



Exploring COVID-19 Vaccine Confidence with People from Black and Asian Backgrounds in England

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Abstract

Aims Little research has examined factors underlying COVID-19 vaccine hesitancy or refusal in Black and Asian individuals in England, among whom hesitancy tends to be higher than in the general population. This qualitative study aimed to gain an understanding of factors affecting hesitancy in Black and Asian individuals in England, to help address concerns about having the vaccine.

Method Ninety-five participants (51 women, 42 men, 2 other; 58% were aged between 30 and 49) recruited via a market recruitment agency, local Healthwatch networks, and using a snowballing method, participated in four activities on an online engagement platform, sharing their attitudes towards the COVID-19 vaccine roll-out, and factors shaping their beliefs and concerns, over 5 weeks from April to March 2021.

Results Inductive thematic analysis revealed five themes: (1) a variety of views on the COVID-19 vaccine, (2) targeted messaging for Black and Asian people as counterproductive, (3) confusion over the purpose of the vaccine roll-out, (4) hesitancy to take the vaccine, and (5) local networks as a trusted source of information.

Conclusions Our findings suggest that respecting individuals' agency, transparency of information provided, and the independence of the bodies providing this information are important. Instead of targeted messaging, local networks should be used in campaigns to increase COVID-19 vaccine uptake among Black and Asian individuals.

Keywords COVID-19 · Vaccine hesitancy · Ethnic minorities · Vaccine acceptance

Introduction

The COVID-19 vaccination programme has been rolled out rapidly across Europe. In the United Kingdom (UK), 73.9% of the population was fully vaccinated as of April 2022,

74.6% in England alone [1]. However, many people delay or refuse vaccination despite vaccine availability. Vaccine hesitancy is complex and context-specific, varying across time, place, and vaccines. It is influenced by factors such as complacency, convenience, and confidence [2]. Vaccine acceptance and uptake among Black, Asian, and minority ethnic individuals are lower than in the general population [3–6]. Low vaccine acceptance means higher infection rates for a range of diseases in communities that are often already disproportionately affected by a range of health inequalities. However, the reasons for vaccine hesitancy and low uptake have not yet been extensively explored within Black and Asian individuals, who are particularly susceptible to COVID-19. Surveys by the Royal Society for Public Health [7] and the Office for National Statistics (ONS) [8] conducted before the vaccine roll-out indicate that only around half of all Black, Asian, and minority ethnic individuals would accept the vaccine if offered. More recent data from the ONS, published in June 2022, indicates that COVID-19

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vaccination rates continue to be the lowest for ethnic minority groups, particularly among Black Caribbean, Black African, Pakistani, and Bangladeshi individuals [9].

To date, little research has examined factors underlying COVID-19 vaccine hesitancy or refusal in Black and Asian individuals. These have been examined in Black, Asian, and minority ethnic healthcare staff, with higher levels of hesitancy than among healthcare staff generally [10]. Medical mistrust [11, 12] and a lack of trust in vaccines, particularly among Black respondents [2], have been cited as a common reason for hesitancy. Trust is further diminished by systemic racism and discrimination and negative experiences within a healthcare system that may lack cultural sensitivity [13].

Residential segregation, which is most prevalent for the Bangladeshi and Pakistani communities in the UK [14], impacts on health and access to health-enhancing resources in many ways, serving to increase mistrust [13]. The Commission on Race and Ethnic Disparities Report [15] recommends building trust between communities and the institutions serving them, to meaningfully address disparities between different ethnic groups in the UK. The UK's history of colonialism and racism still impacts on the experience of individuals and communities outside of the white majority. Issues such as the make-up and governance of the National Health Service (NHS) [16] and the lack of diversity in clinical trials [17] and a more recent focus on health inequalities [18] are issues magnified throughout the COVID-19 pandemic. People from ethnically diverse communities are especially susceptible to COVID-19, due to a combination of factors affecting these communities, including socioeconomic factors, barriers towards accessing health services, and comorbidities affecting specific ethnic groups disproportionately [19]. It is therefore critical to understand what drives vaccine hesitancy in these communities.

