review and Meta-Analysis. *PLoS One* 2015; **10**. DOI:10.1371/journal.pone.0138511.

61 Vyas DA, Eisenstein LG, Jones DS. Hidden in Plain Sight - Reconsidering the Use of Race Correction in Clinical Algorithms. *N Engl J Med* 2020; **383**. DOI:10.1056/NEJMms2004740.

Paper 4: Confronting the consequences of racism, xenophobia and discrimination on health and healthcare systems

Prof Ibrahim Abubakar, FRCP, Institute for Global Health, University College London, London, UK

Lu Gram, PhD, Institute for Global Health, University College London, London, UK

Sarah Lasoye, MSc, Institute for Global Health, University College London, London, UK

Prof E. Tendayi Achiume, Juris Doctor, Professor of Law, UCLA School of Law, United Nations Special Rapporteur on Contemporary Forms of Racism, Racial Discrimination, Xenophobia and Related Intolerance

Laia Becares, PhD, Department of Social Work and Social Care, University of Sussex, Brighton, UK

Gurpreet Kaur Bola, MSc, Medact, London, UK

Rageshri Dhairyawan, FRCP**,** Barts Health NHS Trust, London, UK

Gideon Lasco, Department of Anthropology, University of the Philippines Diliman, Quezon City, Philippines

Prof Martin McKee, DSc, London School of Hygiene & Tropical Medicine, UK

Prof Yin Paradies, PhD, Alfred Deakin Institute for Citizenship and Globalisation, Deakin University, Melbourne, Australia

Nidhi S. Sabharwal, PhD, Centre for Policy Research in Higher Education, National Institute of Educational Planning and Administration, New Delhi, India

Sujitha Selvarajah, MBBS, Institute for Global Health, University College London, London, UK

Geordan Shannon, PhD, Institute for Global Health, University College London, London

Delan Devakumar, PhD, Institute for Global Health, University College London, London, UK

Corresponding author: Prof Ibrahim Abubakar, UCL Institute for Global Health, 30 Guilford St, London. WC1N 1EH Tel: +44 (0)20 7905 2122, i.abubakar@ucl.ac.uk

Key messages

- Beyond individualised interventions which aim to mitigate the health impacts of racism and xenophobia, there is need to prioritise transformative action which challenge and ultimately seek to dismantle existing political, economic, legal and social systems which uphold/reproduce racism, xenophobia and all forms of structural oppression. Transformative justice with interventions requiring community based, multisectoral and society-wide non-violent action and restorative justice with appropriately compensated historically wronged groups to tackle contemporary challenges are essential.
- To effectively tackle the structural drivers of injustice which underlies racism in economic, political and health systems, there is need to prioritise anti-racist interventions that can prevent and address the health impacts of racism and xenophobia through individual, organizational and community change as well as movement-building, legislation and race equity policies in institutions and nations.
- Interventions must look both at the intersectional and generational nature of discrimination by considering the interaction of multiple forms of oppression, and the historical contexts which produce contemporary racial dynamics among different populations.
- While specific individual and community interventions of variable effectiveness have been identified in this review, there is still much crucial work to do in investigating the impact of various interventions that seek to prevent or address the consequences of racism, xenophobia and discrimination on health.

Formatted: Outline numbered + Level: 1 + Numbering Style: Bullet + Aligned at: 0.25" + Indent at: 0.5"

Abstract

Racism, xenophobia and discrimination are key determinants of health and equity and must be addressed to achieve impact on~~in clinical and public health actions. We reviewed interventions across individual, community, healthcare, institutional and the policy and legal levels to identify what works to improve health, targeting racism, xenophobia and discrimination and specific~~ health outcomes ~~that result from them. While there is evidence that some specific interventions can prevent and/or tackle the consequences of racism, much work remains~~. We conclude that far broader, deeper, transformative action is needed. To tackle the structural drivers of racism and xenophobia, anti-racist action and other wider measures that target determinants should adopt an intersectional approach to effectively address the causes and consequences of racism within a population. Structurally, legal instruments and human rights law provide a robust framework to challenge the pervasive drivers of disadvantage linked to caste, ethnicity, Indigeneity, migratory status, race, religion and skin colour. Actions~~Finally, we~~ must take into account the historical, economic and political contexts in which the effects of racism, xenophobia and discrimination impact on health. We propose a number of specific actions; an intervention-based commission that explores how we action the approaches laid out in this paper; building a conversation and a series of events with international multi-lateral agency stakeholders to raise the issue and profile of racism, xenophobia and discrimination within health; and use our multiple platforms to build coalitions, expand knowledge, highlight inequities, and advocate for change across the world.

Introduction

Formatted: Font: 12 pt

The first three papers in the series described the ubiquitous nature of racism, xenophobia, and discrimination on the grounds of caste, ethnicity, race, Indigeneity, migratory status, skin colour and religion.[insert reference to first 3 papers]. They described the profound health consequences of racism and xenophobia in every context, and how these forms of oppression are based on centuries of historical atrocities. Earlier papers also highlighted the importance of taking an intersectional approach in order to address root causes of structural inequality. Encouraged by politicians and the media, there is increasingly visible othering of racialised and minoritised populations by those with power, which impacts health and wellbeing. Such othering demands a response from those concerned with improving health for all to prevent adverse outcomes. Any response to address health impacts of racism, xenophobia and other forms of discrimination must take account of historical and contemporary context. The need for the response to be multisectoral, society-wide and address historical injustices poses a challenge to global health, and requires critical rethinking of where future action should lead.[11] Rethinking future action and by whom has become urgent given recent events, including the election of far-right governments in some countries, the growth of the Black Lives Matter and other racial justice movements, and calls to decolonise health itself. To date, societal responses have ranged in scale - from the important but limited, such as calls for equality for minority healthcare workers, to a fundamental rethinking of society.[1]

There was a notable delineation between studies addressing specific health outcomes versus studies addressing broader drivers of health. Figure 1 highlights the importance of process and power in the formation of health; however, interventions identified across most levels were rarely process-oriented and employed limited approaches to understanding or changing power imbalances. This review consequently focusses on wider societal action~~two general pathways~~ to confront the health impacts of racism corresponding to the core of our model. We present

evidence on ~~: first, measures that target specific health outcomes that result from racism, xenophobia and discrimination; second, interventions that target racism, xenophobia and discrimination themselves that have a secondary effect of improving health. We present evidence on wider societal action to tackle racism including~~ legal and human rights instruments and on systems and institutions, to build a case for what works to confront the health impacts of racism, xenophobia and discrimination. We review the limited evidence available~~, and then summarise the literature~~ on individual, community and health interventions aimed at improving health outcomes. We conclude by summarising key actions neccessary~~that have been shown to reduce harms~~ to tackle the health impact of racism, xenophobia and discrimination and a plan for future action. ~~health.~~ "Full definitions of the terms used can be found in the first paper of the series [ref]". ~~A detailed description of the evidence used can be found in the appendix.~~

Wider societal action to prevent adverse health outcomes from racism

Formatted: Font: 12 pt

As racism and its impact is often structural,[2] we~~We~~ surmise that the most impactful determinants of health outcomes, and consequently likely effective interventions, require broad action targeting the structural drivers of discrimination. Many of these are legal and political and require radical policy interventions. These broader structural drivers are underpinned by history and previous reviews of discriminition from a broader scope concluded that there is much focus on explanatory rather than solution directed research.[3] ~~are underpinned by history.~~ Much of medicine and health interventions have been developed on a foundation of injustice, cruelty and discrimination. Drawing on scholars such as Frantz Fanon[42], more radical approaches advocate the destruction of existing systems, including defunding established systems of authority which contribute to systemic racism and redistributing resources towards community-based and non-punitive solutions. For many societies, change is therefore only possible if historical injustices[53] are recognised and addressed through reparative[64] and transformative justice[75]. The global health community is beginning to engage with this challenge. Inspired by related issues such as

environmental justice communities fighting for racial justice have added their voices to those confronting structures that uphold the status quo and calling for radical change in areas such as policing and prisons.

Whilst much existing research seeks to understand racism and discrimination within a specific sector or community, the root cause of many racialised health inequalities derive from macro-economic policies driven by political ideologies [Paper 1 reference]. Evaluating the health impacts of broad societal changes and generalist policies, such as reparations for historic injustice is challenging and will be addressed in the forthcoming Lancet Commission on Reparations and Redistributive Justice.[8] We believe~~, but~~ we can learn from natural experiments and quasi-experimental studies. We examine two broader 'interventions', social movements for health and racial justice and affirmative action policies. First, contemporary and historical social movements – informal networks of individuals or groups engaged in political conflict on the basis of a shared identity[9]~~6~~– have long interrogated the political economy driving racialised health inequalities. The South African Treatment Action Campaign mobilised thousands of Black, HIV-positive women to protest government inaction on HIV/AIDS and eventually succeeded in forcing international pharmaceutical companies to make life-saving drugs available at affordable prices.[10]~~7~~ The Civil Rights Movement campaigned against racist segregation laws preventing African Americans from using health facilities reserved for Whites.[11]~~8~~ The 1964 Civil Rights Act prohibited discrimination and segregation in all public institutions, including hospitals. An analysis of vital statistics from Mississippi found a considerable narrowing of racial differences in mortality between 1965 and 2002, resulting in an estimated 25,000 additional Black infants surviving in the rural South,[11]~~8~~ and improvements in life expectancy amongst Black women.[12]~~9~~ Second, affirmative action can address inequity and discrimination particularly in the domains of education and employment.[13]~~10~~ The US Civil Rights Movement played a major role in promoting affirmative action policy. In India, affirmative action

to support those in the lowest caste was enshrined in the 1950 Constitution and the abolition of the customary rules of the caste system (Panel 1).[14~~11~~]

In summary, the above examples suggest broader political and economic interventions can impact health outcomes, but the paucity of research underscores the need to further explore the extent to which context affects the applicability of specific interventions for improving health outcomes. For example, affirmative action policies have long attracted controversy, including within medical communities.[15~~12~~]

Indeed the societal marginalisation of racialised groups has the double effect of limiting the widespread adoption of legal and policy measures to improve health outcomes for minoritised communities, and of limiting the collection of empirical data to determine the specific effects of those policies that are in place. The limited analysis in this section reflects the dire reality of the failure of most governments to prioritise legal and policy measures targeted at substantive equality on racial and ethnic bases in access to health. Though unrealised to date, we hope that the~~The~~ COVID-19 pandemic[16,17] may result in some positive changes in light of the widely acknowledged unequal impact of this pandemic on many societies.

Legal and human rights frameworks

Applicable International Human Rights Frameworks

The right to health is enshrined in many international human rights instruments, most prominently the Universal Declaration on Human Rights and the International Covenant on Economic, Social and Cultural Rights (ICESCR). ICESCR guarantees everyone the right to the highest attainable standard of mental and physical health[18~~13~~] and requires that this right be exercised "without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status."[18~~13~~] There are also a number of international human rights treaties that prohibit discriminatory access to health, including the International Convention on the Elimination of Racial Discrimination, the

Convention on the Elimination of All Forms of Discrimination Against Women, the Convention on the Rights of Persons with Disabilities,[19][14] and the Convention on the Rights of the Child.

Impact of International Human Rights Legal Interventions for Health Outcomes

Legal and policy frameworks, especially those anchored in international human rights norms, can play a major role in the fight against racism, racial discrimination, xenophobia and related intolerance, as they relate to health. As described in the Lancet Commission on Global Health and Law, law exerts a powerful influence on health by structuring, perpetuating, and mediating the risk factors and underlying social determinants of health.[20][15]

First, these frameworks set common standards, articulating shared normative commitments regarding what conduct, treatment and outcomes are acceptable so that persons, communities and societies can work in coordination towards a shared vision. Gaining common ground is particularly pertinent, given the different meanings among categories such as race, ethnicity and caste, and in light of the differential experiences and conceptions of discrimination and intolerance. Human rights-based approaches (HRBAs) to health include strategies "designed to redress deeply ingrained inequalities, and aim to enable everyone to participate fully in economic, social, and cultural affairs toward the progressive realisation of rights."[21][16]

Secondly, these frameworks also provide mechanisms through which governments, public officials, and to some extent private actors, can be held accountable for conduct and outcomes that violate applicable equality and non-discrimination frameworks. There is evidence that stronger racial equality and non-discrimination laws are associated with better outcomes for racially minoritised groups.[21,22][16,17] For instance, a study found evidence that HBRAs in part contributed positively to health gains for women and children in Nepal, Brazil, Malawi and Italy.[23][18] Furthermore, law can be a detriment to health outcomes through criminal justice laws, criminalisation of sex work and infectious disease transmission, and immigration regimes.[20][15]

Individual case studies have highlighted the transformative impact of HRBAs on government

frameworks for provision of healthcare. Strategic litigation was used in Venezuela and Argentina resulting in requirements on the respective governments to concretise abstract legal commitments to the right to health via positive obligations to provide HIV treatment.[20~~15~~] Meier et al noted that "Litigation to enforce health-related rights has extended across tuberculosis in prisons in South Africa, maternal mortality in Uganda, the health insurance system in Colombia, and the regulation of medicines in India."[24~~19~~] A 2019 systemic review found broader evidence that human rights interventions improve HIV-related outcomes.[25~~20~~] A Peruvian study found a citizen-led programme empowered Quechua-speaking women to monitor health care clinics and support other women facing medical discrimination resulted in improved right to health by democratising the process of identifying and acting on violations at the local level.[26~~21~~] In addition to the above, the indivisibility of human rights is a necessary condition of rights-based health progress, especially when other sectors, like education, participation, and the environment, saw sizeable investments alongside human rights efforts.[27~~22~~]

In summary, international human rights law holds great potential for improving health outcomes for minoritised populations. However, understanding this potential requires further research to investigate the transformation of legal frameworks into policy, including the independent regulation of their implementation. Unlocking this potential requires a redoubled effort to address the drivers of systemic racism, explored in the first paper in this series. Ultimately, developing and implementing human rights and legal instruments involves greater collaboration between health and legal professionals at all levels.

