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Anti-racist interventions to reduce ethnic disparities in healthcare in the UK: an umbrella review and findings from healthcare, education and criminal justice

Jennifer L Y Yip ,[1] Shoba Poduval ,[2] Leah de Souza-Thomas,[1] Sophie Carter,[1,3] Kevin Fenton[1]

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[1]Office for Health Improvement and Disparities, London, UK
[2]Institute of Health Informatics, University College London, London, UK
[3]Health Innovation Manchester, Manchester, UK

Correspondence to
Dr Shoba Poduval;
s.poduval@ucl.ac.uk

ABSTRACT

Objectives To assess the evidence for anti-racist interventions which aim to reduce ethnic disparities in healthcare, with a focus on implementation in the UK healthcare system.

Design Umbrella review.

Data sources Embase, Medline, Social Policy and Practice, Social Care Online and Web of Science were searched for publications from the year 2000 up to November 2023.

Eligibility criteria Only systematic and scoping reviews of anti-racist interventions reported in English were included. Reviews were excluded if no interventions were reported, no comparator interventions were reported or the study was primarily descriptive.

Data extraction and synthesis A narrative synthesis approach was used to integrate and categorise the evidence on anti-racist interventions for healthcare. Quality appraisal (including risk of bias) was assessed using the AMSTAR-2 tool.

Results A total of 29 reviews are included in the final review. 26 are from the healthcare sector and three are from education and criminal justice. The most promising interventions targeting individuals include group-based health education and providing culturally tailored interventions. On a community level, participation in all aspects of care pathway development that empowers ethnic minority communities may provide an effective approach to reducing ethnic health disparities. Interventions to improve quality of care for conditions with disproportionately worse outcomes in ethnic minority communities show promise. At a policy level, structural interventions including minimum wage policies and integrating non-medical interventions such as housing support in clinical care has some evidence for improving outcomes in ethnic minority communities.

Conclusions Many of the included studies were low or critically low quality due to methodological or reporting limitations. For programme delivery, different types of pathway integration, and providing a more person-centred approach with fewer steps for patients to navigate can contribute to reducing disparities. For organisations, there is an overemphasis on individual behaviour change and recommendations should include a shift in focus and resources to policies and practices that seek to dismantle institutional and systemic racism through a multilevel approach.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ We employed a rigorous review process with a comprehensive search strategy across multiple databases, and dual independent review, and our categorisation and synthesis of results used the socioecological model, which worked well to understand the different levels in which the interventions were acting.
⇒ Although we included systematic reviews, meta-analyses and scoping reviews, many were considered low or critically low in quality due to reporting and methodological limitations.
⇒ We limited inclusion to peer-reviewed literature in English, to facilitate access, but this may have reduced the scope of our findings.
⇒ Some of the reviews demonstrated publication bias (when the direction or strength of a study's outcome influences whether it is published or not), meaning that they included smaller studies that generated larger SEs and, if they had been conducted on a much larger scale, the analysis would have shown less positive results for reducing inequalities.
⇒ Heterogeneity of intervention approaches, study designs and reporting presented in the included articles made comparing results difficult.

INTRODUCTION

Health inequalities have increased since 2010, with an extending 10-year gap in life expectancy between people living in the most and least deprived areas of England.[1] The COVID-19 pandemic augmented pre-existing inequalities and highlighted the impact of our social environment on our health. Rudolf Virchow was one of the first physicians to identify medicine as a social science.[2] Since then, health inequalities and the importance of social causes of poor health have been highlighted in UK public health policy by the Black report,[3] the Acheson report[4] and the WHO Commission on Social Determinants of Health.[5] People living in poorer areas, and from less affluent backgrounds, have a

higher risk of morbidity and mortality.[6] These conditions of human existence have existed for centuries, etched in science and literature. The interplay between social and economic factors also drives racial health inequalities, where communities from indigenous and minoritised ethnic groups who live in areas of greater socioeconomic disadvantage, also experience additional drivers such as racism.[7] Since the start of the COVID-19 pandemic, the association between ethnicity and adverse health outcomes has risen in prominence.[8–12] People from black, Asian and minority ethnic backgrounds were exposed to higher risk of morbidity and mortality from Covid-19 in the UK, with the South Asian and black populations suffering up to five times the risk of Covid-19 deaths compared with their white counterparts.[13] Differential access to interventions such as vaccinations and well-fitting face masks compounded the increased risk.[14 15]

Although racial health disparities are not new, scientific awareness was coupled with cultural change that arose with the murder of George Floyd and Black Lives Matters movement to create a deeper focus on the differential impacts of the Covid-19 pandemic by ethnicity in the UK. The National Health Service (NHS) Race and Health Observatory (RHO) was commissioned, and there are emerging efforts to address racial disparities in health and healthcare.

Racism is also recognised as a public health crisis globally and is 'embedded in the structures and institutions that drive global health governance and healthcare systems', resulting in inequities in sexual and reproductive rights, housing and migrant rights, Indigenous peoples' well-being, and access to affordable and quality healthcare.[16] For example, in South Africa, HIV prevalence in black men and women in 2012 was more than 80 times higher than in white people.[17] In New Zealand, Indigenous Māori women with breast cancer are less likely to reach the 5-year survivor mark compared with non-Māori women.[18]

There is extensive literature that demonstrates the association between minoritised ethnicity and poorer health outcomes.[7 19] In the UK, black women are four times more likely to die in childbirth compared with white mothers, and experience around four times the risk of stillbirths even after accounting for area deprivation and maternal age.[20 21] In addition, the NHS RHO has reported barriers to access in mental health and other aspects of care for ethnic minority groups that contribute to worse outcomes.[22]

Racism is a driver of ethnic health inequalities, operating directly through discrimination and stigma, and indirectly through the social determinants of health.[7 23] The social patterns that mediate health inequalities, such as differential access to material, social and healthcare resources, health behaviours and psychosocial stress, also reflect racialised patterns and highlight the intersectional nature of health risk. The focus on social inequalities in UK health policy has, to some extent, masked the impact of race and racism on health disparities because racism drives, and its effects are mediated through, structured social and economic inequalities.[23] Abubakar and colleagues reviewed a wide range of literature that examined the relationship between racism, xenophobia, discrimination and health outcomes, and outlined key areas for intervention from the global literature.[24]

The literature on interventions to reduce ethnic disparities in healthcare is growing and developments in global health policy reflect this. In 2020–2021, members of the United Nations Sustainable Development Group released a report on opportunities to address racial-based and ethnicity-based discrimination developed through a consultative process involving UN senior executives and technical staff, civil society, public health practitioners and human rights experts.[25] It identified three strategic approaches to addressing racial-based and ethnicity-based discrimination including interventions explicitly tackling racial and ethnicity-based discrimination.[25]

Further examination is required to implement and recommend actions in the UK and other high-income countries where, particularly in diverse urban areas, there is an urgent need to take action to mitigate the impact of racism on adverse health outcomes.

