



Understanding the fundamental role of racism in ethnic inequities in COVID-19 vaccine hesitancy

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UNDERSTANDING THE FUNDAMENTAL ROLE OF RACISM IN ETHNIC INEQUITIES IN COVID-19 VACCINE HESITANCY

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KEY POINTS

- Ethnic inequities in COVID-19 vaccine hesitancy have been reported in the United Kingdom and elsewhere. Explanations have mainly focused on differences in the level of concern about side effects and in lack of trust in the development and efficacy of vaccines.
- In this briefing, we propose that racism is the fundamental cause of ethnic inequities in vaccine hesitancy. We discuss how racism at the structural and institutional level has shaped the landscape of risk for the stark ethnic inequities we've seen during the coronavirus pandemic, and in relation to COVID-19 vaccine hesitancy.
- We empirically examine some of the pathways we propose using data from the UK Household Longitudinal Study. Findings show that institutional-level factors (socioeconomic position, area-level deprivation, overcrowding) explained the largest part (42%) of the inequity in vaccine hesitancy for Pakistani or Bangladeshi people, and community-level factors (ethnic density, community cohesion, political efficacy, racism in the area) were the most important factors for Indian and Black groups, explaining 35 per cent and 15 per cent of the inequity, respectively.
- Our findings suggest that if policy intervened on institutional and community-level factors – shaped by structural and institutional racism – considerable success in reducing ethnic inequities might be achieved.

Introduction

Rates of COVID-19 vaccination uptake have not been equal across ethnic groups in the UK (MacKenna et al., 2021; Robertson et al., 2021), which could further exacerbate ethnic inequities in COVID-19-related outcomes (Nazroo and Bécaries, 2020). Ethnic inequities in vaccine uptake may be the result of unequal and insufficiently tailored distribution of vaccines (Corbie-Smith, 2021), as well as greater vaccine hesitancy among some minoritized ethnic groups (Freeman et al., 2020; Robertson et al., 2021; SAGE, 2020; Woodhead et al., 2021; Woolf et al., 2021). Explanations offered for ethnic inequities in vaccine hesitancy have been wide-ranging and have mainly focused on differences in the level of concern about side effects (ONS 2020) and in lack of trust in the development and efficacy of vaccines (Robertson et al., 2021).

In this briefing, we propose that racism is the fundamental cause of ethnic inequities in vaccine uptake. We first detail the mechanisms by which racism at the structural and institutional levels leads to higher vaccine hesitancy among minoritized ethnic groups, and then describe analyses using data from the UK Household Longitudinal Study (UKHLS) to empirically examine some of these pathways.

Racism as the fundamental cause of vaccine hesitancy in minoritized ethnic groups

Racism is a complex system of structuring opportunity and assigning relative value based on phenotypic characteristics, unfairly advantaging some ethnic groups and disadvantaging others (Jones, 2000). At the structural level, racism maintains the racial order (Bonilla-Silva, 1997), and ensures production and continued reproduction of ethnic inequities. The intricate and effective foundations of structural racism support and give rise to institutionalized and individualized practices in subtle, invisible ways, leading to what Bonilla-Silva refers to as 'racism without racists' (Bonilla-Silva, 2006). Structural violence is embedded into social, political, legislative and economic systems leading to and being reinforced by chronic disinvestment in minoritized ethnic communities across a wide range of systems related to public planning and the built environment, housing, education, employment, criminal justice, health care and media, all of which have had a role in structuring the stark ethnic inequities in COVID-19-related outcomes (Nazroo and Bécaries, 2020).

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Practices of structural racism are rendered invisible through their gradual enactment over time. They also enable racism at the institutional level, which in turn amplifies the impact of structural racism, resulting in stark ethnic inequities in socioeconomic outcomes at the individual and neighbourhood levels. We argue that structural racism, producing ethnic inequities in public planning and the built environment, housing, education, employment, criminal justice, health care and the media, has shaped the landscape of risk (Kelly, 2005) for higher vaccine hesitancy among minoritized ethnic groups by influencing discriminatory policies and practices, and producing and maintaining inequities across institutional settings.

Institutional racism perpetuates differential access to goods, services and opportunities within institutions (Jones, 2000), resulting in several institutional-level outcomes related to ethnic inequities, including with regards to individual and area-level deprivation. Studies on vaccine hesitancy have documented the role of socioeconomic factors at the individual and area level in patterning inequities (MacKenna et al., 2021; Murphy et al., 2021; Robertson et al., 2021). Studies that have examined other COVID-19-related outcomes, including infection and mortality, have found similar associations between socioeconomic disadvantage and poorer outcomes (Mathur et al., 2021). These studies have centred the role of socioeconomic disadvantage as the primary cause of vaccine hesitancy or other COVID-19 outcomes, without considering the systems and processes disadvantaging minoritized ethnic groups, and producing socioeconomic inequities. We make these relationships explicit. As we described earlier, racism (both structural and institutional) patterns both ethnic inequities in socioeconomic outcomes and area-level deprivation. Institutional racism in one sector or domain (e.g., education, the criminal justice system, urban planning) reinforces it in other sectors (e.g., employment, housing), forming a comprehensive, interconnected system that produces and maintains ethnic inequities (Bailey et al., 2017). We therefore emphasize the role of institutional racism, and the discriminatory policies and practices it enables, produces and promotes, in patterning socioeconomic inequities (income, education, employment) and area-level deprivation (e.g., limited transport, journey time and cost, geographical barriers, limited distribution of vaccines), which have been associated with vaccine hesitancy.