~~Individual, Community, Healthcare and~~ Institutions and ~~Systems Interventions~~

Formatted: Font: 12 pt

~~Table 1 summarises the key findings of intervention studies identified from the academic health literature in relation to their context, mechanisms, and outcomes. We also recognise that a wealth of intervention work that may result in improvements to health exists outside of health related journals. It is important to also acknowledge the limits of the analyses that we have conducted. While we have searched the literature widely, we have not, for example, considered the economic impacts of racism, xenophobia or discrimination or interventions such as reparations that may address these. We also recognise that there is literature on demonstrating effective interventions on wider determinants of health such as those targeted at socioeconomically deprived communities in the US or the UK, many of whom are predominantly minoritised that we have only partially evaluated in this review.~~

~~In considering what works to confront the health impacts of racism, targeted individualised health interventions may be important to mitigate the 'symptoms' of racism, but they do not address root causes or transform power imbalances. Further, there was a notable delineation between studies addressing specific health outcomes versus studies addressing broader drivers of health. Figure 1 highlights the importance of process and power in the formation of health; however, interventions identified across most levels were rarely process oriented and employed limited approaches to understanding or changing power imbalances. Further, whilst developing a targeted body of literature is important to evidence action, focusing on one specific population may reinforce rather than overcome their marginalisation and continue to perpetuate power hierarchies. Additionally, isolating intervention efforts to specific forms of racism or discrimination risks silencing or devaluing forms of minoritisation which are left off the research agenda. This may also obfuscate or detract from the task of addressing fundamental hierarchies of racial power which underlie racism. Ultimately, a diverse and balanced body of research across population groups and contexts has the potential for the most traction and health impacts should be central to all intervention studies addressing racism, xenophobia and discrimination.~~

As the majority of interventions identified address issues in or target individuals, we have presented some of this evidence in the location where the intervention was implemented such as in the community or in health settings as follows.

Individual interventions

Interventions targeted at individuals have mostly aimed to change the attitudes and behaviours of people who may hold prejudicial or discriminatory views about other ethnic groups. Educational measures were the most commonly identified, followed by those related to mindfulness and measures to reduce implicit bias. Educational interventions, which could last from hours to months, ranged from use of selected texts/books[23–25], TV programmes[26–28] and set lessons, training courses, and modules incorporating multiple teaching elements[29–39]. Most had a positive impact, reducing reported prejudicial and discriminatory views in children and adults immediately after the intervention. A meta-analysis of 122 programmes showed a small reduction in prejudice, with those incorporating direct contact, empathy, and perspective taking showing the greatest benefit.[40] Importantly, there was no association between length of exposure to the intervention and efficacy.

Other interventions tested include mindfulness meditation[41] and confronting students with evidence that others held different views[42], both of which had positive effects on reducing prejudicial views. A simulation study used Jane Elliott's "Blue Eyes - Brown Eyes" example, in which participants with brown eyes were asked to assume they were superior to those with blue eyes and treat them as such. This was moderately successful in reducing prejudice among student teachers,[43] but participants found it stressful, suggesting limited utility. Other interventions to reduce implicit racial bias achieved varying results.[44,45] Lai et al recruited 6321 non-Black undergraduate students from 19 universities across the USA to assess the durability of interventions. Nine interventions immediately reduced implicit racial preferences but the effects were not sustained, even a few days later.[44,45]

The available research has important limitations. Most interventions were aimed at children aged 4-18 years or undergraduate students, with very few targeting older adults (appendix). Most took place in the United States and Europe, and were of variable quality, with small sample sizes, utilising quasi-experimental before and after designs. Only a few evaluated effects beyond two weeks post-intervention, and those that did found that initial positive effects reduced or disappeared.

Only a few interventions sought to increase resilience of individuals who may experience prejudice and discrimination, with even fewer reporting health outcomes. One such intervention with HIV positive men is described in Panel 2. A randomised controlled trial (RCT) in the US with 92 university students tested a brief social belonging intervention designed to reduce psychological perceptions of threat on campus by framing social adversity as common and transient. In the subsequent three years, it was found to improve self-reported health and well-being ($p=0.019$) among the 49 African American students.[46]

In summary, strategies aimed at changing individual behavior may have limited effectiveness but have inconsistent application and evaluation. They may also suffer from desirability bias, with participants giving the answers they expect researchers would like to hear. Interventions using educational tools may also assume that people make rational choices based on knowledge. More evidence is needed on interventions that will support individuals at risk of or who have experienced harm due to systemic racism and especially so for other forms of discrimination and interventions to change the attitudes and behaviours of people who may hold prejudicial or discriminatory views. In particular, interventions to support mental health and wellbeing, to address unhealthy behaviours, and to tackle physical illnesses prevalent in minoritised groups are needed.

Community-level interventions

Communities can mitigate or exacerbate the effects of racism on health of minoritised populations.[47] Those living in segregated neighbourhoods often experience poorer access to healthcare, education, and basic public amenities[48] but their effects are often compounded by proximity to environmental toxins, poor-quality housing, and pervasive marketing of unhealthy products.[48] Three types of community-level interventions were identified: community-based health outreach to marginalised populations; broader community development initiatives; and, community level interventions to reduce prejudice without an explicit health focus. The first type of intervention directly sought to mitigate detrimental health effects of unhealthy environments. The second type sought to restructure the social and physical environment to become more health-enabling. The third type sought to address explicit and implicit prejudice among residents causing racist treatment of minoritised groups in the first place.

First, community health outreach, predominantly in the US, has been employed via community health workers to tackle childhood asthma,[49,50] prevent suicide,[51] improve cancer screening,[52–55] and improve perinatal health.[55] However, most studies were of low quality: all except one[55] either did not measure final health outcomes, relied on self-reported measures of health, or were before-and-after analyses without controls. The highest quality study, an RCT of a home visiting programme where nurses supported low-income African American women through the perinatal period, achieved substantial reductions in pregnancy-based hypertension (13% versus 20%, p=0.009), but no impact on birthweight and preterm delivery.[55] Later childhood injuries and the likelihood of a second pregnancy, were also reduced, but there was no improvement in childhood immunisation rates or social and mental development.[55]

The second intervention type comprised broader community development initiatives, with community-based farming,[56] campaigning,[57] enhanced participation,[58] or group health education and therapy.[59–61] Again, most studies were of low quality: these explored intervention processes rather than impacts, did not measure final health outcomes, or used before-and-after analyses

without controls. An RCT evaluated sexual health education for African American teenagers delivered in group sessions that emphasised ethnic and gender pride.[61] Knowledge and attitudes towards condom use improved, with greater self-efficacy and self-reported use, and fewer chlamydia infections (OR 0.17, 95% CI 0.03-0.09) at 12 months, though no impact on other infections.[61] Another community RCT in primary care randomised patients black men to black and non black doctors demonstrating increased acceptance of public health interventiosn following a consultation visit with black doctor.[62]

The third type of community level interventions sought to reduce prejudice and promote tolerance of minoritised groups through interventions without an explicit health focus. These typically created opportunities for schoolchildren or university students to meet physically and interact with counterparts from other ethnic groups[63–67] or to vicariously interact with them through story-telling, imagined contact, and classroom discussion.[68–71] For example, a critical ethnography of an intervention in Malta, in which a group of young male asylum seekers from different countries in Africa came to a secondary school encouraged empathy and reduced hostility towards asylum seekers.[67] However, there was no long-term follow-up or psychological impact assessment. A meta-analysis of prejudice reduction interventions found significant publication bias in smaller studies.[72] Most were in high-income settings, with a handful of exceptions, such as an intervention involving radio listening groups in rural Rwanda (Panel 2). Other promising interventions to promote social cohesion and mutual understanding include inter-caste/inter-faith sports teams in India and Iraq.[73,74]

In summary, the community-based interventions reviewed show the importance of targeting those who have suffered from discrimination and positively promote collective action to support minoritised groups. Whilst governments have primary responsibility to tackle structural drivers of ill health from racism, xenophobia and discrimination, communities can contribute health by providing support.[75] Community development initiatives working across sectors can play a role, especially among minoritised groups, while simultaneously leveraging support and expanding

capacities. These community development initiatives should target multiple pressure points in the community simultaneously. Large-scale prejudice reduction interventions which engage whole communities to address the multiple ways in which racism and discrimination play out are very much needed, including tackling entrenched unconscious biases, racist attitudes, and explicitly dehumanising discourses. Evidence supports schools as an important site tackle racism, engaging young people before they are socialised into accepting problematic societal narratives and ideas.

Healthcare

Interventions in the health sector have either focused on addressing racism within healthcare professions or on improving outcomes for minoritised populations. Three studies evaluated measures to improve health. First, an Australian study asked whether the involvement of Aboriginal Health Workers (AHW) influenced experiences of Indigenous Australian cardiac patients in in- and outpatient care.[76] In qualitative research, those interacting with the AHW received better health education and care, were less likely to discharge themselves against medical advice, had increased contact time, enhanced the identification of Aboriginal patients, and improved cultural education to hospital staff.[76] A further Australian study found that radiation oncology staff attending a 2-hour workshop on how Aboriginal and non-Aboriginal Australians experienced healthcare developed greater confidence in caring for Aboriginal patients and had better understanding of how to treat them with respect.[77] The workshop explored social determinants of health, White privilege, and colonisation and used case studies illustrating discriminatory behaviour, with group discussions to explore barriers and facilitating factors to delivering culturally safe care. Immediately after the workshop and 2-months later, participants reported fair/extreme confidence in delivering services respectful of cultural differences.[77] Third, a Canadian qualitative study investigated improving the hospital experience of Aboriginal patients by placing two community health representatives (CHRs) in Emergency Departments.

~~Among 54 attendees, the CHRs provided practical and emotional support to Aboriginal patients, cut down discriminatory practices, and fostered a sense of belonging for patients.[78]~~

~~Two interventions addressed racism in health and healthcare using educational initiatives; a Cultural Immersion Program in New Zealand and a US educational programme using 'Initial Cultural Competency' and 'Power and Privilege' courses.The New Zealand study assessed a 1-week programme for third-year medical students, convened in collaboration with Ngati Porou Hauora, the local Maori community's primary healthcare provider. The programme is thought to have potential as a method of consciousness raising, however, it was criticised as relatively superficial and the authors suggest more time should be devoted in the curriculum to racism and its impact.[79] In the US example, while difficult to ascertain causality, over four years there was a 10-fold increase in midwifery students completing their thesis on racism, ethnic inequalities, or culturally competent care and a more diverse staff and student population.[80]~~

~~**Healthcare institutions should invest in educational interventions for health professionals, to improve health outcomes including anti-racist teaching by decolonising medical curricula; incorporating content about the effects of racism and professional development curricula, teaching individual and structural competency, encouraging cultural humility and supporting measures to tackle power imbalances. The interventions reviewed were mostly of short duration, and did not provide evidence of sustained improvements over significant time periods. Organisational change implemented routinely through better, and longstanding equalities policies and diverse advisory input, and safe reporting**~~ **systems** ~~**are needed.**~~

Formatted: Heading 4

~~**Institutions and systems**~~

There was limited evidence on institution and~~are three types of interventions at an institutional or~~ system level interventions targeting the material conditions around minoritised groups with respect to social determinants and with one exception,[28] these exclusively studied Black and

Latino groups in the United States. We present three illustrative studies that show what is possible: early childhood development programmes, housing mobility programmes, and income supplementation programmes. ~~With one exception,[81] these exclusively studied Black and Latino groups in the United States.~~ First, two studies examined interventions to promote early childhood development among African American households.[29,30~~82,83~~] The Carolina Abecedarian Project, a randomised controlled evaluation of a two-stage treatment: 1) children aged 0-5 years received cognitive and social stimulation interspersed with caregiving and supervised play; 2) as children became older, they received homeschool resource teachers who improved early math and reading skills.[29~~82~~] The intervention has been credited with many different impacts on participants throughout the lifecourse including increases in childhood IQ, reductions in pregnancy, depression and substance use among teenagers, lower blood pressure and risk of hypertension among male 30-year-olds, and even measurable differences in brain structure among 40-year-olds.[31~~84~~] As described above, and while limitations exist, the education system is potentially a good target for interventions.[32~~85~~] Second, several studies have evaluated the effect of US government assistance to relocate minoritised families from low-income, inner-city neighbourhoods to middle-class, suburban areas.[33–39~~86–92~~] Using quasi-experimental approaches exploiting random variation in the selection of programme beneficiaries, these studies estimated health impacts from interventions such as the Moving to Opportunities project. Families selected by lottery in five cities were offered practical and financial support by government to move out of public housing into high-income neighbourhoods. This was associated, at three to seven years, with reductions in child injuries, accidents, and asthma attacks,[38~~91~~] but evidence on impacts on child mental health was mixed.[35,37,38~~88,90,91~~] Among adults, evidence for impact on self-reported physical and mental health was also mixed,[35–38~~88–91~~] but large, sustained reductions in BMI and glycated haemoglobin were observed up to 15 years later.[35,39~~88,92~~] Third, multiple studies evaluated US income supplementation programmes,[40–44 all except one[40~~93–97~~ ~~all except one~~[93]] showing positive benefits. Quasi-experimental evaluations of the Earned Income Tax Credit

scheme and the Food Stamp Program found evidence for declines in low birthweight among beneficiary households, with larger effects for Black than White babies.[43,44~~96,97~~] Studies of income supplementation for American Indian households found reductions in symptoms of adult and child psychiatric disorder.[41,42~~94,95~~]

The one study outside the US examined the impact of expanding the South African Pension at the end of the apartheid era.[28~~81~~] It estimated a 1.19 SD increase in weight-for-height and 1.16 SD increase in height-for-age among girls under the age of five living in a household with a beneficiary grandmother, but not among boys or among girls living with a beneficiary grandfather. The inference was that grandmothers receiving direct transfers had greater influence over household spending. A review[2]~~A review~~[48] with a specific focus on structural racism in the US identifies three promising intersectoral approaches: Place-based, multisector, equity-oriented initiatives including redevelopment of neighborhoods and housing, advocating for policy reform in areas such as prisons and drug use, and in the training of the next generation of physicians.