Initial searches identified several systematic reviews assessing specific interventions or interventions addressing specific disease areas. In light of this, there is a need for a current and comprehensive systematic review of reviews to synthesise the evidence. We draw on methodology from The Joanna Briggs Institute which uses the term 'umbrella review' for a synthesis of evidence from published systematic reviews on a "broad condition or problem for which there are competing interventions and highlights reviews that address these interventions and their results".[26]

With this in mind, the aim of this umbrella review is to identify and assess the evidence for competing interventions to reduce ethnic disparities, and assist policy-makers, managers and clinicians to choose effective interventions, by highlighting the highest quality and most consistent evidence, with a focus on potential implementation in the UK healthcare system.

Definitions

For the purpose of this review, we reviewed a number of commonly used definitions of racism and anti-racism to inform the selection of studies. A full discussion on the definitions is beyond the scope of this review. The term 'health and racial inequities' is used to emphasise that the differences resulting from racism are avoidable, unfair and unjust.[27] We also recognise the difference in definitions between race and ethnicity, but here we will use the terms interchangeably.

In this review, we draw on Ibrahim X. Kendi's definition of anti-racism as "any idea that suggests that racial groups are equals in all their apparent differences".[28 29] Another commonly used definition of anti-racist intervention is from Calliste and Dei: an "action-oriented, educational and/or political strategy for systemic and political change that

addresses issues of racism and interlocking systems of social oppression".[30] This definition addresses a wide range of actions in a number of settings and, at its core, recognises the systemic and embedded impact of racism and oppression.

Power dynamics was an important consideration identified from existing definitions of racism and was used to inform our selection and definition of anti-racist interventions in the current review.[29 31–35]

Therefore, we included reviews that either define the intervention as anti-racist, or reviews which included studies that provided:

1. Evidence that the intervention redressed the imbalance of power. Social realist theory has been used in previous research on power dynamics by Farr and colleagues to analyse practice.[36] Realist social theory conceptualises how people (agents) are conditioned by their structural and cultural contexts, but their actions are not determined.[37] Through reflexivity and social interactions, people have the potential to instigate changes within themselves or others, or instigate cultural or structural changes.[38] Social interactions can facilitate emancipation through collective power, or domination may continue.[38] We used this interpretation of Archer's realist social theory framework to analyse interventions and their potential impact on power dynamics.[36]
2. Explicit ambition to reduce ethnic or racial health disparities.

Framework

To categorise the different interventions identified, we used an adaptation of Dahlgren and Whitehead's socioecological model as a framework to guide the analysis, showing racism as a driver of different levels of social determinants of health (figure 1). Here, we show structural racism acting at the highest level of society, and implied in the diagram is the impact of the wider determinants on more proximal risk factors of disease resulting in ethnic health inequalities, as racism is embedded and causes harm while hidden in our healthcare system, institutions, policies, cultures and behaviours, growing over time.

METHODS

We conducted an umbrella review in accordance with recognised methodology[26 39] and reported in line with the Preferred Reporting for Systematic reviews and Meta-Analyses (PRISMA) statement.[40] The search strategy, inclusion and exclusion criteria, appraisal tool and data collection instruments were designed and agreed prior to selection.

Search strategy

A literature search of the following databases was conducted in collaboration with a knowledge and evidence specialist: Embase, Medline, Social Policy and Practice, Social Care Online and Web of Science, with the aim to identify 'what works in antiracism' focusing on reviews which examined interventions and programmes that addressed racism. The search was updated in November 2023 and expanded to include reviews identified through a clinical queries reviews filter that is better suited to identifying systematic review and meta-analyses. Our search criteria only included databases that focused on health and social care, although our search terms included educational interventions. We included search terms based on Medical Subject Headings (MeSH) and keywords related to race, ethnicity, racism and anti-racism. A full list of the search terms and the search strategy is included in online supplemental appendixes 1 and 2.

Eligibility criteria

We limited the search to systematic reviews published from the year 2000 onwards as initial searches indicated that more literature emerged after this date. This is the first umbrella review of anti-racist to reduce ethnic disparities in healthcare to our knowledge.

Inclusion criteria were

1. Systematic reviews, meta-analyses and scoping reviews.
2. Reviews which include any kind of empirical primary study evaluating an intervention.
3. Reviews with explicit inclusion and exclusion criteria.
4. Reviews where authors searched more than one literature database.
5. Interventions were anti-racist, based on definitions above. We sought evidence that the intervention redressed the imbalance of power by asking the question: 'Do the interventions address differences in power and reallocate resources to people from minoritised ethnic groups?'
6. Publication was available in English language.

Exclusion criteria were

1. No interventions reported.
2. No comparator intervention reported and the study was primarily descriptive, for example, a review of epidemiological studies of association between race and an outcome.

Selection process

The selection process is outlined in figure 2 using the PRISMA 2020 statement on guidelines for reporting systematic reviews. One of the first authors (JLYY) drafted the protocol and data collection table, and together with two coauthors (SC and LdST) agreed the final protocol prior to conducting data collection. The protocol and review were not registered. Two authors (SC and JLYY) independently reviewed titles and abstracts for inclusion, with consensus in discussion with a third author (LdST). Data extraction was conducted manually and independently by three authors (SC, JLYY and SP) using a data extraction form based on the review objectives. In our selection process, we found two reviews looking at educational interventions[41 42] and one looking at criminal justice.[43] These were included in the analysis and synthesis as it was felt the findings were relevant to the review aim.