Considering the lower uptake among people from Black and Asian backgrounds, we sought to explore vaccination barriers among Black and Asian people as the COVID-19 vaccine roll-out progressed. At the time of the research, the vaccine roll-out was entering a new phase trying to reach younger populations who may perceive less need to get vaccinated [20]. Thus, the project aimed to gain an understanding of factors affecting COVID-19 vaccination hesitancy in Black and Asian individuals, and what they perceived to be lacking in the current roll-out strategy, to help address existing concerns about having the vaccine. Although there is literature examining COVID-19 vaccine hesitancy in the general UK population using theoretical frameworks such as protection motivation theory [21], there is comparatively little literature focusing on COVID-19 vaccine acceptance among minority ethnic groups. The current study was therefore exploratory in nature and aimed to answer the research question of which

factors affected COVID-19 vaccine hesitancy in Black and Asian individuals in England.

Materials and Methods

Design

The qualitative project was designed and delivered by Healthwatch England, an independent champion for people who use health and social care services, in collaboration with Traverse, an independent research organisation, and the NHS Race and Health Observatory. An online engagement platform was used to host the research project. Participants who were recruited and met the screening criteria were invited to register on the platform and create a profile.

The study ran for 5 weeks between March and April 2021, during which participants were required to complete four activities relating to their opinions of the COVID-19 vaccine. The variety of activity types and the flexibility in design options available meant the activities were iteratively designed on a weekly basis. Two online discussions took place with participants during the 5 weeks to explore in more detail the insights being shared on the platform.

Participants

Participation in this project was incentivised via a payment of up to £130. To engage with members of the population who do not usually take part in market research, 100 participants were recruited via (1) a professional market recruitment agency (60 participants) and (2) a snowballing strategy, identifying and approaching existing community groups who helped spread the word, sharing information about the project on social media and local Healthwatch partners sharing details about the project with their networks (40 participants). Individuals were recruited by the market recruiters via social media and their own database of potential participants.

The recruitment materials explicitly invited Black and Asian people to participate. All prospective participants completed a screening questionnaire to express an interest in taking part in the project, which assessed participant demographics and their current attitudes towards the COVID-19 vaccine. In total, 100 participants were invited to register for the platform, and 95 (51 women, 42 men, 2 other) ultimately participated in the online activities. Most (58%) participants were aged between 30 and 49. Table 1 displays participant demographics.

Table 1 Participant demographics ($N=95$)

Demographic variable (%)		
Age	18–29	24 (25)
	30–49	55 (58)
	50–69	14 (15)
	70+	2 (2)
	Total	95 (100)
Ethnicity	Any other Asian ethnic background	1 (1)
	Any other Mixed ethnic background	1 (1)
	Other—please specify	1 (1)
	White and Asian	1 (1)
	White and Black African	1 (1)
	White and Black Caribbean	1 (1)
	Any other Black ethnic background	2 (2)
	Bangladeshi	16 (17)
	African	22 (23)
	Pakistani	24 (25)
	Caribbean	25 (26)
	Total	95 (100)
	Gender	Female
Male		42 (44)
Other—please specify		2 (2)
Total		95 (100)
Religion or belief	Christian	37 (39)
	Muslim	44 (46)
	No religion or belief	10 (11)
	Other—please specify	4 (4)
	Total	95 (100)
Would get COVID-19 vaccine if offered	Definitely would	3 (3)
	Probably would	10 (11)
	Not sure	35 (37)
	Probably not	28 (29)
	Definitely not	8 (8)
	I have already received the vaccine	11 (12)
Total	95 (100)	
Social grade*	AB	8 (8)
	C1	62 (65)
	C2	6 (6)
	DE	16 (17)
	Unknown	3 (3)
	Total	95 (100)

*Social grade was based on participants' employment status, education level and home ownership status. The National Readership Survey demographic classification [22] was used. *AB*, higher and intermediate managerial, administrative, professional occupations; *C1*, supervisory, clerical and junior managerial, administrative, professional occupations; *C2*, skilled manual occupations; *DE*, semi-skilled and unskilled manual occupations, unemployed, and lowest grade occupations

*According to the National Readership Survey demographic classification [22]

Project Description, Materials, and Procedure

An online platform was used to host the research project. The four activities on the platform were designed to allow participants to share their attitudes towards the COVID-19 vaccine roll-out and the various factors shaping their beliefs and concerns. Some activities encouraged participants to share multimedia, allowing them to upload videos or images to add context to their response. Participants were also required to write some words to accompany the multimedia they uploaded, including a description of the image or video, why they felt it was important, and how it affected their attitudes towards getting the COVID-19 vaccine. Other activities involved typing responses into an open text box, and there was a 'fill in the blanks' activity which involved participants filling in blanks contained in statements in relation to their trusted sources of information on the COVID-19 vaccine.