In summary, despite some limitations of the studies in this section, there are sufficient grounds to seek further evaluation of specific measures and implement action to alter the material conditions that lead to poor health outcomes of minoritised groups, that stem from institutional or systemic discrimination. The root causes of poor housing and income among minoritised groups requires political, social policy, and legislative action to resolve, however, some~~Some~~ of the specific examples identified here, such as income supplementation, improved rehousing, better pensions and teacher-delivered help could be adapted to the local context.

Individual, Community and Healthcare Interventions

Our review of individual, community and healthcare interventions suggests the published evidence is limited and is summarised in the appendix. Table A1 in the appendix summarises

Formatted: Not Superscript/ Subscript

the key findings of intervention studies identified from the academic health literature in relation to their context, mechanisms, and outcomes. It is important to also acknowledge the limits of the analyses that we have conducted. We recognise that a wealth of intervention work that may result in improvements to health exists outside of health related journals.. Furthermore, while we have searched the literature widely, we have not, for example, considered the economic impacts of racism, xenophobia or discrimination or interventions such as reparations that may address these. We recognise that there is literature on demonstrating effective interventions on wider determinants of health such as those targeted at socioeconomically deprived communities in the US or the UK, many of whom are predominantly minoritised that we have only partially evaluated in this review.

First, we surmise that there is an urgent need to increase high quality research addressing the causes, determinants and consequences of adverse health impacts of racism, xenophobia and discrimination. Second, in considering what works to confront the health impacts of racism, targeted individualised health interventions may be important to mitigate the 'symptoms' of racism, but they do not address root causes or transform power imbalances. Third, whilst developing a targeted body of literature is important to evidence action, focusing on one specific population may reinforce rather than overcome their marginalisation and continue to perpetuate power hierarchies. Additionally, isolating intervention efforts to specific forms of racism or discrimination risks silencing or devaluing forms of minoritisation which are left off the research agenda. This may also obfuscate or detract from the task of addressing fundamental hierarchies of racial power which underlie racism. Ultimately, a diverse and balanced body of research across population groups and contexts has the potential for the most traction and health impacts should be central to all intervention studies addressing racism, xenophobia and discrimination. Finally, we~~We~~ gathered literature from across the world on interventions to address multiple forms of discrimination. In doing so, we seek to highlight similarities in interventions. However

context matters and each intervention should be adapted to specific minoritised groups, taking into account their social location and needs. ~~We also recognise that substantial gaps remain in the evidence base and have outlined specific research recommendations in Panel 3.~~

Key Principles to Address the Health Harms of Racism, Xenophobia and Discrimination

~~Way Forward and Conclusions~~

We suggest six key principles, focused on the upstream causes, to address the health harms caused by racism, xenophobia and discrimination.

First, decolonisation must be adopted to challenge the societal structures that we live in to create a fairer society. Decolonisation is a process of active efforts that recognise, examine and undo the legacies of colonialism, across all domains of society including the social, political and epistemological [Paper 1 appendix reference]. It cannot be done without challenging the ingrained colonial-logics that persist today. Perhaps the most challenging aspect of decolonisation is the pervasive nature of ideas around “the other”; generated by centuries of injustice against minoritised groups.[45] Colonial ideas underpin the current social construction of race, ensuring ideas of Black inferiority and White supremacy. Interrogating colonial logic is our route to decolonising our understanding of inequality, and the powers that drove those ideas in the first instance. For example, most authors of this series are beneficiaries and a part of the institutions that have created existing unequal global health systems through either our training or employment. Truly tackling these systems and health inequalities will require wealthy societies to rethink existing paradigms of knowledge creation and structures in global health, challenging the very concept of global health.

Second, global health must address both reparative and transformative justice.[6,7] To achieve true change, we must also~~Second, to achieve decolonisation, global health will need to~~ draw on ideas from political science and a wider pool of researchers outside current western dominant institutions and concepts. In this way, we will move to a more active view of racialisation, interrogating power in both ideology and process of knowledge development and "evidence". For example, Escobar and colleagues[46~~98~~] drew on the experience of Indigenous and Afro-descendant activist-intellectuals to illustrate how colonial notions have limited our ability to imagine what is possible in order to bring about health justice. To deal with the many inequalities in global health, scholars and activists need to take a pluriverse of perspectives to craft different possible futures that could bring about the profound social transformations that are needed to inform better health. In addition, a decolonial approach to anti-racism invites us to embrace social justice in a way that is deeply intertwined with community healing.[47~~99~~] Such an approach also requires undoing structures of racialised subordination, and remaking social, political and economic institutions on more equitable terms. Another approach that minoritised groups champion is transformative justice which takes a non violent approach to deliver justice as opposed to state enforced systems such as the police and prisons. Transformative justice approaches avoid violence by encouraging support for survivors, healing, building communities, and supporting the development of skills to avoid violence.

Third~~Second~~, increasing diversity and inclusion to improve social cohesion and resilience will help to address the health inequalities caused by racism, xenophobia and other forms of discrimination. Diversity should be seen as a precursor to an equal society, and not as a final endpoint.[48]~~.~~ Minoritised communities must be at the centre of designing interventions and policies to improve their health. It is the responsibility of global health institutions and organisations to reflect on the diversity of experience and background brought to bear upon the

design of interventions and policies, particularly at a leadership level. This should be underpinned by active engagement and collaboration with activists, community groups, non-governmental organisations, and scholars from fields beyond health. Diversity should not mean virtue signalling nor tokenism, bringing different faces into the room sometimes in leadership positions without addressing decision making power, injustice and accountability. In practice, it will require global health institutions to involve different stakeholders within a broad inclusive framework, with support from leaders to resource and implement outcomes. It should ultimately involve addressing the systems that result in the under-representation of minoritised populations.

FourthThird, interventions must include an understanding of the intersections between racism, xenophobia, and related forms of discrimination alongside other axes of discrimination, such as gender, class and disability.[49]. Intersectionality, as described in the first three papers of the series, must be applied when conducting research and interventions in ways that break open preconceived ideas around whole groups of people. Examples of this within global health include placing all racialised individuals in the same group, without viewing the different levels of privilege and entitlement across, for example, gender, ability or class. The specific situation and needs of an individual must be taken into account. Equal treatment, such as colour blind policies,[50], ignores the existing power imbalances at the core of all these systems and categorisations.

FifthFourth, interventions must take an anti-racism approach across all levels, i.e. one that actively promotes racial equity by opposing racism addressed from the perspective of multiple cultural contexts.[51]. Actions to broadly tackle racism such as bystander anti-racism would indirectly impact health outcomes.[52] For[100] The evidence base is biased towards the 'individual layer' of our conceptual model but for large scale and meaningful health improvements,

interventions must take into account structural drivers with implementation in a supportive political, legal and policy ecosystem to ensure lasting effects. At the core of our model, we must challenge the link between money and power that stem from racial capitalism and the histories of colonisation [paper 1 ref], whereby those who stand to make a financial profit have the ability to influence policy makers. From tobacco to climate change, this influence has repeatedly been shown to have negative and discriminatory health consequences.

Finally, human rights based approaches should be supported. Societies must engage in these policy processes in the following ways:

- Policy making and monitoring, including through the global human rights platforms provided by the United Nations. Many of the human rights treaties are accompanied by monitoring processes that subject countries to international reviews for compliance, including obligations related to the right to health, and equality and non-discrimination rights. Policymakers and human rights advocates should actively engage public health researchers and clinicians in these processes. New policies should have a health impact assessment that includes an estimation of equity for distinct minoritised people.
- Processes that strengthen the capacity of HRBAs to improve health outcomes. For example, international human rights frameworks have been used to underpin recommendations that all states adopt national action plans to combat racism, xenophobia and discrimination in all spheres of public life including healthcare.
- Using international human rights accountability mechanisms such as treaty bodies and courts. This may be a fruitful way to promote government accountability for the right to health especially for racially and ethnically minoritised populations.

Formatted: Font: 12 pt

Conclusion and Post-Publication Actions

To address inequities and improve health outcomes, we must take account of structural and institutional causes and the historical, economic and political contexts in which they occur. As we have described throughout the series, racism, xenophobia and discrimination are independent causes of ill health but we live in societies which promote discriminatory ideologies as the norm, while continuing to deny their significance. Interventions to improve the socioeconomic status of minoritised people are required but these will not be adequate alone. To achieve improvements in health outcomes, we must ~~also~~ tackle racism, xenophobia and discrimination as a determinant of global health.

Through this Series, and related initiatives, we commit to future action to improve the evidence base and achieve impact. We also recognise that substantial gaps remain in the evidence base and have outlined specific research recommendations in Panel 2. A series on racism, xenophobia and discrimination, especially one as broad ranging as this, can only set the scene and scratch the surface of what should be done. In every context minoritised communities are struggling against the inequities that they face, largely individually and in the institutions that they live and work in. Interventions should exist at all levels, but, as we have emphasised, the problems and key solutions lie upstream, in the 'core' of our model. This series is only the first step in our process and we make a commitment to continue in the work. We propose a number of mid-term objectives. These would be: (1) an intervention-based commission that explores and attempts to address how we action the approaches laid out in this paper; (2) work with an international multi-lateral agency to raise the issue and profile of racism, xenophobia and discrimination within health; (3) host an event that draws together diverse partners and forms of discrimination that will serve to expand knowledge, highlight inequities, and build a coalition of

collaborators; and (4) use the Race & Health platform (www.raceandhealth.org) to educate and advocate for change across the world, through the development of regional hubs.

Panel 1. Case study - India

While caste-based discrimnation still exists in India, a number of affirmative action provisions are laid down in the Constitution of India, which guarantees 'equality before law' (1950),[53101] overturning the customary rules of the caste-system. Based on the constitutional provisions, the government of India has employed legal safeguards against untouchability-based discrimination in public spaces, violence, and atrocities. These include the Anti-Untouchability Act 1955 (renamed the Protection of Civil Rights Act in 1976)[54102] and the SC/ST Prevention of Atrocities Act 1989.[55103] Along with legal safeguards, affirmative action in the form of reservation policy in public employment, higher education, and legislature, as well as other government spheres like public housing have been initiated to improve the economic and educational status of the scheduled castes (former untouchables), other "backward" classes (lower in the caste hierarchy) and the scheduled tribes (Indigenous groups).

In the political arena, seats are reserved for people from the scheduled castes and scheduled tribes in village panchayats (local village councils) and in municipalities, with one-third reserved for women; legislative assemblies of the State, and in the House of People. Members of the disadvantaged social groups are enabled to exercise their power and authority, which can contribute towards ensuring non-discriminatory access to various public health programmes relating to health and nutrition. The Constitution Act, 1992 empowers the village councils and municipalities to function as institutions of self-government with responsibility for implementation of programmes for economic development and social justice. Panchayats are considered as the key last mile link in facilitating delivery of public services to the poor and the most disadvantaged.[56104]

While there has been much work on the economic impacts of affirmative action,[57105] there has been little on health outcomes. An evaluation of a programme which reserved public

Formatted Table

Field Code Changed

sector jobs for people from disadvantaged castes since 1993,[58~~106~~] showed decreased under-5 mortality (U5MR). The “political reservation” system for political positions and university posts had a similar effect on child mortality –a 40% reduction in U5MR- suggesting the important role of inclusive decision-making.[59~~107~~]

Panel 2. Research and data collection recommendations ~~Case studies~~

The evidence collated~~Coping intervention for HIV-positive men~~ in this paper~~the US Black sexual minority men living with HIV in the US experience discrimination from multiple facets of their identity, which are associated with poor health outcomes. Still Climbin' was a culturally-tailored, pilot intervention based on cognitive behavioural therapy, to improve coping with discrimination developed using community stakeholder input.[108] It consisted of 8 weekly two-hour group sessions. Facilitators provided psychoeducation about disparities and discrimination. Skills practice, such as role play, was done during~~ and across the series clearly shows a bias towards ~~between sessions.~~

~~Sixty-four Black sexual minority men living with HIV were recruited and randomised to the intervention or wait-list control group. Repeated-measures regressions indicated significant intervention effects on improved coping in response to discrimination, including functional (problem-solving), coping (p=0.04), humor (p=0.03), and cognitive/emotional debriefing (p=0.04), a culturally relevant form of coping that includes self-protective strategies, such as strategic avoidance of~~ certain types of discrimination and ~~places or people. Intervention participants rated the sessions positively. Still Climbin' was feasible and acceptable to participants and demonstrated improvement with functional coping and self-protective strategies for coping with discrimination. However, the authors concluded that individual-level~~ interventions. In response to this, we make eight distinct but related recommendations for ~~are insufficient and that complementary structural-level interventions are also needed to address social determinants of health disparities.~~

~~Radio intervention in Rwanda~~

~~In 1994, extremist Hutu police, military and civilians killed hundreds of thousands of Tutsis and politically moderate Hutus in what has become known as the Rwandan genocide.~~

Formatted Table

~~Radio played a key role in inciting violence through the dissemination of hateful propaganda. The International Criminal Court convicted the founders of the anti-Tutsi radio station Radio Télévision Libre des Mille Collines for crimes of genocide.[109] In its aftermath, mass media interventions were then implemented to reduce risk of~~ future research:~~ethnic violence. A non-governmental organisation (NGO) called Radio La Benevolencija began broadcasting a radio soap opera called "New Dawn" to teach listeners about the roots of violence and address the mistrust, lack of communication, and trauma left by the genocide.[110]~~

1. Population and location: Research must be conducted in all parts of the world, in particular low- and middle-income countries (LMICs) where evidence is lacking. A systematic review of racism on health, found that of the 333 articles reported, 271 (81%) were from the United States of America. There were no studies from LMICs.[60] Within a country, research may be confined to a particular group, while other minoritised populations are ignored, for example there is little work on racism affecting members of the East and Southeast Asian diaspora.