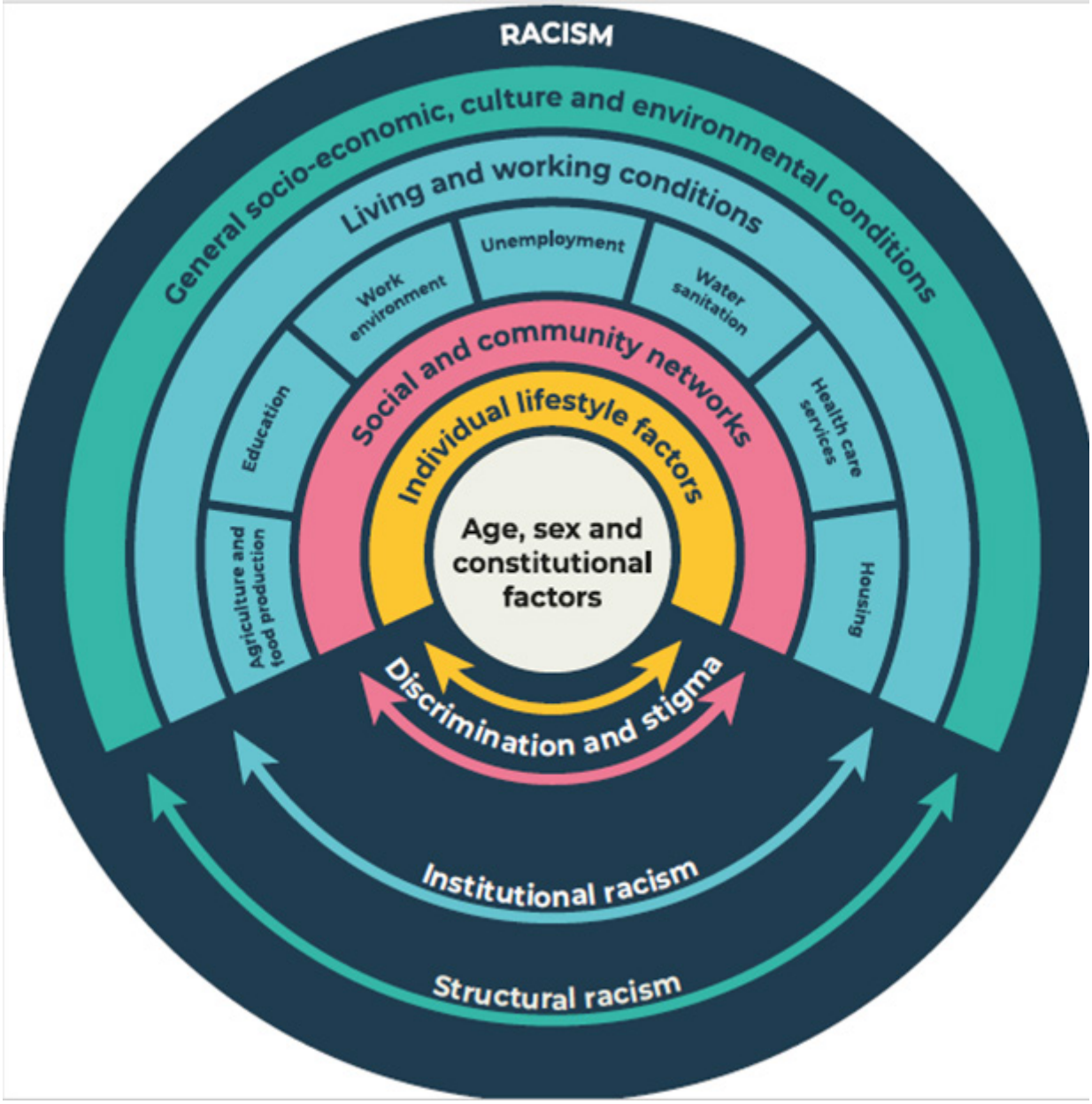

Figure 1 Conceptualising racism integrated with the social determinants of health.[36] Adapted from Dahlgren and Whitehead, showing racism as a driving force for social determinants of health. Although social determinants are universal, racism is one of a range of driving forces that exists in our societies and that acts on these determinants.[37]

Quality assessment/appraisal (tools)

In line with recommendations for umbrella reviews,[26] two authors (JLYY and SP) independently used the AMSTAR-2 tool to evaluate quality of the selected reviews,[44] and quality was taken into account in the synthesis of the evidence. We prioritised interventions reported in reviews that were considered higher quality, or where there was consistent evidence across several reviews.

Data synthesis

We conducted a narrative synthesis due to the nature of the selected reviews, the lack of meta-analyses and heterogeneity of included studies. Narrative synthesis is an approach commonly used for integrating or comparing findings in systematic reviews.[45 46] As outlined above, we used an adaptation of Dahlgren and Whitehead's socioecological model as a framework to guide the synthesis. Steps taken included (1) data extraction (eg, setting, condition, outcome measures, level of intervention) and tabulation, (2) textual description of studies and their main findings, (3) synthesising and grouping findings according to the levels described in the socioecological model (community, individual and healthcare organisation level). These data are described in the results below. The description and discussion of findings focused on implementation in the UK healthcare system.

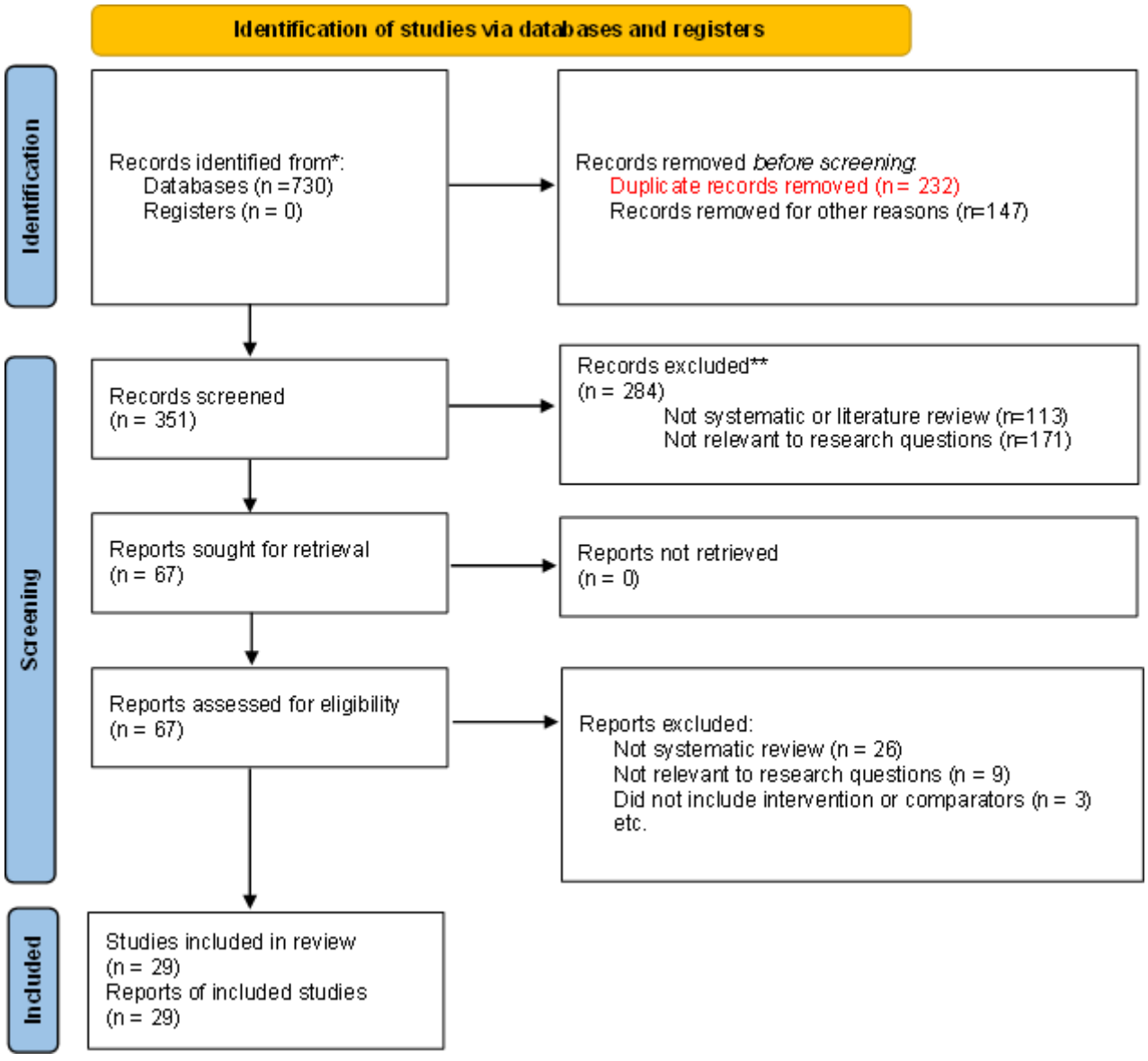

Figure 2 Identification of studies via databases and registers.