Another key construct that we associate with institutional racism is historical misinformation leading to mistrust. Studies show that participants who report increased hesitancy are also more likely to report mistrust in government officials, scientists, and health care professionals (Bhanu et al., 2021; Hassan et al., 2021; Lindholt et al., 2021; Murphy et al., 2021). For minoritized ethnic groups, mistrust in these

institutions arises from a legacy of abuse in research, experiences of unfair treatment in healthcare, pernicious media misinformation (including social media) and governmental responses to events that have detrimentally impacted minoritized ethnic communities. In the UK, this includes events such as the Grenfell Tower catastrophe and the Windrush Scandal.

At the community level, we consider the health-promoting and protecting effects, including in relation to vaccine hesitancy, that living in diverse communities has for minoritized ethnic groups. A large body of research has shown that once the concentration of poverty and disadvantage in the neighbourhood has been adjusted for, the residential concentration of ethnic minority people, or ethnic density, has been associated with protective effects on health and health behaviours, a so-called ethnic density effect (Bécares et al., 2017; Bécares et al., 2012; Halpern and Nazroo, 2000; Shaw et al., 2012). Positive health outcomes associated with ethnic density are attributed to the protective and buffering effects from the direct or indirect consequences of discrimination and racial harassment (Bécares et al., 2009; Bécares et al., 2012). Other mechanisms include enhanced social cohesion, mutual social support, a stronger sense of community and belongingness, and increased political efficacy (Bécares et al., 2013; Bécares and Das-Munshi, 2013; Bécares et al., 2011; LaVeist, 1992, 1993). Ethnic density may be a protective factor against vaccine hesitancy because of the increased social capital and social cohesion that it fosters (Bécares et al., 2011). Promotion of vaccination by members of trusted networks, and involvement of voluntary, faith, community and charity organizations in vaccination efforts has improved vaccine confidence and uptake rates among minoritized populations (Lott et al., 2020).

Empirical examination of theoretical framework centring racism as fundamental cause of ethnic inequities in vaccine hesitancy

We use nationally representative data from the UKHLS to examine some of the associations we have described above. We document empirically how racism, at the structural and institutional level, patterns ethnic inequities in vaccine hesitancy.

Due to the limitations of secondary data analyses we are not able to empirically examine all constructs we've discussed above, nor examine variables that measure structural racism directly. However, we can explore how several of the concepts proposed

are associated with ethnic inequities in vaccine hesitancy. In particular, we can capture related constructs at the institutional and community levels that are conceptualized as direct outcomes of structural and institutional racism (for example, area-level deprivation and socioeconomic inequity at the institutional level). We also take into account demographic variables and several health outcomes.

At the institutional level, we use four measures of socioeconomic position (SEP): subjective financial situation; car use, which in addition to acting as an indicator of SEP, may be an indicator of participants' ability to travel to vaccination centres; housing tenure; and highest educational degree attained. We also include a measure of area-level deprivation (2019 Index of Multiple Deprivation) and a measure of overcrowding.

At the community level, we include four variables to capture relevant constructs: ethnic density, neighbourhood cohesion, political efficacy and racism in the participant's neighbourhood. We operationalize ethnic density as the proportion of non-White British people in the English 2011 Census for each participant's neighbourhood. We measure neighbourhood cohesion with a summary indicator that combines variables that asked about interactions between people in their neighbourhood. To measure political efficacy we include four variables capturing participants' own competency in understanding and participating effectively in politics, and beliefs about the responsiveness of government authorities to citizens' demands. We assess racism in the participant's area with a variable that asked respondents how common insults or attacks to do with someone's race or colour are in their area.

We also include several demographic variables known to be associated with vaccine hesitancy: age; gender; partnership status; living with school-aged children; living with a person over 70; and nativity.

We include five measures of health capturing health behaviour, physical health, mental health and social wellbeing.

We use the same measure of ethnicity as that used in the 2011 Census question, which includes 18 different categories. The two largest ethnic groups, white British and Indian, were kept as distinct groups. Because we have small sample sizes in other ethnic minority groups, we have to aggregate them as follows: Pakistani or Bangladeshi; Black (including Caribbean, African and Other Black); Other White; Mixed; Other Asian; and Other ethnicity.

We assess vaccine hesitancy with a single variable that asked respondents how likely or unlikely they would be to take a vaccine against COVID-19.

Our sample includes 7,759 UKHLS participants living in England. We assess the relationship between vaccine hesitancy and ethnicity taking into account

participants' age and gender, and then explore the proportion of ethnic inequity in vaccine hesitancy that is explained by each of the domains of racism at the institutional and community-level once both age and gender had been accounted for.