2. Types of discrimination: The majority of research investigates the effects of discrimination based on race, ethnicity or colour. The evidence base is limited on discrimination due to caste, religion, Indigenous health, and xenophobia towards migrants.

3. Disaggregated data: There is rightly concern over the disaggregation of routine data by race and some countries forbid this. Simply categorising outcomes by racial groups is unlikely to be effective and, in some cases can lead to harm, for example the use of race corrections in clinical algorithms.[61] But knowledge of health disparities is the first step in understanding and then tackling the issues that may exist. Care must be taken not to further stigmatise groups.

4. Study quality: Robust intervention design and well thought-through evaluation process allows for a deeper understanding of possible health and social impacts and facilitates more effective cross-research comparisons. Where quantitative studies are conducted, they must be of an adequate sample size. A number of the studies reviewed were small and underpowered. Evaluations of interventions seeking to directly improve health often did not measure hard health outcomes and did not include a control group. Evaluations of interventions to promote anti-racist attitudes and behaviours often relied on convenience samples of undergraduates.

5. Follow-up period: Long-term evaluation of interventions is required to assess durability of the effects and adverse effects. Studies must also include an appreciation for latent periods, where outcomes may not avail themselves. In the individual interventions, very few evaluated whether effects were sustained more than two weeks later.

6. Lifecourse approach: Research must consider all aspects of the lifecourse, highlighting how discrimination may present and act differently in different stages of life and how outcomes may differ over the lifecourse and intergenerationally.

7. More economic studies and policy and legal work is needed. Public health and legal researchers, and racially and ethnically monoritised communities, supported by governmental and non-governmental organisations, should further understand and amplify the benefits of human rights-based approaches to combating inequity and discrimination in access to and enjoyment of the right to health.

8. Engagement: Minoritised populations must be central to the research process through sustained dialogue and engagement. This includes co-creation and design, as well as conducting research. Minoritised populations must be included as participants in health research, especially those who may respond differently to treatments and interventions. ~~A~~

~~cluster RCT was conducted involving monthly radio listening groups which were randomised to play either new episodes from "New Dawn" (intervention), or a generic HIV education programme (control).[109] Intervention group participants were more likely to endorse inter-ethnic marriage, support people speaking up about traumatic experiences, and express empathy towards survivors of genocide.[109] When asked to improvise an ending to a role-play in which a man comes running asking villagers to repel incoming refugees, all 14 radio listening groups in intervention communities 'decided' to organise shelter and food for the refugees, whereas 78% of comments in control groups deferred responsibility to local NGOs or the government.[110] However, the behavioural changes were not accompanied by greater self-reported willingness to affiliate with members of other groups.[110] The results suggest a positive, albeit limited, role for mass media in reducing inter-group conflict.~~

Panel 3. Research and data collection recommendations

The evidence collated in this paper and across the series clearly shows a bias towards certain types of discrimination and interventions. In response to this, we make eight distinct but related recommendations for future research:

1. Population and location: Research must be conducted in all parts of the world, in particular low- and middle-income countries (LMICs) where evidence is lacking. A systematic review of racism on health, found that of the 333 articles reported, 271 (81%) were from the United States of America. There were no studies from LMICs.[111] Within a country, research may be confined to a particular group, while other minoritised populations are ignored, for example there is little work on racism affecting members of the East and Southeast Asian diaspora.

2. Types of discrimination: The majority of research investigates the effects of discrimination based on race, ethnicity or colour. The evidence base is limited on discrimination due to caste, religion, Indigenous health, and xenophobia towards migrants.

3. Disaggregated data: There is rightly concern over the disaggregation of routine data by race and some countries forbid this. Simply categorising outcomes by racial groups is unlikely to be effective and, in some cases can lead to harm, for example the use of race corrections in clinical algorithms.[112] But knowledge of health disparities is the first step in understanding and then tackling the issues that may exist. Care must be taken not to further stigmatise groups.

4. Study quality: Robust intervention design and well thought-through evaluation process allows for a deeper understanding of possible health and social impacts and facilitates more effective cross-research comparisons. Where quantitative studies are conducted, they must be of an adequate sample size. A number of the studies reviewed were small and underpowered. Evaluations of interventions seeking to directly improve health often did not

measure hard health outcomes and did not include a control group. Evaluations of interventions to promote anti-racist attitudes and behaviours often relied on convenience samples of undergraduates.

5. Follow-up period: Long-term evaluation of interventions is required to assess durability of the effects and adverse effects. Studies must also include an appreciation for latent periods, where outcomes may not avail themselves. In the individual interventions, very few evaluated whether effects were sustained more than two weeks later.

6. Lifecourse approach: Research must consider all aspects of the lifecourse, highlighting how discrimination may present and act differently in different stages of life and how outcomes may differ over the lifecourse and intergenerationally.

7. More economic studies and policy and legal work is needed. Public health and legal researchers, and racially and ethnically monoritised communities, supported by governmental and non-governmental organisations, should further understand and amplify the benefits of human rights-based approaches to combating inequity and discrimination in access to and enjoyment of the right to health.

8. Engagement: Minoritised populations must be central to the research process through sustained dialogue and engagement. This includes co-creation and design, as well as conducting research. Minoritised populations must be included as participants in health research, especially those who may respond differently to treatments and interventions.

Table 1. Summary of contexts, mechanisms, and outcomes of interventions identified in literature search

	Context	Mechanisms	Outcomes
Individual-level Interventions	Mainly schools and universities in the U.S. and Europe. No studies from Africa or Latin America.	1) Targeting perpetrators of discrimination: changing discriminatory attitudes towards a minoritised group 2) Targeting minoritised groups: improving sense of belonging and coping strategies for experiences of racism, xenophobia and discrimination.	1) Mainly short term studies. Small reductions in prejudice seen immediately following intervention, however no evidence of sustained change in discriminatory attitudes, or evidence this leads to improved health outcomes for minoritised groups 2) May improve 'resilience' of individuals to the effects of discrimination, and may improve experiences of ill health but are not preventative.
Community-level Interventions	Most varied contexts: - U.S. (African Americans, PoC, Indigenous, and immigrant populations) - Israel (Palestinian populations) - Germany (Muslim populations) - U.K (South Asian and refugee populations) - Hungary (Roma community) - Rwanda (Hutu and Tutsi) - Malta (refugee populations) - Australia (Indigenous communities) - Finland (immigrant populations)	1) Targeting perpetrators of discrimination: increasing empathy and reducing prejudice towards a discriminated group, with a focus on early childhood education 2) Targeting minoritised groups: outreach of healthcare services into communities of discriminated groups 3) Healing from intergenerational trauma in discriminated groups	1) Mixed evidence of impact, some evidence of reduced stereotypes and improved attitudes towards minoritised groups 2) A range of health outcomes: increased take up of mammography programmes, reduction in colorectal cancer incidence and mortality, reduction in asthma, improved sexual health practices. Some evidence of negative MH outcome - lower intention to refer at-risk members of the community MH services following training intervention. 3) Limited evidence base, only short-term follow up. Some positive changes; reduction in obsessive thoughts and self-consciousness, positive changes in parenting behaviours, and enhanced sense of community empowerment

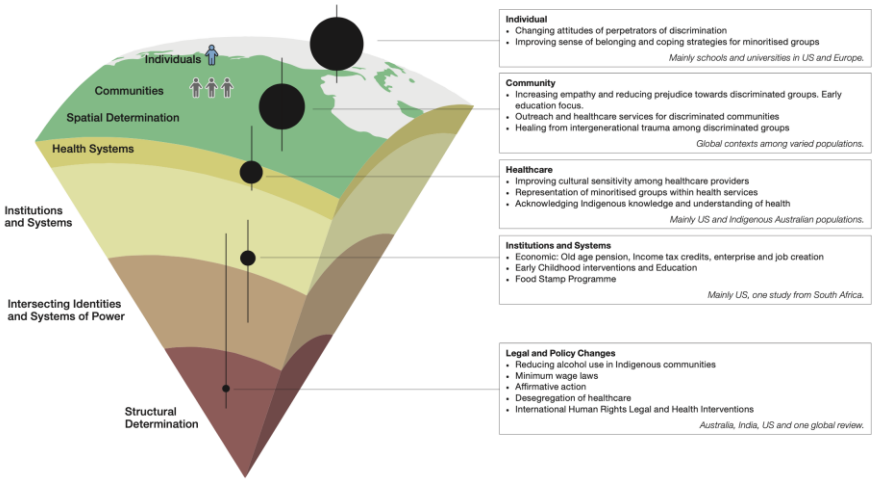
Healthcare Interventions	Predominantly U.S. (Black and Latino populations) or Australian (Aboriginal and Indigenous populations)	1) Targeting healthcare professionals and community health workers: training and education for healthcare professionals to improve cultural-sensitivity for marginalised groups. 2) Increasing the presence of community health workers, including aboriginal health workers, within medical services. 3) Acknowledging Indigenous knowledges and concepts of health	1) Improved cultural sensitivity of providers and increased satisfaction and trust in health service from minoritised groups. 2) Improved health outcomes, namely blood pressure control. 3) Improved pattern of health service use: increased attendance at appointments, retention on healthcare programmes and reduced discharges against medical advice.
Institutions and Systems Interventions	Predominantly U.S. (Black and Latinx populations) One study from South Africa (Black South Africans)	Targeting minoritised groups: 1) Education (early childhood cognitive and social stimulation) 2) Housing (rehousing to wealthy neighbourhoods) 3) Economic status (old age pension schemes, earned income tax credit schemes, income supplements and job creation) 4) Food Security (food stamp programme)	Long term outcomes examined in some studies. 1) Prevention of cognitive disability and long-term reductions in prevalence of hypertension, reduction in Vitamin D deficiency, and improvements in metabolic syndrome, 2) Decline in low-birth weight, improved physical health (reduced BMI and glycated haemoglobin). Some evidence for improved mental health. 3) Increased weight-for-height and height-for-age of young girls, decline in low-birth weight with greater impact seen for Black than white mothers, and reductions in prevalence of psychiatric disorders. 4) Decline in low-birth weight with greater impact seen for Black than White mothers.
Political, legal and policy Interventions	Australia (Indigenous communities) U.S. (AA, PoC, Hispanic and Latino communities, and other minority populations) One global review India (Disadvantaged castes)	1) Policies to reduce alcohol use in Indigenous communities 2) Changes to minimum wage laws 3) Affirmative action in electoral politics, the public sector and college admissions 4) Desegregation of healthcare services (1964 Civil Rights Act)	1) Mixed evidence on impact on alcohol use and some evidence of reduced violence 2) Limited and heterogenous evidence on impact of increased minimum wage on health and access to healthcare 3) Improved infant and under 5 mortality. An affirmative action ban in college admissions was associated with increases in smoking, alcohol use, and binge drinking

		5) International Human Rights Legal Interventions - Human rights based approaches (HRBAs) to health - Human rights litigation - Identifying and acting on violations at a national and local level	4) Reduced infant mortality, improved life expectancy for women. 5) Changes to government frameworks for healthcare provision - Shaping government policy on: access to healthcare, treatments and life-saving pharmaceuticals (e.g. accessing antiretroviral drugs, health-insurance systems and regulations of medicines) - Abolition of discriminatory laws to support equal access to health

Formatted: Normal

Figure 1 - Interventions targeting the health impacts of racism, xenophobia and discrimination: what, where and at which level of society?

Figure 1 is a visual representation and summary of the interventions identified which aim to reduce the health effects of racism, xenophobia and discrimination. It maps out the interventions based on the level of society at which they operate, and the circles represent the amount of evidence at each level. Vertical lines indicate the range of levels of society covered by an intervention - for example, healthcare interventions affect both health systems and spatial determination. The skewing towards individual and community level interventions is evident. Further details on the mechanisms underpinning these interventions can be found in Table A11.



Funding

There was no specific funding for this work.

Conflicts of interest

We declare no competing interests.

Author contributions

IA and DD conceived the series and produced the first draft. SS developed the conceptual model. Searches and data extraction were conducted by ETA, LB, LG, SL. Individual sections were drafted by ETA, LB, RD, LG, GL, SL, NSS, GS. GKB, MM, YP and SS edited and critically revised the draft. All authors reviewed the manuscript.

Acknowledgments

We would like to acknowledge Siddharta Mehta for his support in reviewing the policy literature.

References

1 Abimbola S, Pai M. Will global health survive its decolonisation? *Lancet* 2020; **396**. DOI:~~Abimbola S, Pai M. Will global health survive its decolonisation? *Lancet* 2020; **396**. DOI:~~10.1016/S0140-6736(20)32417-X.

2 Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *Lancet* 2017; **389**: 1453–63.

3 Bertrand, Duflo. Field experiments on discrimination. *Handbook of economic field experiments* https://www.sciencedirect.com/science/article/pii/S2214658X1630006X?casa_token=EjWTlcAAipoAAAAA:XRQ9QXyfRQ4aE6tzfxYFRiBJd9FH_fhYTvlFzykidsTyYtjKpVIz2-65RsVIBqILOoOW831oZA.