RESULTS

A total of 730 records were reviewed at the identification stage, 232 were removed due to duplication and an initial title screen resulted in 351 records where abstracts were reviewed. A total of 67 reviews were selected for retrieval and 29 reviews were included in the final selection.

Of the 29 reviews included in the final review (see figure 1), 26 were from the healthcare sector and 3 from outside of healthcare (education and criminal justice). Seventeen reviews are focused on interventions and one focused on implementation.

Description of included reviews

A total of 29 individual reviews were included. Sixteen reviews specified health conditions in their inclusion criteria (hypertension,[47] cardiovascular disease,[48] cancer screening,[49–51] mental health,[52 53] palliative care,[54 55] HIV,[56] adult obesity,[57] childhood obesity[58] osteoarthritis,[59] maternal and neonatal health,[60] and diabetes[61 62]), eight reviews did not specify and explored health disparities in general[63–69] and five did not focus on health conditions.[41–43 70 71] Nineteen reviews included any ethnic minority (non-white) group,[47–50 53 54 58–64 66 67 69–73] six reviews focused on one ethnic group (black, African, African diaspora or Indigenous peoples[43 52 55–57 70]) and four reviews did not specify ethnic criteria.[41 42 65 74] Eleven reviews did not specify in which countries the interventions had to be based; 13 specified that interventions had to be based in the USA; 2 specified that interventions had to be based in high-income countries, 2 specified that interventions had to be based in Canada, the USA, New Zealand or Australia; and 1 specified England. Twenty-four reviews described interventions which targeted individuals and their communities, 14 reviews described interventions targeting healthcare organisations and 1 described structural interventions (including policies targeting socioeconomic, living and working conditions).

Table 1 Summary of review characteristics (n=29)

Review characteristics	Count (%)
Study setting	
Healthcare	26 (90)
Education	2 (7)
Criminal justice	1 (35)
Health conditions	
Metabolic chronic disease (hypertension, cardiovascular disease, diabetes, obesity)	6 (21)
Cancer screening	3 (10)
Palliative care	2 (7)
Mental health	2 (7)
Non-metabolic chronic disease (HIV, osteoarthritis)	2 (7)
Maternal and neonatal health	1 (3)
Health condition not specified	8 (26)
Did not focus on health	5 (17)
Target population	
Black/African/African diaspora	5 (17)
Indigenous peoples	2 (7)
Any ethnic minority groups	19 (66)
Ethnicity not specified	4 (14)
Level of intervention	
Individual and community	24 (83)
Healthcare organisation	14 (48)
Policy	1 (3)

Two reviews focussed on addressing social determinants of health but through healthcare interventions rather than policy. A summary of characteristics of all included reviews is available in table 1, and a summary of interventions and findings is outlined in table 2.

Critical appraisal

Using the AMSTAR2 criteria (see online supplemental appendix 3), 1 systematic review (3%) was assessed as high quality, 9 reviews (31%) were low quality and 19 (66%) were critically low quality (see online supplemental appendix 4). Methodological strengths across the included reviews were a comprehensive literature strategy (n=27, 93%), study selection completed in duplicate (n=21, 72%), data extraction completed in duplicate (n=17, 59%), details of excluded studies studies (n=12, 41%) and conflicts of interests of authors declared (n=22, 76%). Methodological weaknesses across the reviews were protocol registration (n=4, 14%), risk of bias from individual studies included in the review (n=3, 10%), meta-analytical methods (n=1, 3%), consideration of risk of bias in interpretation of results (n=2, 7%) and assessment of publication bias (n=1, 3%). The AMSTAR2 tool is based on the AMSTAR tool which was designed for randomised controlled trials (RCTs).[44] The revised AMSTAR2 enables appraisal of both randomised and non-randomised studies of healthcare interventions but retains 10 of the original domains, including assessment of risk of bias from unconcealed allocation and lack of blinding, sources of funding of studies and conduct of meta-analysis.[44] This makes it less well suited to the reviews included in this review, including studies where the comparator group is not clearly described and narrative syntheses are used due to heterogeneity of interventions.

Results of individual sources of evidence

A review of the characteristics of the interventions presented in the included reviews is described in online supplemental appendix 4, and a summary of the interventions with some evidence of effectiveness is presented in figure 3.

Effectiveness of interventions

Individual and community level interventions

Patient education and access

The evidence for interventions targeting education and access for ethnic minorities is mixed. Effective patient-targeted interventions were culturally tailored one-to-one education programmes using interpersonal (non-computer-based) skills training, counselling (stress reduction), motivational strategies, social networks such as family members and peer support groups, and group-based health education led by professional staff.[47 61 66] Patient education combined with interventions to improve access and interactions with clinicians may also be effective. A review of colorectal cancer screening found that tailored patient education combined with patient navigation services (telephone outreach), and healthcare professional training in communicating with patients of low health literacy, modestly improved adherence to screening.[51]

A review of non-medical interventions for type 2 diabetes found that HbA1c levels improved significantly with multicomponent interventions which supplemented self-management education with food supplementation, financial incentives, housing relocation with counselling support.[62] Non-medical interventions were more effective if they were integrated into medical care using the electronic medical record.[62]

The evidence for church-based programmes for mental health and obesity is promising. Intervention components include emphasising black culture and spirituality, using churches as a setting, involving trained church mentors, and including prayer.[52 57] However, the evidence is extremely limited due to the small number of studies, small numbers of participants, different types of data and lack of meta-analysis to assess the effectiveness of interventions.[52]

Most other studies of patient education interventions were unable to show evidence of a reduction in ethnic disparities. Limitations included health outcomes not being assessed, no white subpopulation for comparison,