Table 2 shows a breakdown of the four activities, with some examples of the questions posed to participants. Each activity took approximately 15 minutes to complete and was open for 5 days. Following the completion of these activities, two 90-minute online workshops took place for participants to discuss their responses with each other and the researchers.

The authors adhered to the Social Research Association and Market Research Society ethical guidelines, and the study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. Informed consent was obtained from all participants. The study was reported according to the Standards for Reporting Qualitative Research (SRQR) [23].

Analysis

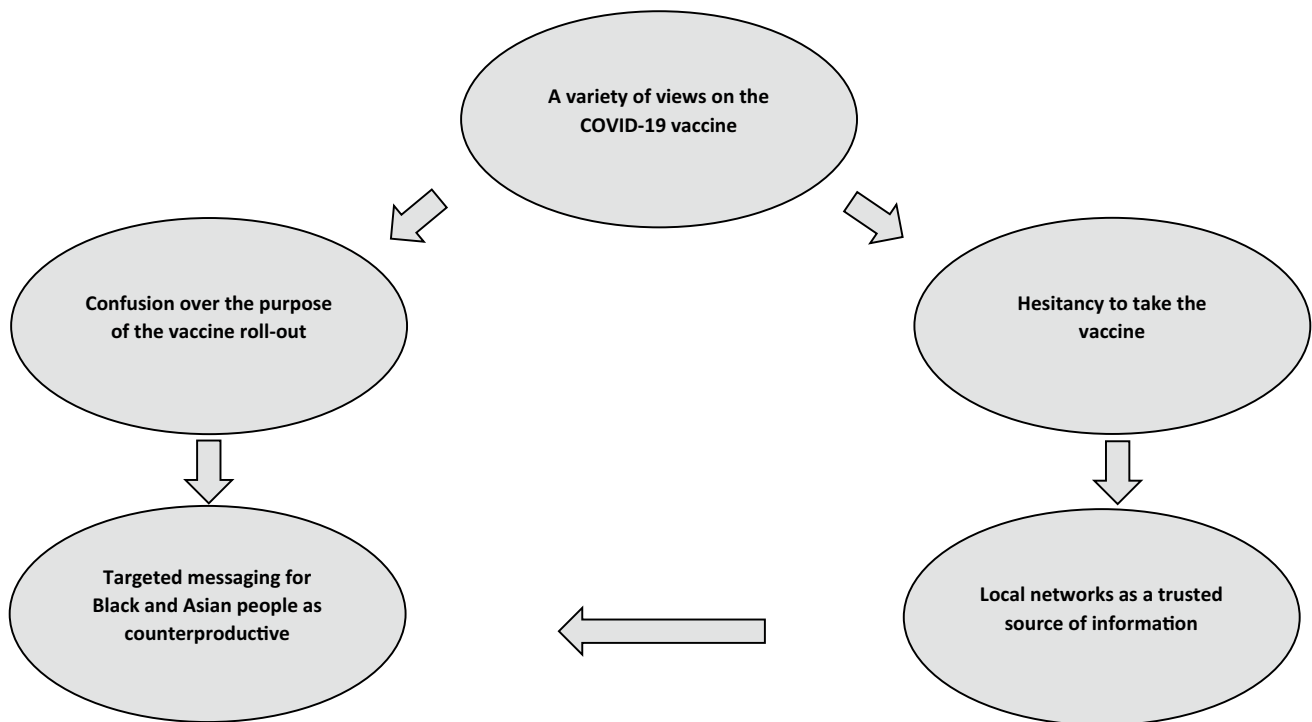
Data from participants' written responses, including the text accompanying their multimedia uploads, were analysed qualitatively using Braun and Clarke's [24] six-step approach of inductive thematic analysis. Firstly, authors familiarised themselves with the data by reading and re-reading the responses. Secondly, initial codes were identified during this process, and thirdly, themes were created. In the fourth step, these themes were reviewed, and the fifth step entailed naming the themes. Finally, these were written up. Analysis of participants' responses yielded five themes (see Fig. 1): a variety of views on the COVID-19 vaccine, confusion over the purpose of the vaccine roll-out, hesitancy to take the vaccine, targeted messaging for Black and Asian people as counterproductive, and local networks as a trusted source of information.