4 Fanon F. The Wretched of the Earth. Grove Press, 2004.

5 Downs J. Maladies of Empire: How Colonialism, Slavery, and War Transformed Medicine. Harvard University Press, 2021.

6 Bassett MT, Galea S. Reparations as a Public Health Priority - A Strategy for Ending Black-White Health Disparities. *N Engl J Med* 2020; **383**: 2101–3.

7 Eniasivam A, Pereira L, Dzeng E. A Call for Restorative and Transformative Justice Approaches to Anti-Racism in Medicine. *J Gen Intern Med* 2022; published online April 28. DOI:~~2 Fanon F. The Wretched of the Earth. Grove Press, 2004.~~

~~3 Downs J. Maladies of Empire: How Colonialism, Slavery, and War Transformed Medicine. Harvard University Press, 2021.~~

~~4 Bassett MT, Galea S. Reparations as a Public Health Priority - A Strategy for Ending Black-White Health Disparities. *N Engl J Med* 2020; **383**: 2101–3.~~

~~5 Eniasivam A, Pereira L, Dzeng E. A Call for Restorative and Transformative Justice Approaches to Anti-Racism in Medicine. *J Gen Intern Med* 2022; published online April 28. DOI:~~10.1007/s11606-022-07605-2.

8 Lancet commission on reparations and redistributive justice. https://projects.iq.harvard.edu/lancet-reparations (accessed July 22, 2022).

9 Diani M. The Concept of Social Movement. *Sociol Rev* 1992; **40**: 1–25.

10 Heywood M. South Africa's Treatment Action Campaign: Combining Law and Social Mobilization to Realize the Right to Health. *J Hum Rights Pract* 2009; **1**: 14–36.

11 Almond D, Chay KY, Greenstone M. Civil Rights, the War on Poverty, and Black-White Convergence in Infant Mortality in the Rural South and Mississippi. 2006; published online Dec 31. DOI:~~6 Diani M. The Concept of Social Movement. *Sociol Rev* 1992; **40**: 1–25.~~

Field Code Changed

Field Code Changed

7 Heywood M. South Africa's Treatment Action Campaign: Combining Law and Social Mobilization to Realize the Right to Health. *J Hum Rights Pract* 2009; **1**: 14–36.

8 Almond D, Chay KY, Greenstone M. Civil Rights, the War on Poverty, and Black-White Convergence in Infant Mortality in the Rural South and Mississippi. 2006; published online Dec 31. DOI:10.2139/ssrn.961021.

12 Kaplan G, Ranjit N, Burgard S. Lifting Gates--Lengthening Lives: Did Civil Rights Policies Improve the Health of African-American Women in the 1960's and 1970's? 2008. 9 Kaplan G, Ranjit N, Burgard S. Lifting Gates--Lengthening Lives: Did Civil Rights Policies Improve the Health of African-American Women in the 1960's and 1970's? 2008. http://hdl.handle.net/2027.42/134322 (accessed Oct 19, 2020).

13 Skrentny JD. The Ironies of Affirmative Action: Politics, Culture, and Justice in America. University of Chicago Press, 2018.

14 Deshpande A. Affirmative action in India and the United States. 2005. 10 Skrentny JD. The Ironies of Affirmative Action: Politics, Culture, and Justice in America. University of Chicago Press, 2018.

11 Deshpande A. Affirmative action in India and the United States. 2005. https://openknowledge.worldbank.org/handle/10986/9038.

15 Chatterjee P. India's doctors protest over caste quota plans. *Lancet* 2006; **367**: 1892.

16 Sze S, Pan D, Nevill CR, *et al.* Ethnicity and clinical outcomes in COVID-19: A systematic review and meta-analysis. *EClinicalMedicine* 2020; **29**: 100630.

17 Bhui K. Ethnic inequalities in health: The interplay of racism and COVID-19 in syndemics. *EClinicalMedicine* 2021; **36**: 100953.

18 OHCHR International Covenant on Economic, Social and Cultural Rights. 12 Chatterjee P. India's doctors protest over caste quota plans. *Lancet* 2006; **367**: 1892.

13 OHCHR International Covenant on Economic, Social and Cultural Rights. https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx (accessed Nov 10, 2020).

19 OHCHR Convention on the Rights of Persons with Disabilities. 14 OHCHR Convention on the Rights of Persons with Disabilities. https://www.ohchr.org/en/hrbodies/crpd/pages/conventionrightspersonswithdisabilities.aspx (accessed Dec 1, 2020).

20 Gostin LO, Blagojevic A, Bland S, Dhaliwal M, Guerra R, Monahan JT. Launching the Universal Health Coverage Legal Solutions Network. *Lancet* 2020; **395**. DOI:15 Gostin LO, Blagojevic A, Bland S, Dhaliwal M, Guerra R, Monahan JT. Launching the Universal Health Coverage Legal Solutions Network. *Lancet* 2020; **395**. DOI:10.1016/S0140-6736(19)32221-4.

21 Assessing the Impact of a Human Rights-Based Approach across a Spectrum of Change for Women's, Children's, and Adolescents' Health. 2015; published online Nov 22. 16 Assessing the Impact of a Human Rights-Based Approach across a Spectrum of Change for Women's, Children's, and Adolescents' Health. 2015; published online Nov 22.

Field Code Changed

Field Code Changed

Field Code Changed

Field Code Changed

Field Code Changed

Field Code Changed

https://www.hhrjournal.org/2015/11/assessing-the-impact-of-a-human-rights-based-approach-across-a-spectrum-of-change-for-womens-childrens-and-adolescents-health/ (accessed Nov 10, 2020).

22 Hahn RA, Truman BI, Williams DR. Civil rights as determinants of public health and racial and ethnic health equity: Health care, education, employment, and housing in the United States. SSM - Population Health. 2018; **4**: 17–24.

23 Bustreo F, Hunt P, Gruskin S, *et al.* Women's and Children's Health: Evidence of Impact of Human Rights. World Health Organization, 2013 ~~17 Hahn RA, Truman BI, Williams DR. Civil rights as determinants of public health and racial and ethnic health equity: Health care, education, employment, and housing in the United States. SSM - Population Health. 2018; **4**: 17–24.~~

~~18 Bustreo F, Hunt P, Gruskin S, *et al.* Women's and Children's Health: Evidence of Impact of Human Rights. World Health Organization, 2013~~
https://apps.who.int/iris/bitstream/handle/10665/84203/9789241505420_eng.pdf (accessed Nov 26, 2020).

24 Meier BM, Evans DP, Kavanagh MM, Keralis JM, Armas-Cardona G. Human Rights in Public Health: Deepening Engagement at a Critical Time. *Health Hum Rights* 2018; **20**. ~~19 Meier BM, Evans DP, Kavanagh MM, Keralis JM, Armas-Cardona G. Human Rights in Public Health: Deepening Engagement at a Critical Time. *Health Hum Rights* 2018; **20**.~~
https://pubmed.ncbi.nlm.nih.gov/30568404/ (accessed Nov 26, 2020).

25 Stangl AL, Singh D, Windle M, *et al.* A systematic review of selected human rights programs to improve HIV-related outcomes from 2003 to 2015: what do we know? BMC Infectious Diseases. 2019; **19**. DOI:~~20 Stangl AL, Singh D, Windle M, *et al.* A systematic review of selected human rights programs to improve HIV-related outcomes from 2003 to 2015: what do we know? BMC Infectious Diseases. 2019; **19**. DOI:~~10.1186/s12879-019-3692-1.

26 Samuel J, Frisancho A. Rights-Based Citizen Monitoring in Peru: Evidence of Impact from the Field. *Health Hum Rights* 2015; **17**. ~~.~~

~~21 Samuel J, Frisancho A. Rights-Based Citizen Monitoring in Peru: Evidence of Impact from the Field. *Health Hum Rights* 2015; **17**.~~ https://pubmed.ncbi.nlm.nih.gov/26766854/ (accessed Nov 10, 2020).

27 Assessing the Impact of a Human Rights-Based Approach across a Spectrum of Change for Women's, Children's, and Adolescents' Health. 2015; published online Nov 22. ~~22 Assessing the Impact of a Human Rights-Based Approach across a Spectrum of Change for Women's, Children's, and Adolescents' Health. 2015; published online Nov 22.~~
https://www.hhrjournal.org/2015/11/assessing-the-impact-of-a-human-rights-based-approach-across-a-spectrum-of-change-for-womens-childrens-and-adolescents-health/ (accessed Nov 10, 2020). ~~(accessed Nov 10, 2020).~~

28 Duflo E. Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa. *World Bank Econ Rev* 2003; **17**: 1–25.

29 Campbell F, Conti G, Heckman JJ, *et al.* Early childhood investments substantially boost adult health. *Science* 2014; **343**: 1478–85.

Field Code Changed

Field Code Changed

Field Code Changed

Field Code Changed

30 Muennig P, Schweinhart L, Montie J, Neidell M. Effects of a prekindergarten educational intervention on adult health: 37-year follow-up results of a randomized controlled trial. *Am J Public Health* 2009; **99**: 1431–7.

31 Ramey CT. The Abecedarian approach to social, educational, and health disparities. *Clin Child Fam Psychol Rev* 2018; **21**: 527–44.

32 Grapin SL, Griffin CB, Naser SC, Brown JM, Proctor SL. School-Based Interventions for Reducing Youths' Racial and Ethnic Prejudice. Policy Insights from the Behavioral and Brain Sciences. 2019; **6**: 154–61.

33 Fauth RC, Leventhal T, Brooks-Gunn J. Short-term effects of moving from public housing in poor to middle-class neighborhoods on low-income, minority adults' outcomes. *Soc Sci Med* 2004; **59**: 2271–84.

34 Votruba ME, Kling JR. Effects of neighborhood characteristics on the mortality of black male youth: Evidence from Gautreaux, Chicago. *Soc Sci Med* 2009; **68**: 814–23.

35 Kling JR, Liebman JB, Katz LF. Experimental analysis of neighborhood effects. *Econometrica* 2007; **75**: 83–119.

36 Ludwig J, Duncan GJ, Gennetian LA, *et al.* Neighborhood effects on the long-term well-being of low-income adults. *Science* 2012; **337**: 1505–10.

37 Leventhal T, Brooks-Gunn J. Moving to opportunity: an experimental study of neighborhood effects on mental health. *Am J Public Health* 2003; **93**: 1576–82.

38 Katz LF, Kling JR, Liebman JB. Moving to opportunity in Boston: Early results of a randomized mobility experiment. *Q J Econ* 2001; **116**: 607–54.

39 Ludwig J, Sanbonmatsu L, Gennetian L, *et al.* Neighborhoods, obesity, and diabetes—a randomized social experiment. *N Engl J Med* 2011; **365**: 1509–19.

40 Riccio J, Dechausay N, Miller C, Nuñez S, Verma N, Yang E. Conditional Cash Transfers in New York City: The Continuing Story of the Opportunity NYC-Family Rewards Demonstration. *MDRC* 2013.

41 Costello EJ, Erkanli A, Copeland W, Angold A. Association of family income supplements in adolescence with development of psychiatric and substance use disorders in adulthood among an American Indian population. *JAMA* 2010; **303**: 1954–60.

42 Costello EJ, Compton SN, Keeler G, Angold A. Relationships between poverty and psychopathology: A natural experiment. *JAMA* 2003; **290**: 2023–9.

43 Hoynes H, Miller D, Simon D. Income, the earned income tax credit, and infant health. *American Economic Journal: Economic Policy* 2015; **7**: 172–211.

44 Almond D, Hoynes HW, Schanzenbach DW. Inside the war on poverty: The impact of food stamps on birth outcomes. *Rev Econ Stat* 2011; **93**: 387–403.

45 Besson EK. Confronting whiteness and decolonising global health institutions. *Lancet* 2021; **397**: 2328–9.

46 Kothari A, Salleh A, Acosta A, Escobar A, Demaria F. Pluriverse: A Post-Development Dictionary. Tulika Books, 2019.

47 Chioneso NA, Hunter CD, Gobin RL, Smith SM, Mendenhall R, Neville HA. Community Healing and Resistance Through Storytelling: A Framework to Address Racial Trauma in Africana Communities. Journal of Black Psychology. 2020; **46**: 95–121.

48 Stanford FC. The Importance of Diversity and Inclusion in the Healthcare Workforce. *J Natl Med Assoc* 2020; **112**: 247–9.

49 Fisher DR, Rouse SM. Intersectionality within the racial justice movement in the summer of 2020. *Proc Natl Acad Sci U S A* 2022; **119**: e2118525119.

50 Yi J, Neville HA, Todd NR, Mekawi Y. Ignoring race and denying racism: A meta-analysis of the associations between colorblind racial ideology, anti-Blackness, and other variables antithetical to racial justice. *J Couns Psychol* 2022; published online May 23. DOI:10.1037/cou0000618.

51 Came H, Kidd J, McCreanor T. Re-imagining anti-racist theory for the health sector. *N Z Med J* 2022; **135**: 105–10.

52 Nelson JK, Dunn KM. Bystander Anti-Racism: A Review of the Literature. *Analyses of Social Issues and Public Policy* 2011; **11**: 263–84.

53 Government of India. Constitution of India. Legislative Department, Ministry of Law and Justice. 1950.

54 Government of India (GOI). The Protection of Civil Rights (PCR) Act. 1955.

55 Government of India (GOI). The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act. Ministry of Tribal Affairs. 1989.

56 Government of India. Towards holistic Panchayat Raj: Twentieth anniversary report of the expert committee on leveraging Panchayats for efficient delivery of public goods and services. New Delhi: Ministry of Panchayati Raj, 2013.