Table 2 Summary of interventions and findings

Citation	Anti-racism intervention	Main findings
Anderson *et al*[66]	Locally recruited coalitions of racial and ethnic minority communities in partnership with social and health service agencies, schools, businesses, etc.	Lay community health outreach worker interventions and group-based health education produced positive effects on health and behavioural outcomes.
Beach *et al*[67]	Most interventions were primary care prevention, most commonly targeting breast cancer screening.	Tracking and reminder systems were effective in improving rates of services such as cancer screening and advance directive completion.
Borkhoff *et al*[59]	All programmes involved patient education on osteoarthritis using a variety of delivery methods.	Most studies were conducted to extend their reach to, and evaluate their benefit in, disadvantaged populations with OA.
Cene *et al*[72]	Health care–based interventions addressing material (eg, food and housing) and social (eg, physical safety) needs that are required for good health.	Intense case management or community health worker/peer mentor outreach found differential outcomes by ethnicity.
Clark *et al*[69]	Structural interventions that affect racial inequities including supplemental income programmes, minimum wage policies, immigration-related policies, and reproductive and family-based policies.	There were clear benefits to policies that improve socioeconomic status and opportunities such as minimum wage policies, and harms from policies that restrict access to abortion or immigration.
Davis *et al*[48]	Interventions to improve cardiovascular disparities were grouped by the vascular risk or condition they address (eg, hypertension and hyperlipidaemia) and by the predominant target of the intervention.	Few studies specifically tested interventions for their effectiveness in reducing ethnic/racial disparities in cardiovascular prevention and care.
Dawson *et al*[70]	University-based educational interventions, vocational training and continuing professional education courses for practicing health professionals.	Authors emphasised the importance of cultural safety and the ability to engage reflexively in the provision of equitable, non-discriminatory care.
Egede *et al*[62]	Clinical interventions addressing one or more social determinants of health, including structural racism, food insecurity, and poor housing.	Interventions with targeted, multicomponent designs that combine both medical and non-medical approaches can reduce risk for and improve clinical outcomes for type 2 diabetes.
Engberg[41]	Multicultural education interventions in higher education including diversity workshops and training, and peer-facilitated interventions.	Most educational interventions are effective in reducing racial bias.
Esan[60]	Interventions to tackle ethnic health inequalities in maternal and neonatal health. Most interventions targeted patients and providers.	Caseload midwifery, and migrants, asylum-seekers and refugee model of care provided evidence of potential effectiveness.
Escribà-Aguir *et al*[49] 2016	Quality improvement (QI) interventions to promote cancer screening among ethnic minorities delivered via the healthcare system.	Results show that peer-based education on culturally targeted patient interventions may enhance effectiveness of interventions.
Glick *et al*[50]	Cervical cancer screening interventions including patient educational materials, health system navigation, low-cost screening and improved access to screening.	There is moderate evidence for telephone support with navigation in increasing the rate of screening.
Fisher *et al*[63]	Interventions using cultural leverage to narrow racial disparities in health care including interventions 1) modifying health behaviours; (2) improving healthcare access; and (3) providing culturally-tailored health information.	Only a limited number of the interventions assessed health outcomes, and the demonstrated effect was not robust.
Florez *et al*[57]	Church-based interventions to address obesity among African Americans and Latinos in the United States.	The use of trained religious organisation volunteers may be associated with more positive weight outcomes.
Hankerson and Weissman[52]	Church-based health promotion programmes (support groups, focus groups and educational sessions) for substance-related disorders and anxiety and depressive symptoms.	Some promising results including improved understanding of mental illness and services.

Continued

Table 2 Continued

Citation	Anti-racism intervention	Main findings
Hassen *et al*[64]	Anti-racist interventions in healthcare settings at the individual level (eg, cultural competency training), interpersonal level, community level (eg, meaningful partnerships), organisational level (eg, strategic leadership), and policy level (eg, workforce policies).	Few studies included complete evaluation findings.
Jones *et al*[54]	Advance care planning, palliative care, and end-of-life care interventions for racial and ethnic underrepresented groups, including educational interventions and community support including peer or patient navigators.	There was significant variation in outcomes making it difficult to compare effectiveness.
Lee-Tauler *et al*[53]	Interventions to improve initiation of mental health care among racial-ethnicminority groups, including (1) Collaborative care, (2) psychoeducation, (3) case management, (4) colocation of mental health services, (5) screening and referral, and (6) a change in Medicare medication reimbursement policy.	Seven studies provided evidence of a reduction disparities in initiation of care.
Loutfy *et al*[56]	Stigma-reducing interventions for African/black diasporic women, including (1) A cognitive intervention to reframe traumatic events, (2) a behavioural intervention designed to enhance HIV-knowledge, (3) a maternal HIV self-care symptoms management intervention, (4) participatory educational exercises.	80% reported reductions in stigma post-intervention.
Marshall *et al*[58]	Obesity prevention in early childhood including modifying language and translations, altering activities to improve suitability and addressing cultural values in the intervention content.	Results were mixed and only one intervention showed evidence of significant change in behavioural outcomes.
McPheeters *et al*[65]	Patient self-management education or provider education on the clinical issue or raising awareness about disparities affecting the target population.	Most studies were unable to show a reduction in disparity.
Mueller *et al*[47]	Interventions to reduce racial disparities in hypertension were categorised by individual/family or social support/provider or team/organisation or practice/local community/national health policy/multilevel.	Interventions targeting barriers at several levels of the ecological model may be more effective.
Naylor *et al*[73] 2012	Interventions to improve care related to colorectal cancer among racial and ethnic minorities. Patient-level interventions (including education and other interventions), patient-level navigation, and provider/system-level interventions.	The dominant colorectal cancer screening promotion interventions tested to date are patient education and navigation.
Paluck *et al*[42]	Prejudice reduction interventions including extended and imaginary contact, cognitive and emotional training, social categorisation, peer influence and dialogue.	The review provides evidence of moderate effect.
Peek *et al*[61]	Diabetes patient interventions involved culturally tailored self-management education. Provider interventions included culturally tailored case management.	On average, the interventions improved quality of care, health outcomes and possibly reduced health disparities in quality of care.
Schill and Caxaj[55]	Cultural safety strategies for rural indigenous palliative care included anticipating barriers to care; shared decision-making; active patient and family involvement; and culturally appropriate communication.	Culturally competent practices improve services but do not improve disparities.
Sumpter *et al*[71]	Strategies for anti-racist teaching in nursing including the use of media, lived experience, reflection and discussion.	Students and faculty can experience deep, structural shifts in how they understand and engage with the world.
Truong *et al*[74]	Interventions to improve cultural competency in healthcare including training/workshops/programmes for health practitioners.	Moderate evidence of improvement in provider outcomes and healthcare access and utilisation.

Continued

Table 2 Continued

Citation	Anti-racism intervention	Main findings
Waller[43]	Interventions to decrease intimate partner violence among black males remanded to treatment including CBT, psychoeducation, Duluth model or gender based psychoeducation, and goal-setting.	Outcomes for black males were worse (higher attrition rates).