Ethnic inequities in vaccine hesitancy

Unadjusted vaccine hesitancy ranges from 12 per cent for white British people to 56 per cent for Black people (see Figure 1). Taking into account age and gender reduces the difference in vaccine hesitancy between the white British people and nearly all ethnic groups, but a substantial difference still remains – this is the difference that needs to be explained by the factors related to racism we describe above.

Empirical investigation of potential explanations of ethnic inequities in vaccine hesitancy

Figure 2 shows the percentage of ethnic inequity in vaccine hesitancy explained by the institutional and community constructs that we linked to racism in the introduction, as well as the other constructs we adjust for (age, gender, demographic characteristics and health).

The percentage of ethnic inequity in vaccine hesitancy explained by institutional factors varies across groups, explaining 41.6 per cent of the difference for Pakistani or Bangladeshi people, 20.2 per cent for Indian people, and 12.9 per cent for Black people.

Community-level factors explain more than 30 per cent of the ethnic inequity in vaccine hesitancy for Indian and Pakistani or Bangladeshi people, and are the most important explanatory factors for the Black group.

The demographic variables (country of origin, partnership status, presence of an older person in the household) explain a modest percentage of inequities of vaccine hesitancy among minoritized ethnic groups, ranging from 5.6 per cent for Pakistani or Bangladeshi people, to 18 per cent for Other ethnicities. Health outcomes are relatively unimportant in explaining vaccine hesitancy, explaining at most only 8.6 per cent of the difference (for the Mixed ethnic group).

Finally, the model containing all variables explains a reasonably high proportion of ethnic inequities for nearly all ethnic groups, apart from the Other White ethnic group. The highest proportion of inequity potentially explained is for Pakistani or Bangladeshi people (47.2%), with around a third for Indians and a quarter for Black people. The full model explains less than 10 per cent of the ethnic inequity in vaccine hesitancy for members of the Other White group.

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Figure 1: Percentage of COVID19 vaccine hesitancy by ethnic group before and after adjusting for age and gender

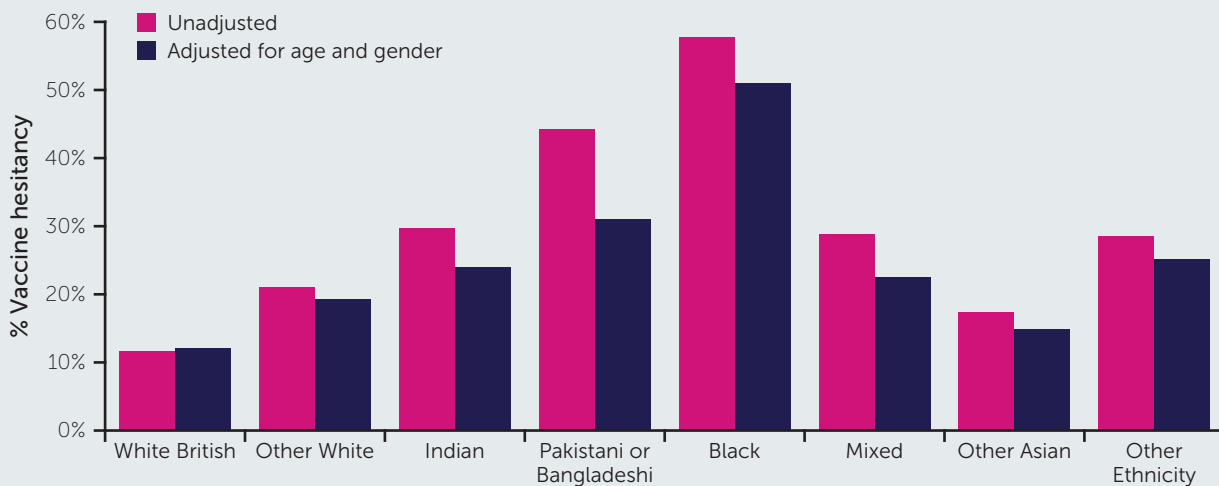


Figure 2: Percentage of ethnic inequities in COVID19 vaccine hesitancy explained by each racism domain



Recommendations

Our findings suggest that if policy intervened on key institutional and community-level factors, considerable success in reducing ethnic inequities might be achieved. These factors can be modified by policy and are not related to individual-level choices or behaviours – a focus of most nudging-style policy in the UK – but rather are factors shaped by structural and institutional racism, as described here. Structural and institutional racism have rightly undermined the trust of minoritized ethnic communities in public-facing institutions. Challenging and changing racist structures and systems is crucial to addressing ethnic inequities, and demonstrating that the actions and intentions of government and researchers are trustworthy. Short to

mid-term policies that aim to redress ethnic inequities in vaccine hesitancy or other COVID-19-related outcomes, should therefore focus on key institutional and community determinants of health, including reducing inequities in education, housing tenure, area-level deprivation or overcrowding. In the long term, focusing on these factors alone will not suffice. Addressing the production and reproduction of ethnic inequities and dismantling the racist structures and systems that reproduce and maintain these inequities require changing laws, policies and practices in ways that produce sustained or fundamental change (Braveman et al., 2022).

For access to the full paper please see: <https://www.sciencedirect.com/science/article/pii/S235282732200129X>

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