57 Holzer H, Neumark D. Assessing Affirmative Action. *J Econ Lit* 2000; **38**: 483–568.

58 van den Berg GJ, Bergemann A, Gupta S. Impact of an Affimative Action Program in Employment on Child Mortality in India. 2010. ~~23 Brown CS, Tam M, Aboud F. Ethnic Prejudice in Young Children in Indonesia: Intervention Attempts Using Multicultural Friendship Stories. *International Journal of Early Childhood* 2018; **50**: 67–84.~~

~~24 Litcher JH, Johnson DW. Changes in attitudes toward Negroes of white elementary school students after use of multiethnic readers. *J Educ Psychol* 1969; **60**: 148–52.~~

~~25 Cameron L, Rutland A, Brown R, Douch R. Changing children's intergroup attitudes toward refugees: testing different models of extended contact. *Child Dev* 2006; **77**: 1208–19.~~

~~26 Persson A, Musher-Eizenman DR. The impact of a prejudice-prevention television program on young children's ideas about race. *Early Child Res Q* 2003; **18**: 530–46.~~

~~27 Banerjee R, Datta Gupta N. Awareness programs and change in taste-based caste~~

prejudice. *PLoS One* 2015; **10**: e0118546.

28 Houser BB. An examination of the use of audiovisual media in reducing prejudice. *Psychol Sch* 1978. https://onlinelibrary.wiley.com/doi/abs/10.1002/1520-6807(197801)15:1%3C116::AID-PITS2310150122%3E3.0.CO;2-G.

29 Turner RN, Brown R. Improving Children's Attitudes Toward Refugees: An Evaluation of a School-Based Multicultural Curriculum and an Anti-Racist Intervention. *J Appl Social Pyschol* 2008; **38**: 1295–328.

30 Hughes JM, Bigler RS, Levy SR. Consequences of learning about historical racism among European American and African American children. *Child Dev* 2007; **78**: 1689–705.

31 Slone M, Tarrasch R, Hallis D. Ethnic Stereotypic Attitudes Among Israeli Children: Two Intervention Programs. *Merrill Palmer Q* 2000; **46**: 370–89.

32 Whitford DK, Emerson AM. Empathy Intervention to Reduce Implicit Bias in Pre-Service Teachers. *Psychol Rep* 2019; **122**: 670–88.

33 Pedersen A, Barlow FK. Theory to social action: A university-based strategy targeting prejudice against Aboriginal Australians. *Aust Psychol* 2008; **43**: 148–59.

34 Stefaniak A, Bilewicz M. Contact with a multicultural past: A prejudice-reducing intervention. *Int J Intercult Relat* 2016; **50**: 60–5.

35 Al Sadi FH, Basit TN. Religious tolerance in Oman: addressing religious prejudice through educational intervention. *Br Educ Res J* 2012; **34**: 1–26.

36 Gray DB, Ashmore RD. Comparing the Effects of Informational, Role-playing, and Value-discrepancy Treatments on Racial Attitude1. *J Appl Social Pyschol* 1975; **5**: 262–81.

37 Hill ME, Augoustinos M. Stereotype change and prejudice reduction: short- and long-term evaluation of a cross-cultural awareness programme. *J Community Appl Soc Psychol* 2001; **11**: 243–62.

38 Case KA. Raising White Privilege Awareness and Reducing Racial Prejudice: Assessing Diversity Course Effectiveness. *Teach Psychol* 2007; **34**: 231–5.

39 Wade P, Bernstein BL. Culture sensitivity training and counselor's race: Effects on Black female clients' perceptions and attrition. *J Couns Psychol* 1991; **38**: 9.

40 Beelmann A, Heinemann KS. Preventing prejudice and improving intergroup attitudes: A meta-analysis of child and adolescent training programs. Journal of Applied Developmental Psychology. 2014; **35**: 10–24.

41 López-Rodríguez L, Navas M, Justo CF, Mañas IM. Medatación en concencia Plena: Una nueva aproximación para reducir el prejuicio. *Rev Electron Investig Psicoeduc Psigopedag* 2012; published online Sept.

42 Stangor C, Sechrist GB, Jost JT. Changing Racial Beliefs by Providing Consensus Information. *Pers Soc Psychol Bull* 2001; **27**: 486–96.

43 Byrnes DA, Kiger G. The Effect of a Prejudice-Reduction Simulation on Attitude Change1. *J*

Appl Social Pyschol 1990; **20**: 341–56.

44 Devine PG, Forscher PS, Austin AJ, Cox WTL. Long-term reduction in implicit race bias: A prejudice habit-breaking intervention. *J Exp Soc Psychol* 2012; **48**: 1267–78.

45 Lai CK, Skinner AL, Cooley E, *et al.* Reducing implicit racial preferences: II. Intervention effectiveness across time. *J Exp Psychol Gen* 2016; **145**: 1001–16.

46 Walton GM, Cohen GL. A brief social-belonging intervention improves academic and health outcomes of minority students. *Science* 2011; **331**: 1447–51.

47 Selvarajah S, Deivanayagam TA, Lasco G, *et al.* Categorisation and Minoritisation. BMJ Global Health. ; **In press**.

48 Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *Lancet* 2017; **389**: 1453–63.

49 Spielman SE, Golembeski CA, Northridge ME, *et al.* Interdisciplinary planning for healthier communities: Findings from the Harlem Children's Zone Asthma Initiative. *J Am Plann Assoc* 2006; **72**: 100–8.

50 Krieger JW, Takaro TK, Song L, Weaver M. The Seattle-King County Healthy Homes Project: a randomized, controlled trial of a community health worker intervention to decrease exposure to indoor asthma triggers. *Am J Public Health* 2005; **95**: 652–9.

51 Capp K, Deane FP, Lambert G. Suicide prevention in Aboriginal communities: application of community gatekeeper training. *Aust N Z J Public Health* 2001; **25**: 315–21.

52 Erwin DO, Ivory J, Stayton C, *et al.* Replication and dissemination of a cancer education model for African American women. *Cancer Control* 2003; **10**: 13–21.

53 Earp JA, Eng E, O'Malley MS, *et al.* Increasing use of mammography among older, rural African American women: results from a community trial. *Am J Public Health* 2002; **92**: 646–54.

54 Grubbs SS, Polite BN, Carney J Jr, *et al.* Eliminating racial disparities in colorectal cancer in the real world: it took a village. *J Clin Oncol* 2013; **31**: 1928.

55 Kitzman H, Olds DL, Henderson CR, *et al.* Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing: a randomized controlled trial. *JAMA* 1997; **278**: 644–52.

56 Trinidad AMO. Toward kuleana (responsibility): A case study of a contextually grounded intervention for Native Hawaiian youth and young adults. *Aggress Violent Behav* 2009; **14**: 488–98.

57 Subica AM, Grills CT, Villanueva S, Douglas JA. Community organizing for healthier communities: environmental and policy outcomes of a national initiative. *Am J Prev Med* 2016; **51**: 916–25.

58 Mehl-Madrona L. Comparisons of health education, group medical care, and collaborative health care for controlling diabetes. *Perm J* 2010; **14**: 4.

59 Heart MYHB. Oyate Ptayela: Rebuilding the Lakota Nation through addressing historical trauma among Lakota parents. *J Hum Behav Soc Environ* 1999; **2**: 109–26.

60 Brave Heart MYH. The return to the sacred path: Healing the historical trauma and historical unresolved grief response among the Lakota through a psychoeducational group intervention. *Smith Coll Stud Soc Work* 1998; **68**: 287–305.

61 DiClemente RJ, Wingood GM, Harrington KF, *et al.* Efficacy of an HIV prevention intervention for African American adolescent girls: a randomized controlled trial. *JAMA* 2004; **292**: 171–9.

62 Alsan M. Does Diversity Matter for Health? Experimental Evidence from Oakland. 2018.

63 Berger R, Abu-Raiya H, Gelkopf M. The art of living together: Reducing stereotyping and prejudicial attitudes through the Arab-Jewish Class Exchange Program (CEP). *J Educ Psychol* 2015; **107**: 678.

64 Orosz G, Bánki E, Bőthe, Beáta, Tóth-Király I, Tropp LR. Don't judge a living book by its cover: effectiveness of the living library intervention in reducing prejudice toward Roma and LGBT people. *J Appl Soc Psychol* 2016; **46**: 510–7.

65 Cadenas GA, Cisneros J, Todd NR, Spanierman LB. DREAMzone: Testing two vicarious contact interventions to improve attitudes toward undocumented immigrants. *J Divers High Educ* 2018; **11**: 295.

66 Pirchio S, Passiatore Y, Carrus G, Taeschner T. Children's interethnic relationships in multiethnic primary school: results of an inclusive language learning intervention on children with native and immigrant background in Italy. *European Journal of Psychology of Education* 2019; **34**: 225–38.

67 Spiteri D. Can My Perceptions of the 'Other' Change? Challenging Prejudices against Migrants Amongst Adolescent Boys in a School for Low Achievers in Malta. *Research in Education* 2013; **89**: 41–60.

68 Stathi S, Cameron L, Hartley B, Bradford S. Imagined contact as a prejudice-reduction intervention in schools: the underlying role of similarity and attitudes: Imagined contact in schools. *J Appl Soc Psychol* 2014; **44**: 536–46.

69 Igartua J-J, Wojcieszak M, Kim N. How the interplay of imagined contact and first-person narratives improves attitudes toward stigmatized immigrants: A conditional process model. *Eur J Soc Psychol* 2019; **49**: 385–97.

70 Birtel MD, Crisp RJ. 'Treating' prejudice: an exposure therapy approach to reducing negative reactions toward stigmatized groups. *Psychol Sci* 2012; **23**: 1379–86.

71 Liebkind K, Mähönen TA, Solares E, Solheim E, Jasinskaja-Lahti I. Prejudice-reduction in culturally mixed classrooms: The development and assessment of a theory-driven intervention among majority and minority youth in Finland. *J Community Appl Soc Psychol* 2014; **24**: 325–39.

72 Paluck EL, Porat R, Clark CS, Green DP. Prejudice Reduction: Progress and Challenges. *Annu Rev Psychol* 2020; published online Sept 14. DOI:10.1146/annurev-psych-071620-

030619.

73 Lowe M. Types of contact: A field experiment on collaborative and adversarial caste integration. 2020.

74 Mousa S. Building Tolerance: Intergroup Contact and Soccer in Post-ISIS Iraq. 2019.

75 Ben J, Kelly D, Paradies Y. Contemporary anti-racism : A review of effective practice. In: Routledge International Handbook of Contemporary Racisms. Routledge, 2020: 205–15.

76 Taylor KP, Thompson SC, Smith JS, Dimer L, Ali M, Wood MM. Exploring the impact of an Aboriginal Health Worker on hospitalised Aboriginal experiences: lessons from cardiology. *Aust Health Rev* 2009; **33**: 549–57.

77 Durey A, Halkett G, Berg M, Lester L, Kickett M. Does one workshop on respecting cultural differences increase health professionals' confidence to improve the care of Australian Aboriginal patients with cancer? An evaluation. *BMC Health Serv Res* 2017; **17**: 660.

78 Cameron BL, Carmargo Plazas MDP, Salas AS, Bourque Bearskin RL, Hungler K. Understanding inequalities in access to health care services for aboriginal people: a call for nursing action. *ANS Adv Nurs Sci* 2014; **37**: E1–16.

79 Crampton P, Dowell A, Parkin C, Thompson C. Combating effects of racism through a cultural immersion medical education program. *Acad Med* 2003; **78**: 595–8.

80 Gordon WM, McCarter SAU, Myers SJ. Incorporating Antiracism Coursework into a Cultural Competency Curriculum. *J Midwifery Womens Health* 2016; **61**: 721–5.

81 Duflo E. Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa. *World Bank Econ Rev* 2003; **17**: 1–25.

82 Campbell F, Conti G, Heckman JJ, *et al*. Early childhood investments substantially boost adult health. *Science* 2014; **343**: 1478–85.

83 Muennig P, Schweinhart L, Montie J, Neidell M. Effects of a prekindergarten educational intervention on adult health: 37-year follow-up results of a randomized controlled trial. *Am J Public Health* 2009; **99**: 1431–7.

84 Ramey CT. The Abecedarian approach to social, educational, and health disparities. *Clin Child Fam Psychol Rev* 2018; **21**: 527–44.

85 Grapin SL, Griffin CB, Naser SC, Brown JM, Proctor SL. School-Based Interventions for Reducing Youths' Racial and Ethnic Prejudice. Policy Insights from the Behavioral and Brain Sciences. 2019; **6**: 154–61.

86 Fauth RC, Leventhal T, Brooks-Gunn J. Short-term effects of moving from public housing in poor to middle-class neighborhoods on low-income, minority adults' outcomes. *Soc Sci Med* 2004; **59**: 2271–84.

87 Votruba ME, Kling JR. Effects of neighborhood characteristics on the mortality of black male youth: Evidence from Gautreaux, Chicago. *Soc Sci Med* 2009; **68**: 814–23.

88 Kling JR, Liebman JB, Katz LF. Experimental analysis of neighborhood effects.

Econometrica 2007; **75**: 83–119.

89 Ludwig J, Duncan GJ, Gennetian LA, *et al.* Neighborhood effects on the long-term well-being of low-income adults. *Science* 2012; **337**: 1505–10.

90 Leventhal T, Brooks-Gunn J. Moving to opportunity: an experimental study of neighborhood effects on mental health. *Am J Public Health* 2003; **93**: 1576–82.

91 Katz LF, Kling JR, Liebman JB. Moving to opportunity in Boston: Early results of a randomized mobility experiment. *Q J Econ* 2001; **116**: 607–54.

92 Ludwig J, Sanbonmatsu L, Gennetian L, *et al.* Neighborhoods, obesity, and diabetes—a randomized social experiment. *N Engl J Med* 2011; **365**: 1509–19.

93 Riccio J, Dechausay N, Miller C, Nuñez S, Verma N, Yang E. Conditional Cash Transfers in New York City: The Continuing Story of the Opportunity NYC-Family Rewards Demonstration. *MDRC* 2013.