CBT, cognitive–behavioural therapy.

the demonstrated effect sizes not being robust, or lack of general conclusions about which interventions work for whom due to a wide range of interventions targeting different health programmes.[48 63 65 66]

Cultural adaptation

The evidence for culturally adapted education interventions for palliative care is promising.[54] Most interventions had significant associations with improved patient engagement, change in attitudes and knowledge of advanced care planning, and congruence in goals of care.[54] One high-quality RCT found that a multilingual online interactive skill-building programme designed especially for diverse patients and carers using video stories, narratives and testimonials to model how to engage in advanced care planning significantly increased documentation of advanced directives and engagement with advanced care planning when the intervention was compared with non-culturally adapted easy-to-read advanced directives.[54] Likewise, culturally adapted education in osteoarthritis self-management shows promise. This includes community involvement in needs assessments and the training of lay leaders to deliver the intervention.[59]

Community partnership-building

Reviews that included interventions targeting community partnership-building found that these interventions contributed to organisational change and improving disparities.[55] Strategies include involvement of patients and families in service planning, reflection about individual and systemic racism, community ownership of services and recognising distinct world views that shape care.[55]

A review of hypertension interventions found several interventions which sought to improve blood pressure control at the community level. These include community screening for African-American males in barbershops which seeks to identify patients with high blood pressure in order to randomise them to motivational interviewing and patient navigator interventions.[47]

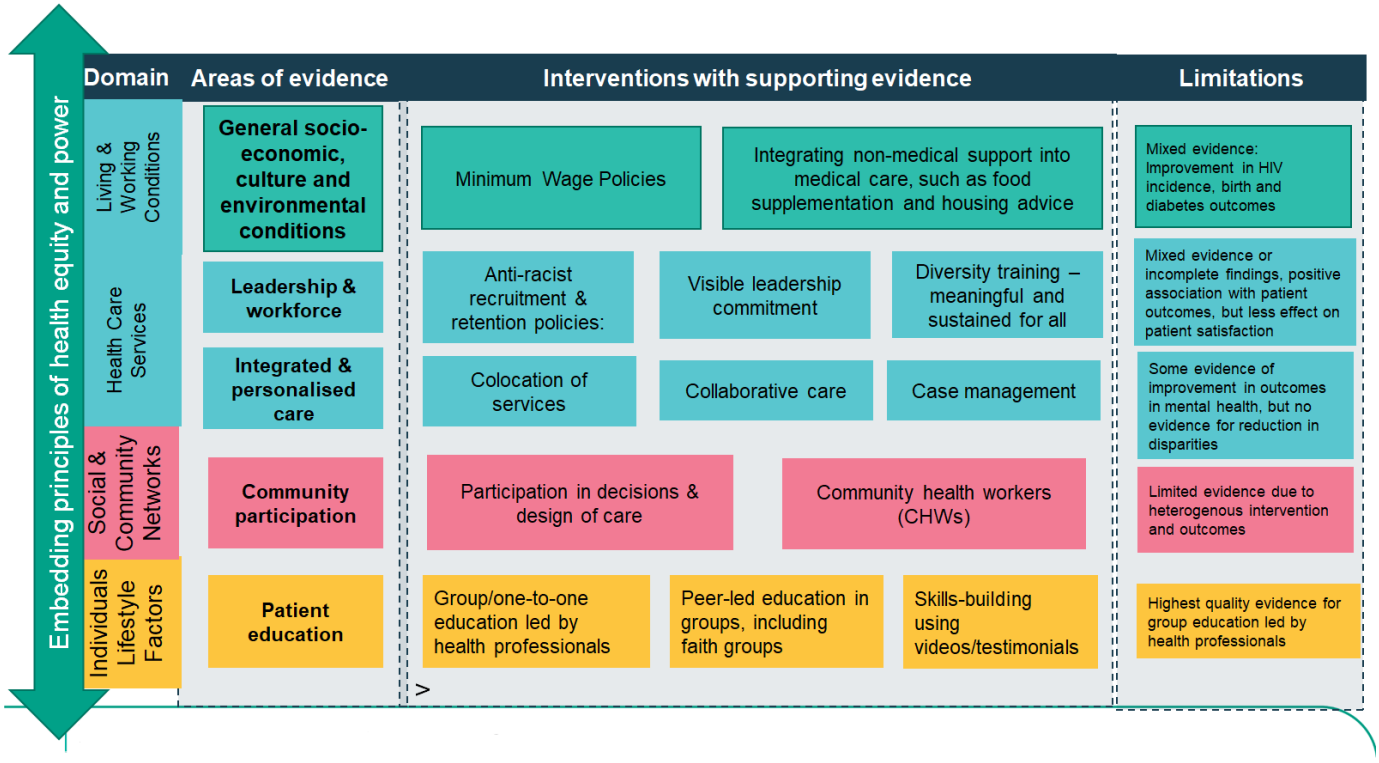

Figure 3 Overview of anti-racist interventions to reduce ethnic disparities in health and care.

Lay community health workers

Lay community health workers (CHWs) compared favourably with broad-scale community and health system interventions.[66] Results from the review of coalition-driven interventions suggested beneficial changes in health behaviour and health status measures when CHWs provided support, but results were not consistent across studies and were quality appraised as 'low-certainty evidence'.[66] Evidence for CHWs in cardiovascular disease is promising. A study of enhanced tracking and follow-up of low-income African-Americans with hypertension by CHWs found that clinic attendance improved from 47% to 65% compared with usual care.[48] Another study demonstrated a 50% reduction in emergency department attendances after employing community health CHWs to work with a group of patients with diabetes and hypertension.[48] A review of social needs interventions found that intense case management or CHWs outreach which provided support with housing, education and employment in addition to health, had differential outcomes by ethnicity.[72]

CHW interventions were found to be heterogenous in terms of approach and outcome measurement. There was little description of the training or characteristics of the CHWs or how this impacted their success. Many studies focused on improved understanding of disease or satisfaction with care, and trends towards improving health behaviours rather than change in health behaviour itself.[63]

Healthcare organisation level interventions

Healthcare organisation level interventions can be grouped into three categories: organisation of care, clinician interactions with patients, and workforce and leadership.

Organisation of care

Interventions targeting organisation of care (collaborative care, case management and colocation of services) were described in two reviews.[53 65] In a review of interventions to improve initiation of mental healthcare, 7 out of 29 studies provided evidence that colocation of primary care and mental health services and collaborative care interventions not only improved mental health outcomes but also contributed to disparities reduction in initiation of care.[53] Findings included increased uptake of psychotherapy or antidepressant use among members of ethnic minority communities compared with white participants.[53] A second review found that collaborative care resulted in greater effects in ethnic minority patients with depression, including depression scores, severity and functioning.[65] Collaborative care was more effective in individuals with less education than in those with more education and in women than in men for some care outcomes in patients with depression.[65] Continuity of care and caseload midwifery were highlighted as policy-driven interventions with potential to tackle ethnic health inequalities in maternal and neonatal health in England,[60] as well as migrant, asylum-seeker and refugee models of care, vitamin D supplementation, health advocacy and culturally adapted cognitive–behavioural therapy (CBT) for South Asian women.[60] However, none of the studies demonstrated a specific reduction in disparity caused by the intervention, partly because few disparities were measurable at baseline.[65]