Additionally, using the data, researchers designed a 'Circle of Trust' model which was presented during the second workshop, and participants were asked to reflect, comment on, and shape the final version (see Fig. 2).

Table 2 Activities undertaken with participants

	Research objectives	Response type	Research questions
Activity 1	Establish a baseline of participant attitudes towards the vaccine	Multimedia	Where do you currently stand on the COVID-19 vaccine?
	Understand what gaps exist in participants' knowledge about the vaccine	Open text	What questions do you have about the COVID-19 vaccine?
Activity 2	Understand the content, format and source of information participants are receiving about the vaccine	Multimedia	What information has influenced your beliefs about the COVID-19 vaccine?
Activity 3	Understand how messages with varying content and format impact participants	Open text	How does this messaging about the vaccine make you feel?
	Understand which institutions participants trust to address concerns	Fill in the blanks	Who do you trust to answer your questions about the vaccine?
Activity 4	Understand what participants think is the reason behind the vaccine drive	Open text	What do you think is the reason for the vaccination drive?
	Understand participant priorities in comparison to the current roll-out	Open text	What would you do next if you were responsible for the vaccine-roll-out?

'Multimedia' refers to participants being asked to contribute multimedia as part of their responses; 'open text' involved typing responses into an open text box; and 'fill in the blanks' refers to participants being instructed to fill in blanks contained in statements in relation to their trusted sources of information on the COVID-19 vaccine

**Fig. 1** Themes and their interrelations

Results

Approximately three quarters of participants were hesitant or lacked confidence in taking the vaccine. The most common sentiment among this hesitant group was feeling unsure if they would take the vaccine if offered to. A few participants said they definitely would not take the

vaccine. Some, despite having been vaccinated, were still anxious about potential side effects.

A Variety of Views on the COVID-19 Vaccine

Participants held a variety of views about the vaccine, some very negative and others very positive, although most were