94 Costello EJ, Erkanli A, Copeland W, Angold A. Association of family income supplements in adolescence with development of psychiatric and substance use disorders in adulthood among an American Indian population. *JAMA* 2010; **303**: 1954–60.

95 Costello EJ, Compton SN, Keeler G, Angold A. Relationships between poverty and psychopathology: A natural experiment. *JAMA* 2003; **290**: 2023–9.

96 Hoynes H, Miller D, Simon D. Income, the earned income tax credit, and infant health. *American Economic Journal: Economic Policy* 2015; **7**: 172–211.

97 Almond D, Hoynes HW, Schanzenbach DW. Inside the war on poverty: The impact of food stamps on birth outcomes. *Rev Econ Stat* 2011; **93**: 387–403.

98 Kothari A, Salleh A, Acosta A, Escobar A, Demaria F. Pluriverse: A Post-Development Dictionary. Tulika Books, 2019.

99 Chioneso NA, Hunter CD, Gobin RL, Smith SM, Mendenhall R, Neville HA. Community Healing and Resistance Through Storytelling: A Framework to Address Racial Trauma in Africana Communities. Journal of Black Psychology. 2020; **46**: 95–121.

100 Nelson JK, Dunn KM. Bystander Anti-Racism: A Review of the Literature. *Analyses of Social Issues and Public Policy* 2011; **11**: 263–84.

101 Government of India. Constitution of India. Legislative Department, Ministry of Law and Justice. 1950.

102 Government of India (GOI). The Protection of Civil Rights (PCR) Act. 1955.

103 Government of India (GOI). The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act. Ministry of Tribal Affairs. 1989.

104 Government of India. Towards holistic Panchayat Raj: Twentieth anniversary report of the expert committee on leveraging Panchayats for efficient delivery of public goods and services. New Delhi: Ministry of Panchayati Raj, 2013.

~~105 Holzer H, Neumark D. Assessing Affirmative Action. *J Econ Lit* 2000; **38**: 483–568.~~

~~106 van den Berg GJ, Bergemann A, Gupta S. Impact of an Affirmative Action Program in Employment on Child Mortality in India. 2010.~~ https://www.econstor.eu/handle/10419/37394 (accessed Sept 17, 2020).

59 Dhakal R. Education and Health Impacts of an Affirmative Action Policy on Minorities in India. 2017. ~~107 Dhakal R. Education and Health Impacts of an Affirmative Action Policy on Minorities in India. 2017.~~ https://scholarcommons.usf.edu/etd/7017/ (accessed Sept 17, 2020).

60 Paradies Y, Ben J, Denson N, *et al.* Racism as a Determinant of Health: A Systematic Review and Meta-Analysis. *PLoS One* 2015; **10**. DOI:10.1371/journal.pone.0138511.

61 Vyas DA, Eisenstein LG, Jones DS. Hidden in Plain Sight - Reconsidering the Use of Race Correction in Clinical Algorithms. *N Engl J Med* 2020; **383**. DOI:10.1056/NEJMms2004740.

Field Code Changed

Field Code Changed

~~108 Bogart LM, Dale SK, Daffin GK, *et al.* Pilot intervention for discrimination-related coping among HIV-positive Black sexual minority men. *Cultur Divers Ethnic Minor Psychol* 2018; **24**: 541–51.~~

~~109 Paluck EL. Reducing intergroup prejudice and conflict using the media: a field experiment in Rwanda. *J Pers Soc Psychol* 2009; **96**: 574–87.~~

~~110 Paluck EL, Green DP. Deference, dissent, and dispute resolution: An experimental intervention using mass media to change norms and behavior in Rwanda. *Am Polit Sci Rev* 2009; : 622–44.~~

~~111 Paradies Y, Ben J, Denson N, *et al.* Racism as a Determinant of Health: A Systematic Review and Meta-Analysis. *PLoS One* 2015; **10**. DOI:10.1371/journal.pone.0138511.~~

~~112 Vyas DA, Eisenstein LG, Jones DS. Hidden in Plain Sight - Reconsidering the Use of Race~~

Correction in Clinical Algorithms. *N Engl J Med* 2020; **383**. DOI:10.1056/NEJMms2004740.

R2 Paper 4 Response to reviewers

Editorial Comments

We really struggled to secure re-review and had to approach new reviewers. There was an overall feeling that authors haven't really addressed the reviewers comments in the first round. To address the gaps in their literature search, authors should be more transparent in acknowledging the limitations of their approach, and how they could have been bias. Authors need to be more bold and assertive with their recommendations. They fail to equip readers for transformational change, as per previous reviews. Proposed solutions are generic and abstract rather than clearly derived from the evidence presented. As the final paper that many readers will trun to as the Series climax,the recommendations need to be really compelling.

Reviewer #1

I still feel short shrift is given to reparations, and I'll reiterate what I wrote in the initial review: I think we have arrived at a point where many see reparative justice as the only truly effective means of repairing health disparities: https://www.nejm.org/doi/full/10.1056/NEJMp2026170 There is a Lancet Commission on Reparations and Redistributive Justice you could refer to (at least the website), but it won't submit its report till this summer. https://projects.iq.harvard.edu/lancet-reparations/home"	We have now addressed reparative justice in our key messages, in the major section on wider actions and in our recommendations.
I feel that the culmination of this 4-article series should explore the potential health impact reparations a bit more thoroughly, including the failure of the aid/development/human rights paradigm to achieve health equity. Here is one of the few references on reparations and health: https://www.sciencedirect.com/science/article/pii/S0277953621000733?via%3Dihub	We agree that reparative justice is a very important component of the response to racism, especially in the context of minoritised groups in North America, however, we believe our inclusion of this issue as outlined above is sufficient for a review addressing the subject of race with a global lens (i.e. the value of reparation in some context compared to other interventions is different to that in North America). We have made reference to the forthcoming Lancet Commission on Reparations and Redistributive Justice.

Most of the work on addressing racial health inequities fails to expand the social imaginary to include reparative justice, and I would hope this series doesn't continue such a conservative tradition.	Thanks. We have now added more on reparative justice as outlined above (in our key messages, wider actions section and recommendations)

Reviewer #7

This is a very ambitious review article on interventions that tackle racism and/or its effects on health. The strengths of the paper are the timeliness of the topic and the thoughtful and comprehensive approach taken by the authors. The weaknesses are that in the attempt to cover this very broad topic, the authors were unable to explore the gaps in the literature and recommendations for future research, practice, and policy in as much detail as they might have been able to do had they chosen to deal with a smaller piece of the overall issue.	Thank you for reviewing the manuscript. We will address your point below. We acknowledge the inevitable limitation of a broad review as insufficient to tackle in depth all issues relevant to race, racism and health. We have considerably altered the presentation of the review to focus on wider societal action, including in particular legal, human rights and institutional measures that address structural racism. We describe the limited evidence we identified on individual, community and health interventions in an appendix.
I think it is suitable for publication; however, I think more clarity is needed in the objectives as well as the methodology used to identify the studies. Additionally, the researchers should be more transparent in acknowledging the limitations of their approach (not looking at all of the studies and instead reviewing the review articles) and how their findings might have been biased by those limitations.	We have now moved the search strategy to the first paper in the series as the literature search was undertaken for the entire series. We also acknowledge the limits of our search.
I suspect that their review missed many interventions, and as such, their conclusions may not reflect the breadth of evidence that exists on this topic. Additionally, because they attempt to cover such a broad topic, the clarity of the paper is not consistently strong.	As indicated above, we have shifted the focus of the review to the wider actions needed to tackle structural racism and its consequences on health and presented the more modest evidence on interventions targeted at individuals to an appendix. We now address the issue of not covering interventions that broadly target social and economic disadvantage beyond racism and health. There is a very rich literature base especially

	of community interventions in high income settings with evidence of effectiveness in such deprived communities who are often minoritised. As these studies are not specifically targeted at minoritised communities, we have acknowledged their exclusion as a limitation of this review.
I think the paper is useful as a call to action for scientists, practitioners, and administrators and policymakers working in global health - perhaps the paper would be strengthened by a summary of recommendations categorized according to the particular audience - individual health and public health professionals, healthcare organizational leaders, researchers, funders, and policymakers, including governmental leaders - or according to the specific type of strategy. In its current form, the paper is quite technically dense and I think many clinical readers who are not anti-racism experts would get lost in the text.	Thank you for the suggestion. The overall paper is organised according to our conceptual model (introduced in detail in the first paper). We did consider organising the recommendations in that way but felt that the approaches we suggest would be cross-cutting, so this did not work very well.
Tables and Figures The figure is excellent - it is just curious that is goes in the opposite direction from the typical socioecological model that places the individual in the innermost circle, surrounded by, in concentric circles, their friends/family/social support network, organizations/health systems, and with community/policy levels in the outermost circle	Thank you. We have deliberately chosen to invert the usual socioecological models to emphasise the importance of the structures and systems at the core. We describe the model in detail in the first paper in the series.
Panel 3 provides clear recommendations for research and data collection.	Thank you.
The case studies are interesting but not particularly helpful in guiding readers toward action. Perhaps the authors could consider providing tables similar to Panel 3 table with recommendations for healthcare practitioners	The case studies were chosen to exemplify different types of interventions, i.e. an individual, a radio-based and a legal intervention from different settings. We felt these showcased the range of interventions possible but, of course, others could have

and educators, healthcare administrators/policymakers, and funders?	been chosen. As above, we chose not to organise the paper in the way suggested, though do appreciate its merits.
This paper is a very ambitious (scoping?) review of interventions at multiple socioecological levels that tackle racism, discrimination, or xenophobia primarily, with health improvements as secondary outcomes, as well those interventions that target health outcomes believed to be caused by racism, discrimination, and xenophobia, terms which the authors use interchangeably. The authors provide compelling recommendations to advance the research that will inform future interventions in this arena.	Thank you.
MAJOR comments	
1. The overall objective of the study and the methodology used should be clearly described in the abstract. It is unclear from the abstract and the introduction whether this is a scoping review or systematic review.	Our review is a narrative synthesis of evidence (and not a systematic review). The abstract and introduction state the wider determinants and structural racism focus of the review.
2. The introduction refers to three other papers in the issue (lines 43,44); however, since each paper stands alone, it would be helpful for the authors to provide brief definitions of the key terms they use - particularly race - or the least, to acknowledge that many of these concepts hold different meanings in different cultural and geographical contexts.	We hope to be able to link the paper to the detailed definitions. If that is not possible, we will put the full definitions list in the appendix of this paper.
3. What are "health responses to racism"(line 49)? Are the authors referring to health programs or policies designed to address the harmful effects of racism on health?	We have moved this section to the appendix and were referring to both health programmes and policies designed to address harmful effects of racism on health.
4. The authors state that they present evidence on "the most important interventions" (line 70) but they do not	We have removed this statement and the whole section on individual interventions. Our focus is now on wider determinants and tackling structural interventions rather than

provide the criteria they used to determine the level of importance of interventions.	individual level action.
5. I respectfully disagree with the authors' assertion that most studies of outreach by community health workers (CHWs) to marginalized populations are of poor quality (line 132); perhaps many of the high-quality studies in this category were not included based on limitations of the search strategy? Did the authors review systematic reviews of CHW interventions?	We recognise that there are multiple studies on outreach interventions by CHWs to marginalised groups of high quality but these studies target areas by level of socio-economic deprivation (not race, ethnicity) and are not the subject of this review. We have acknowledged this issue as a limitation of this study. In recognition of these limitations, we have moved this section to an appendix. We already have explanations in the text why we thought that these studies were of poor quality: “However, most studies were of low quality: all except one[55] either did not measure final health outcomes, relied on self-reported measures of health, or were before-and-after analyses without controls.”
6. It is unclear to me why the RCT of a sex education intervention delivered in group format is considered a community development intervention (lines 142-144). Why was it not considered to be targeting individual behaviors? Other than being from the same community, were the attendees connected to each other in some way, such as through family relationships or friendships?	The RCT did indeed seek to connect attendees to each other through building solidarity and ethnic pride. As stated in the discussion to the original article: “Additionally, the thematic focus of the intervention, "Stay Safe for Yourself and Your Community," was designed to promote a sense of solidarity and ethnic pride among participants and may have inspired them to modify risk behaviors for altruistic motives: by enhancing their health, they were also enhancing the health of the African American community.” We have amended the article to now read, “An RCT evaluated sexual health education for African American teenagers delivered in group sessions that emphasised community solidarity and ethnic and gender pride.”

7. The interventions described as community level programs to reduce prejudice (lines 149-175) do not include a large number of studies known as anti-racism bystander (or upstander) training. Did the authors encounter any of these studies in their review? The authors might consider looking at this reference: Nelson JK, Dunn KM, Paradies Y. Bystander Anti-Racism: A Review of the Literature. Ana Soc Issues Public Policy 2011;1:262-284.	We have moved individual level and community action to an appendix and now made reference to this review and other studies addressing bystander action.
8. I know of many other studies in each category that were not included in this review. For example, I did not see this study: Does Diversity Matter for Health? Experimental Evidence from Oakland. Marcella Alsan, Owen Garrick, Grant Graziani, AMERICAN ECONOMIC REVIEW VOL. 109, NO. 12, DECEMBER 2019; (pp. 4071-4111). How do the authors grapple with the fact that their review likely missed numerous studies because of their reliance on reviews of the literature?	As above, we have sought to improve the comprehensiveness of our search and included additional studies. Given the limitations of evidence and of any search possible across the medical, public health economics, political science and psychology literature, we acknowledged the limits of the search and of the evidence and moved this section to an appendix and focussed our review on the structural drivers of racism and adverse health outcomes.
MINOR comments 1. There are several sentences in the abstract that seem incomplete or have words that are missing (lines 35, 39, and 40).	Thank you. We have proofread and edited the manuscript.