Clinician interactions with patients

A review of diabetes health disparities found several studies targeting clinician behaviour, the majority of which involved the application of generic diabetes quality improvement initiatives to ethnic minority groups.[61] The interventions typically included practice guidelines, continuing medical education, computerised decision-support reminders, in-person feedback and problem-based learning. The interventions resulted in improved processes of care (HbA1c monitoring, foot care, exercise counselling, etc) and improved diabetes control. None of the interventions included culturally tailored components.[61] However, improved care and control is particularly relevant to ethnic minorities as evidence suggests they are less likely to have access to care and more likely to have worse control of their diabetes.[61] Similarly, a review of provider and organisation interventions described primary prevention interventions mostly involving generic quality improvement activities. These included tracking and reminder systems for healthcare professionals providing cancer screening and end of life care which were found to be effective in improving quality and process of care.[67] This suggests that targeting clinicians for quality improvement in service delivery in areas with higher proportions of ethnic minority populations may be an effective strategy for improving outcomes in these groups.[61] Such targeted approach to a general condition or service provision is in line with a proportionate universalism approach to address health inequalities.[75]

Workforce and leadership

Evidence for workforce and leadership interventions is lacking due to methodological issues in individual studies. One review describing interventions targeting workforce and leadership (diversity training, leadership quality improvement initiatives, and recruitment and retention policies) found that few studies had complete evaluation findings.[64] A second review found mixed evidence for staff diversity and cultural competency training, with a positive relationship between cultural competency training and improved patient outcomes, but less effect on patient satisfaction with care.[74] Two reviews of cultural safety training (as an approach to improving healthcare delivery for Indigenous peoples) and anti-racist teaching (in nursing)[70 71] focused on process rather than outcome and emphasised the importance of engaging in reflexivity and transformative learning for educators as well as learners.[70 71]

The reviews found that overall, there is an overemphasis on individual-centred education and individual behaviour change rather than organisational change, and recommend that focus and resources shift to policies and practices that seek to dismantle institutional and systemic racism through a multilevel approach, where cultural competency training is only one component and not a standalone intervention. The studies also show that

better and more consistent data collection and research methods are required to improve evidence on workforce and leadership training.

Policy level interventions

One review identified structural interventions which addressed social determinants of health as outlined in the WHO Commission on Social Determinants of Health conceptual framework.[76] Interventions included supplemental income programmes, minimum wage policies, nutrition safeguard programmes, immigration-related policies, and reproductive and family-based policies.[69] Overall studies reported mixed effects but there were clear benefits from policies that improve socioeconomic status and opportunities, and harms from policies that restrict access to abortion or immigration. In particular, minimum wage policies were shown to reduce HIV incidence and improve birth outcomes for black populations.[69]

Interventions outside the healthcare setting

Tools and resources for addressing organisational racism have been identified from the education and non-profit sectors and these are described below.

Education

A review by Engberg found that most education interventions in the included studies were effective at reducing racial bias.[41] The evidence was stronger for ethnic and women's studies courses (long-term interventions) than diversity workshops (short-term interventions), and white students were found to benefit more than students of colour.[41] Several limitations of the included studies were highlighted including lack of scales to measure racial bias accurately, reliance on quasi-experimental study designs that are vulnerable to selection bias and reliance on convenience or purposive sampling, which limit generalisability to other populations.[41]

A review of prejudice reduction interventions in higher education (including antibias, diversity and intercultural training) found evidence of moderate effect, but effect sizes were limited in size, scope or duration.[42] Several studies found effects only on some types of outcomes but not others. For example, prejudice reduction interventions were more effective at changing behaviours than attitudes. The studies demonstrated publication bias, and if the studies had been conducted on a larger scale, the analysis would have shown no reduction in prejudice.[42]

Criminal justice

A review of interventions to decrease intimate partner violence perpetration among black males remanded to treatment found that outcomes for black males were worse than for their white counterparts[43] due to the interventions mirroring societal discrimination.[43] The most effective treatments for black males are those that incorporate cultural nuances related to power, marginalisation and differential educational levels, with co-developed goal-setting interventions showing the most promise.[43]

DISCUSSION

We found three levels of interventions based on the socioecological model (figure 1), one operating at the policy level, one at the institutional level and one at the community and individual level. We found only one review of structural interventions targeting socioeconomic, living and working conditions at a policy level, with mixed results. The review showed benefits from minimum wage policies and demonstrable harm from anti-immigration policies.[69]

We found that many of the interventions in service delivery target individuals and involve education, and though the results for educational interventions were mixed, group-based health education led by professional staff and culturally tailored interventions were supported by the highest quality and most consistent evidence to reduce ethnic inequalities. The evidence from the criminal justice review[43] emphasises that interventions are likely to fail if they are not carefully co-designed to avoid the perpetuation of societal marginalisation and unequal power dynamics experienced by black men.

Culturally tailoring interventions, together with collaborative community partnerships (CHWs and service user participation in developing and delivering health services), provides agency to disadvantaged groups and allows them to contribute to services that meet their needs. Empowerment and inclusion were also evident in the systematic review to reduce recidivism, without which there is potential to increase inequalities in all aspects of planning and delivery of care.[77]

Integrated care with models of collaboration between different disciplines, co-location of services, continuity of care and case management to provide a more patient-centred approach, was also identified as effective in treatment for minority ethnic communities but could not demonstrate reduced inequities due to lack of baseline measurement. Complex systems can be difficult to navigate, particularly for those with fewer resources or language constraints. Simplifying access through integrated services can overcome some of the barriers.

Multicomponent interventions which involve a combination of individual (patient education), organisational (peer navigators, case management, lay health workers) and structural components (support with nutrition, housing, employment and finance) also showed evidence of benefit.[51 62 72]

For organisational interventions, the reviews found that overall, there is an overemphasis on patient education and individual behaviour change rather than organisational change and recommend shifting focus and resources to policies and practices which seek to dismantle institutional and systemic racism through a multilevel approach, where cultural competency training is only one component and not a standalone intervention. Other components would include ensuring a leadership commitment, a range of workforce interventions to address unfair recruitment, retention and promotion practices, and anti-racist quality improvement initiatives.

Comparison to previous literature

There have been several publications in recent years on tackling racism in healthcare, but some did not explicitly aim to address ethnic health inequalities. With regard to the findings on individual and community-level interventions our findings are consistent with research on the role of racism in vaccine inequalities in ethnic minority communities. The literature suggests the need for cultural adaptation of health information, authentic community outreach through partnership with trusted community workers, and interventions and policies which empower communities.[78–80]

With regard to organisational-level interventions, our findings on organisation of care (collaborative care, case management and colocation of services) are consistent with reviews of healthcare interventions addressing inequalities experienced by Indigenous populations.[81] However, there is poor evidence of improvement in health outcomes from reviews of intersectoral collaborative care in general populations.[82 83] The authors suggest local collaborations should be understood within their macrolevel socioeconomic contexts, and as one intervention within a wider system of population health improvement programmes.[83]

Studies addressing clinician behaviour and interaction have focused on cultural competency training as a way of improving knowledge, skills, behaviours and health outcomes for ethnic minority communities. Reviews suggest that evidence from improvement in ethnic health inequalities is lacking, in part due to a limited number of high quality studies.[84 85]

In terms of interventions targeting the healthcare workforce and leadership, our findings are consistent with a review by Kalra and colleagues who examined leadership interventions for black and minority ethnic staff in the NHS.[86] The authors found a range of initiatives to increase the number of black and minority ethnic staff in senior management positions. Consistent with our findings, most of the interventions were focused on individuals rather than institutional or organisational change.[86]

Consistent with our findings on multilevel strategies, a recent Lancet series on racism, xenophobia, discrimination and health applied an anti-racist frame on global health and health inequalities[7 24] and recommends taking an anti-racist approach at all socioecological levels, but placed less emphasis on community participation compared with our findings. We took a narrower approach to distill key learning that organisations could action, but would take the historical, intersectional and rights into considerations to contextualise how actions and interventions could be taken forward. Overall, this review strengthens and integrates a range of previous studies to provide an evidence base for organisations to take an anti-racist approach to address ethnic health disparities.