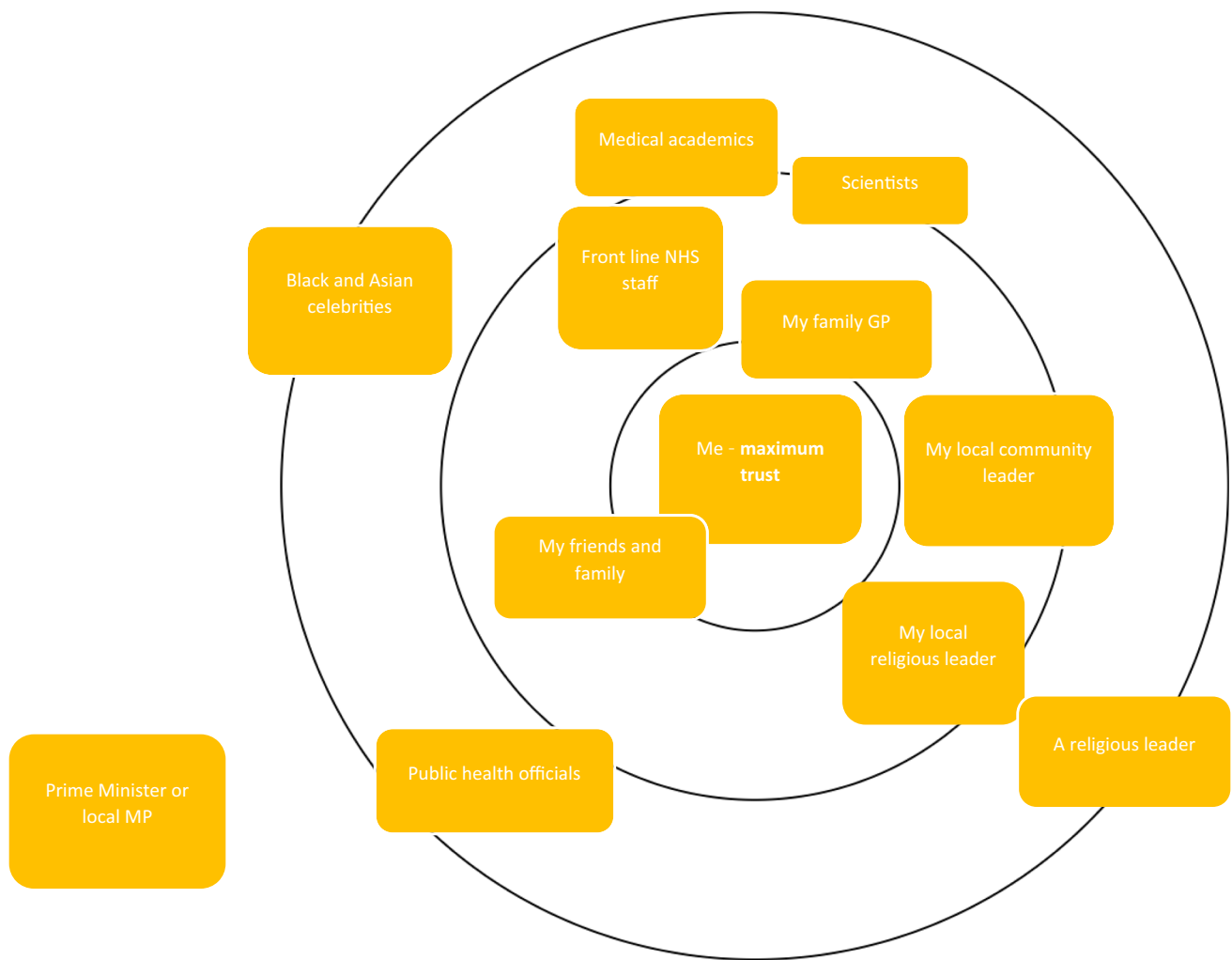


Fig. 2 Circle of trust

somewhere in the middle. Extreme negative views held by a few participants tended to be in the minority. These involved, for example, worries about side effects.

I am not against the COVID-19 vaccine, however I do not feel confident about having the vaccine at the moment, as I feel that it is new and still in its trial phase. I worry about side effects that could develop in the long-term as well as the short-term side effects that have been reported recently. I do not feel that there has been enough time to understand all risks and make an informed decision. (Participant 80)

Extremely negative views were held by a small minority of participants and involved ideas such as Bill Gates putting microchips into people's bodies, and the vaccine being used as a guise to control birth rates and the population of Black communities. Positivity about the vaccine was also apparent,

with some participants seeing it as the only way out of the pandemic. Furthermore, they were concerned that Black and Asian people were more affected by COVID-19.

Participants highlighted how much they appreciated being consulted on their views about the vaccine. This approach to engagement was seen to be in contrast to the blame narrative that many described feeling directed towards them in communications regarding low uptake. Participant 68, for example, suggested consulting with the community about the vaccine roll-out, which was perceived to be an approach more tailored to people's needs than the current one:

[Policymakers should] go to the community and get their opinions about how to roll this out and what they want and feel in the process. This should be a holistic approach to well-being, rather than just a one size fits all approach of 'take the vaccine.' (Participant 68)

Confusion over the Purpose of the Vaccine Roll-Out

One overarching question concerned the purpose of the vaccine roll-out. Participants did not have a clear understanding of the roll-out and the reasons for getting vaccinated. Concerns over the safety of the vaccine were also voiced, with Participant 87 remarking:

I wonder how long the vaccine will last in our bodies and how often we will need a top up. I also wonder about the side effects that may happen in the future that we are not aware of and what effects they will have on our health.