Reviewer #8

General: This review represents an ambitious undertaking to synthesise evidence around interventions to dismantle racism and the negative health impacts that racism, xenophobia, and discrimination have on people. I appreciate the global nature of the piece - drawing from evidence around the world. Three areas that the authors can strengthen: (a) The overall structure of the paper was somewhat hard to follow, (b) Some interventions that I am aware of were missing,	Thanks a. We have changed the structure of the manuscript substantially and simplified it. b. As stated above in response to reviewer 7, we have improved the completeness of the search, added more evidence and moved it to the appendix to reflect the new focus on wider determinants and actions of the review. c. Our recommendations are now linked

which made me wonder how thorough the interventions covered are, and (c) The ultimate recommendations were not linked to the evidence presented around the interventions.	primarily to the wider actions focus and research needed to meet gaps in evidence.
Intro: - Figure 1 is a conceptual framework, but it is not described in the text and it is not clear how or why the authors created this framework. I would like to see a paragraph devoted to explaining the conceptual framework, which would forecast the structure of the paper.	A thorough description of the model is presented in the first paper in the series. We felt that it should not be repeated here, though we will try to link to the first paper.
-More specifically, in the paper, the authors lay out the following categories, which I would recommend stating up front and maybe defining in the intro to set the stage for the reader: individual, community, healthcare, institutions and systems (of which healthcare is one so not sure the value in separating it out), structural (specifically policy/legal), human rights framework.	We have now moved these sections to an appendix and combined the individual, community and healthcare sections in the main text of the manuscript. We appreciate that healthcare is a system. As we describe in more detail in the first paper in the series, we chose to separate out the healthcare layer because of its proximity to health outcomes. We do appreciate the importance of other distal determinants of health and the inter-relationship between healthcare and these.
- I would like to see more clarity around the goals of the paper. The authors say: "Interventions that have the potential to address the consequences of racism/xenophobia/discr /3……..02imination on health and healthcare provision" and specifically promise two groups of interventions: * (A) Interventions that target specific health outcomes that result from racism/xenophobia/discrimination * (B) Interventions that target racism/xenophobia/discrimination themselves These descriptions are very broad and I would like to see a bit more explaination as far as what is meant by this. I think it would also help here to bring in the different levels that the authors are looking at and tie those	We have now changed the focus of the paper to primarily address wider societal action to confront the health impacts of racism corresponding to the core of our model - specifically legal, human rights and institutional/system level action to tackle structural racism (B). We address specific health interventions and individual / community level action (A) but largely to acknowledge the limitations of the evidence base and of our search. The evidence we found on individual / community level action are now summarised in the appendix.

levels to these different types of interventions. One big thing that is not clear throughout the paper is when are the authors talking about interventions that fit (A) vs (B) as I laid out above. The structure of the paper would be strengthened if it was clearly laid out how the interventions tie into the goals.	
- Minor comments:	
The authors reference the other papers in the series, but since I haven't read those, I found it muddled the waters. This piece should be able to stand on its own, so perhaps add some detail about other papers if referencing them.	We plan to create an executive summary that will sit alongside all the papers and provide information on each on and how they fit together. We felt that it would be repetitive to describe all the papers in each one.
Interventions: - The next section is titled "Interventions" and then "Individual Interventions" - again not clear how this relates to initial objectives. Is this A or B? It seems to be B?	The 'Interventions' title covers the whole section, while 'Individual Interventions' is for that particular section. We are happy to change the formatting to make this clear.
Individual Interventions :- In limitations sections of interventions aimed at reducing bias, the authors state that only a few studies evaluated effects beyond 2 weeks post intervention and that any initial positive effects were reduced or disappeared. Rather than being a limitation, this seems to me to be evidence that these interventions don't work at all. Which is interesting because these are the exact interventions that health systems/cororations/etc have turned to in the last two years to show they are doing something.	We agree with this point and have amended this in the text.
- One piece that is missing from this initial grouping of studies is explanation of how predjudicial views were measured in these studies - is the measurement even reliable?	We have added a comment about the heterogeneity of measures used in the studies.
- Next, the authors talk about interventions targeting resilience among people experiencing racism. This seems to be an (A)	The interventions regarding resilience amongst people experiencing racism is part of the first goal that we have stated – that is

goal, but I wasn't expecting this type of study to be included - it would help again to give more conext around the bounds of what they mean by the (A) and (B) goals. Further this section only cites 2 studies - is that really the whole body of work around this topic? o Given that this is a goal, one big gap here are interventions around trauma informed care, dealing with the trauma of racism, etc - seems like a body of literature missing here. o At the end of this section, the authors conclude that we need interventions to address unhealthy behaviors, which came out of nowhere for me - unhealthy behaviors wasn't discussed previously. And in fact there are many many interventions out there that address unhealthy behaviors. But it's also not clear what the connection is between racism and unhealthy behaviors. The authors also talk about interventions to tackle physical illnesses prevelant in minoritized groups but that also comes out of no where and then is not discussed further. SImilarlly there are many interventions to address illnesses such as HTN, DM, etc. ?	measures that target specific health outcomes that result from racism, xenophobia and discrimination. With regards to the comment on the section on unhealthy behaviours, we agree with the reviewer and have taken it out.
Community: - Please define communities to set the stage for what to expect in this section.	We have moved this section to an appendix and it is no longer a focus of this review. Earlier papers in the series address and define the various elements of the model.
- I am not clear what the authors mean by "communities can mitigate or exacerbate effect of racism on health"	We have clarified this sentence which was referring to the functioning or dysfunction of communities and the section is now in the appendix. .
- The authors get at something important by talking about segregated neighborhoods - this should be expounded. Racism shapes neighborhoods and results in segregated neighborhoods that concentrate risk and limit resources for those living in some neighborhoods AND concentrate advantage	We agree with this comment. However, changing neighborhoods and the concentration of risk requires action at the political, institutional and societal level (not simply each internal community action) and believe our new focus of the review on legal, human right and system level actions is a more appropriate solution.

for those living in other (white or other majority) segregated neighborhoods.	
- The authors talks about 3 community-level interventions. Again would help to define what authors mean by community and community-level. "Community based health outreach to marginalized populations" is essentially an individual focused intervention that takes place in communities, so should this go in individual interventions? "Commnity level interventions to reduce prejudice" - not clear why this goes in this section and not individual section in section about reducing prejudice.	As indicated above, we acknowledge the limits of this section. We have moved it to the appendix and stated the limits in the main text.
- The section about CWH seems to be missing a lot of literature. For example, the work of Shreya Kangovi, as well as a vast body of literature around international work on CWHs.	This section is now in the appendix. We have specifically also noted that we have not covered wider interventions that address community interventions in deprived communities (largely from the US and the UK) in diabetes, cardiovascular disease and other chronic conditions such as the work of Shreya Kangovi and others. These communities often have ethnic minorities but the primary focus of the research is not racism, discrimination and xenophobia.
- Broader community development initiatives focused on restructure social/physical envionrments - this squarly fits in this category. Although I found the examples provided didn't all fit. The authors cite sexual health education program - but this is not community development - this falls more in line with education which is really an individual targeted intervention. Defining individual vs community interventions will help. o I would note there is a large body of work around urban nature in the US, Netherlands, and elsewhere. Also work around structural changes to the physical envionrments including RCTs in US - see work of Eugenia South, Charles Branas, John MacDonald.	We used the location the initiative is conducted i.e. in the community to categorise these interventions in to our conceptual model. While we reviewed the work of Eugenia South, Charles Branas and John MacDonald, and its important impact on reducing crime and other adverse outcomes such as violence using changes to the physical environment in the US, this work tackles these factors across all groups and not specifically in minoritised

o There is also a body of work around housing quality and health outcomes specifically asthma that would seem to fit in this section.	individuals. We have therefore not cited this material. Of course policy makers can uuse these interventions in settings with minoritised groups experiencing disproportionate levels of the relevant factor such as socioeconomic disadvantage.
- I found the summary paragraph confusing with several unsupported statements such as "communities can contribute health by providing support" (what type of support? Communities meaning who - individual residents?) and also "Given that legislative change alone may have little impact on racism and experiences of discrimination at the community level . . . . this sentence is not supported by any evidence. The athors themselves later argue that legal avenues are critical so not clear why they say here that legal avenues don't matter. And finally "evidence spports schools as important site of antiracism measures" . . . . this may or may not be true, but the authors did not interrogate this in the preceeding section.	We have now moved this section to the appendix and modified the sentence. While we would argue that this sentence is accurate i.e. legislative interventions alone without enforcement tend not to work and does not contradict our statement that legal measures are important, we have removed this sentence to improve clarity.
Healthcare: - Overall this section felt incomplete. The authors state that there are 3 studies for interventions within health systems to address racism. Perhaps this is my misunderstanding of the scope of this article, but there are many many many more studies that look at ways within health system to address the downstream impacts of racism. Further the two interventions that are education initiatives are ultimately individual level interventions. If the authors want to separate out healthcare, they need to make that clear up front.	As above, we acknowledge that if one takes the wider literature on studies in health settings including in the economics and psychology literature, there are more relevant studies. Furthermore, there are several interventions and studies in our own search that we did not summarise and have therefore elected to describe these 3 studies as exemplars in an appendix. We state this limitation and have moved this section to an appendix now to largely illustrate the possible range of studies.
- The conclusions of this section are interesting and important but are not supported by evidence the authors laid out. For example, the authors say to focus on leaders, which is a great concept, but they did	We have moved this section to the appendix. There is no specific conclusion to the healthcare section. The wider conclusions of the individual, community and healthcare sections are drawn from the limited evidence available.

not find any interventions that focused on leaders - do they not exist? Similarly, the authors say "organizational change implemented routinely through better, and longstanding equities policies (what is this??) and advisory input, diverse leadership, safe reporting systems are needed" but they don't provide any evidence for this or explain why they are making these recommendations. These are all great recommendations, but they need to be further justified and explained.	
Institutions and systems: - Again, this section felt incomplete. The authors focus on 3 types of interventions targeting material conditions: o Early chidlhood development programs (which seems like an individual focused intervention based on how the authors explain the studies, so perhaps the clear link to this being institution/systems would help), o Housing mobility programs - the authors might want to point out a limitation of this concept - that you aren't actually addressing root causes simply moving people out. What about all the people left in the place that is causing harm? o Income supplementation - strongest section here	This section is now appropriately caveated to indicate that it provides illustrative examples of effective measures rather than a comprehensive summary of all institutional and system level action or indeed the root causes of poor housing or income. For example, “The root causes of poor housing and income among minoritised groups requires political, social policy, and legislative action to resolve”
Structural discrimination - policy: - This is an important section and I appreciate the focus on social movments and affirmative action. I think there are other areas to talk about here. See https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)30569-X/fulltext	Thank you. We agree with Zinzi Bailey’s paper but have purposely avoided focussing on the same material as the literature is already too focussed on the US (which is well addressed that review). As indicated in the earlier papers in the series, we have a more global focus on discrimination.
- Legal and human rights frameworks - I believe this section is meant to be part of the structural discrimination section and could be linked into this in a more clear way.	Thank you. We hope the changes to the structure of the manuscript now addresses this concern.

What works?: - Not clear where this fits into structure proposed in intro. Maybe start with summarizing table 1 up front in the intro. Or re-name this section. - The authors then suggest 5 key principles. This feels like it should be its own section. The key principles that are proposed are good principles, but seem disconnected from the interventions and evidence presented in the rest of the paper. - The section on decolonization is strong. - The section on increasing diversity and inclusion is not strong. There is a whole body of literature on these two separate concepts that the authors glaze over. They do not really talk about inclusion. - Similarly, the concepts of intersectionality and antiracism are cursory. I would want ot hear more about what does this actually mean in the practice of developing, testing, and implementing interventions to address racism?	Thank you for the suggestions on the structure of the section on what works some of which we have used to improved the presentation. Specifically: - Decolonisation: no changes - Diversity and Inclusion: increased focus on inclusion (not just diversity) - Intersectionality and antiracism: improved this and split it into two sections including reference to bystander action and other approaches. While there is a lot more that can be said, we have added references that interested readers can learn more from.

Reviewer #9

MAJOR: The paper is an important contribution to research as well as interventions in terms of iterating what should truly have been obvious; that inequalities, power structures, institutional discrimination and exclusion are the root cause of morbidity, mortality and poor health outcomes. It is an essential reading for clinical practitioners, lab-based researchers and everyone engaged in health and health care. The need to understand and practice 'decolonisation' by challenging structural inequality has also been effectively asserted by the authors. The positive impact of the substantive equality approach comes out strongly in the paper, and the authors need to be congratulated on	Thank you for your review. We appreciate your thoughts.

bringing that aspect out through their extensive literature review. Structural inequality and violence are rarely considered realpolitik issues in healthcare; this paper attempts to amend this omission. It also argues for the need for more research and mindful interventions, going beyond tokenism or ticking the boxes about having included a sufficient number of excluded groups. I enjoyed reading the paper!	
MINOR: 1. The first two paragraphs of the Introduction move back and forth in terms of the problem and the responses that exist or should exist. The sentences need to be re-organised.	We have made extensive changes to the introduction and hope that it is now acceptable.
2. "of all forms" is missing in the long form of CEDAW (page 14)	Thank you, this has been changed.
3. Ref # 100: This Act doesn't have 'Ministry of Tribal Affairs' in the title. Please amend it to read as follows: Government of India (GOI). The Protection of Civil Rights (PCR), Ministry of Law and Justice, 1955.	Thank you, this has been changed.
4. The other references related to the Indian context are accurate, though I was only able to access the van der Berg et al 2010 paper indirectly.	Thank you for your comments.