Strengths and limitations

This review employed a rigorous review process with a comprehensive search strategy across multiple databases and dual independent review. Our categorisation and synthesis of results used the socioecological model, which worked well to understand the different levels in which the interventions were acting. There were also several limitations to our review. First, although we selected systematic reviews, meta-analyses and scoping reviews, many were considered low or critically low in quality due to issues in reporting, such as not reporting the reviewed studies' funding sources, or listing excluded studies, and methodological limitations, including small sample sizes, and lack of direct comparator population groups. We note that appraisal tools to assess the quality of reviews are based on biomedical standards, derived from a reductionist lens to infer causality in scientific studies. Using this lens can downgrade the value we place on studies of health that draws on social factors, such as race equity. Designing instruments that take into account both social science and biomedical science perspectives is an important development needed in this area.

We limited reports to peer-reviewed literature in English, to facilitate access, but this may have reduced the scope of our findings. We may have also missed important findings from other sources. Therefore, relevant literature that were identified during the selection process, but did not meet the inclusion criteria were also reviewed and considered alongside the selected reviews to provide context and additional insights which may have mitigated this risk. Publication bias occurs when 'the direction or strength of a study's outcome influences whether it is published or not'.[42] Some of the reviews highlighted that they included smaller studies which generated larger SEs. If the review had accounted for publication bias, it is likely that less positive results would have been seen overall. Heterogeneity of intervention approaches, study designs and reporting presented in the included articles made comparing results difficult. For the individual interventions, there was limited reporting of cultural adaptation, implementation and also lack of comparison with the white population, which limited our understanding of the impact on ethnic health inequalities. The heterogeneity of intervention approaches also informs implementation. Different components of the health system influence health outcomes, and findings from included reviews suggest that the most appropriate approach to implementation would therefore be a related set of different interventions targeted to different levels of the health system.[74]

Implications for policy, research and practice

Healthcare systems in London are keen to act on ethnic health inequalities and have already implemented the NHS workforce race equality strategy and metrics, with the London healthcare system going even further in their support of the London workforce.[87] Based on this review, we recommend five areas of action for healthcare organisations, with example

actions to guide implementation. An implementation framework has been conceptualised in one of the included studies by Hassen *et al*.[64] Our recommendations are consistent with this implementation framework, in that they propose multilevel interventions which address personally mediated racism and institutional racism, as listed below (and illustrated in figure 3):

Interventions targeting personally mediated racism

- Although the evidence on interventions targeting workforce and leadership was lacking, the reviews that did include relevant studies recommend a focus on policies and practices that seek to dismantle institutional and systemic racism through a multilevel approach.[64 74] Approaches include cultural competency training, embedding cultural competency in organisational policy documents such as position statements and strategic plans, commitment among the leadership of the organisation to improve patient outcomes, and embedded key performance indicators supported by allocated resources.[74]
- Evidence from reviews also suggests that organisational and human resources recruitment and retention policies, both internal and external, can contribute to racial health disparities. When explicit anti-racist human resources policies do not exist, these should be developed.[74] Examples are specific processes endorsed by leaders to investigate and address allegations of racism in the workplace[64]

Interventions targeting institutional racism

Organisational level

- The evidence for interventions targeting organisation of care (collaborative care, continuity of care, case management and colocation of services) was stronger suggesting that providing health programmes based on more integrated patient-centred care with an anti-racism focus may be effective.[53 65]

Community level

- Community participation is needed in the decisions, design, delivery and evaluation of services. Building trust and capacity for communities to participate can support efforts to reduce health inequalities. One approach is community coalitions. These consist of members of citizen groups and public and private organisations that are characterised by representation from multiple sectors and are involved in bottom-up planning and decision making.[66] One review provided evidence of benefit from lay community health outreach workers and group-based health education led by community coalitions. However, there is inadequate information on characteristics of the coalitions to provide an explanation for the underlying mechanisms of beneficial effects.[66]

Policy level

- One review included studies targeting upstream policy level changes (including employment, nutrition and housing). Many healthcare organisations in the UK are anchor institutions, which can play a significant role in the social, economic and environmental conditions of communities within which they are situated.[88] Commitment to anchor principles, particularly from areas with high proportions of ethnic minority groups, can support local ethnic minority communities. Examples from included reviews include community health programmes which provide funding to work with supermarkets and restaurants to offer lower fat food options, and to improve community facilities, schools and housing.[66] Minimum wage policies also showed some evidence of improving outcomes in ethnic minority communities likely due to the intersection and structural nature of low income among ethnic minority groups. Integration of non-medical interventions with medical interventions also showed promise and is observed in social prescribing initiatives in the UK.

In terms of approaches to evaluation, new methods are needed. There was a lack of clear evidence of the impact on ethnic health inequalities in most of the studies, due to lack of baseline or ethnicity data or comparison with the white population. Planned evaluation and better data collection is an important consideration for next steps, including better coordination between healthcare providers to allow more standardised ways of reporting outcomes and processes to understand impact on communities. New methods are also needed which more meaningfully build the connections between health and race equity. Recommendations include avoiding the use of race as a proxy for racism; intersecting race with other factors that capture intersectionality; embedding co-production with community members with lived experience of racism in evaluation design and conduct, collecting qualitative as well as quantitative data; multiple outcome measures being used over sufficient time, engaging with discourse from the humanities and social sciences and practising researcher reflexivity.[89]

CONCLUSIONS

This umbrella review represents, to our knowledge, the first umbrella review of interventions to address ethnic health disparities with an anti-racist approach. We have made five recommendations for healthcare organisations. These include multilevel interventions targeting personal and institutional racism. We emphasise that the structural nature of racism will require organisations and systems to change and embed an anti-racist lens in all policies, rather than relying on change at the individual level alone.

We also recognise the need to take decolonisation, social justice, intersectionality and trauma-informed approaches in anti-racism. Our recommendations are not a complete list of activities, but a strategic framework from which to start building programmes in collaboration with communities. The interventions outlined can help organisations to make a start on tackling ethnic health disparities.

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ORCID iDs
Jennifer L Y Yip http://orcid.org/0000-0003-3788-7170
Shoba Poduval http://orcid.org/0000-0002-3049-123X

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