This was particularly the case for younger participants and those not considered to belong to a vulnerable group. Participant 27 asked: ‘Is it to suppress or stop COVID-19, or to stop people getting hospitalised?’ There were many participants who were sceptical of the roll-out, with an underlying feeling that the main driver was to protect the economy, return life to normal, and to protect the NHS, as opposed to protecting their own personal health or that of their loved ones.

Participants described how they would manage the vaccine roll-out if they were in charge. One frequently suggested strategy was to localise the approach by engaging communities, targeting specific gaps, and getting local, trusted community members involved: ‘I would look at the gaps in communities and areas then make a targeted programme for them’ (Participant 14); ‘More effort to engage communities’ (Participant 50); and ‘Ask for help from GPs, educators, social workers, community leaders, civil service and local councils (as opposed to central government)’ (Participant 6). Furthermore, participants suggested increasing the amount of information publicly available, including more transparency about potential side effects of the vaccine: ‘Establish what the vaccine actually does? Identify risks and look at mitigating risks’ (Participant 79); ‘Be more transparent about side effects’ (Participant 48); and ‘Explain the long-term implications on the younger population’ (Participant 62).

Participants also suggested consulting experts such as scientists and ensuring their advice is embraced and actioned: ‘I’d follow scientific advice, something this government has not done despite claims to the contrary’ (Participant 23); ‘Look at the information presented by other professors, scientists and virologists’ (Participant 58).

Thus, community engagement, increasing the amount and transparency of the information available on the vaccine, and consulting experts were seen by participants as key strategies to increase COVID-19 vaccine uptake in Black and Asian communities.

Hesitancy to Take the Vaccine

Linked to questions and uncertainties about the vaccine, many expressed that they would like to wait until others had had it before taking it themselves. This stemmed from concerns around unknown long-term impacts, that the vaccine was developed too quickly, questions about whether the vaccine had been trialled on enough Black and Asian people, and that everyone was part of a big trial. Participant 7 voiced scepticism over the vaccine’s effectiveness, remarking:

I am a bit sceptical as vaccines usually take many years to make and we won’t know if the covid vaccine works or not until people start mixing again. [...] I ain’t against it but I’m also not looking to put myself forward to take it.

Some questioned whether vaccination was worth the potential long-term risks to themselves if vulnerable relatives and the wider population were increasingly protected as the roll-out progressed. This was reflected in Participant 18’s statement: ‘I find it strange that everyone is being asked to take it. If they’ve vaccinated the vulnerable, why do the healthy need it?’.

Thus, there appeared to be a diffusion of responsibility, with some seeing it as increasingly unnecessary to get vaccinated themselves, as more and more people got the vaccine. Even for those participants who accepted that the vaccine could be produced quickly, there was a strong sense that nobody knew what the long-term impacts could be, because they had not been tested yet. This view was reinforced by emerging negative, though rare, findings being reported, such as blood clots.

Fertility was highlighted as a particularly pressing concern. While many female participants, especially those under 35, discussed fertility, male participants and those over 35 also raised it as a concern. The significance of this issue was reflected by participants stating that they frequently discussed it with their friends and their family, such as Participant 64: ‘In my friends[hip] group we are all similar, we’re just married and just trying for our first babies. And my family as well. We’re thinking about not taking the vaccine because of how it might affect fertility.’

Possible adverse impacts on fertility reinforced many participants’ desire to delay vaccination until there was clear evidence that their fertility would not be affected. This was also the case for Participant 24, who had delayed getting vaccinated for this reason, along with many people in her social circle:

If impact isn't recognised until after child is born, you're still going to have to wait for it to be recognised and for it to be identified as linked to the Covid vaccine. [...] That data just isn't there. I've had same conversation with my friends and a lot of women colleagues, and a lot of them have said point blank no.

The government was perceived to be so preoccupied with pushing the roll-out, that there was little consideration for participants' futures, or whether they would be able to have children.

Targeted Messaging for Black and Asian People as Counterproductive

Participants felt that high profile, targeted messaging aimed at Black and Asian people had created a sense of blame. They described feeling as though they were being seen as 'problem groups' for having lower uptake, despite not being consulted before or during the roll-out on how to best reach them. The extra resource going into vaccine campaigns for these groups saw some participants become suspicious of potential ulterior motives. Some commented that there had been a bombardment of messages, texts, and emails regarding the vaccine, adding to a feeling of pressure to get vaccinated.

Many participants particularly disliked Black and Asian celebrities being shown to speak with authority on the COVID-19 vaccine. They questioned why a cricketer or comedian, with no relevant healthcare experience, would be qualified to deliver a message like this and felt it demonstrated a clear lack of understanding. This was attributed to Black and Asian people being seen as one homogenous group rather than recognising differences between communities, and a lack of effort to understand the reasons for their COVID-19 vaccine hesitancy, as Participant 78 explained:

It very much reflects the white gaze (throw a bunch of 'BAME [Black, Asian, and Minority Ethnic]' people together as though they are not from separate and heterogeneous communities, appeal to racial stereotypes (e.g. Indian doctors), push the desired narrative with a script of 'facts' and 'debunking' rather than encouraging genuine dialogue, etc.). It felt like the way the NHS tries to appeal to us, there is no effort to actually understand and address the reasons for our reluctance/refusal and thus came across as patronizing/inauthentic...speaking at us rather than to us.

Respondents felt that celebrity campaigns demonstrated a lack of understanding of the concerns of people from ethnically diverse communities. These campaigns were perceived to be disrespectful and patronising, as well as indicating a

lack of interest in Black and Asian individuals' views on this issue, as Participant 22 pointed out:

It is totally disrespectful to think that any celebrity can change anyone's decision about the vaccine. Further to this I don't understand why it is felt we listen to myths, misinformation and social media. We have common sense to make decisions, we don't need no celebrities to tell us to be safe, they should take it and mind their own business. Clearly there is no trust because everything is done on a one size fits all. They don't come to BAME community to ask questions.

In sum, targeted messaging was seen as counterproductive by many participants, as its perceived patronising and disrespectful tone only served to reinforce COVID-19 vaccine hesitancy.

Local Networks as a Trusted Source of Information

Many participants described friends, family, and their religious leaders as those they trusted the most in general terms. Participant 30, for example, made this clear by stating 'I'd talk to people I personally trust who know more than me.' However, while they trusted their opinions and were happy to discuss their thoughts around the vaccine, unless these networks had either medical or religious knowledge beyond that of the participant, there was an underlying recognition that they too might not have all the answers. For example, while an Imam might be trusted to say the vaccine is considered halal, participants would not expect him to accurately advise on the medical impact of taking the vaccine.

Participants' level of trust in their local GP as opposed to a generic healthcare professional also applied to religious leaders; participants trusted their own local religious leader more than one with whom they had no personal relationship. As with central government, local politicians were viewed as completely untrustworthy and not seen as a source from which to attain reliable information about the vaccine. Participant 89 made it clear that the community was the first and most important source of information to be sought out for advice on health-related issues:

My family and community, I take advice from. It's a cultural thing. If I have a headache, they're the people I ask first. Even with the vaccination, I take a lot of advice from my Caliph, my community is a go-to place.

Figure 2 depicts various sources of information on the COVID-19 vaccine and where these sources are positioned within participants' 'circle of trust.'

Discussion

The present study aimed to explore factors affecting COVID-19 vaccination hesitancy in Black and Asian individuals, and what they perceived to be lacking in the current roll-out strategy. Participants shared a variety of individual opinions and diverse experiences regarding the COVID-19 vaccine, both negative and positive, in line with other qualitative UK research in this area [10, 25]. Overall, there was considerable hesitancy among participants to get vaccinated for COVID-19. One particular concern shared by participants was in relation to the vaccine's potential impact on fertility; similar concerns have been reported in other UK studies [10, 25, 26], emphasising the importance of addressing such concerns within communication about the vaccine.

Confusion over the purpose of the vaccine roll-out was evident. Participants provided suggestions for managing the roll-out which picked up on this confusion, suggesting an increase in the amount of information provided about the vaccine, and transparency about side effects. Concerns over potential side effects have been found in other UK studies involving both the general population and South Asian individuals [14, 25, 27]. Evidence-based communication and tackling misinformation should be used to help address these concerns [28].

A finding of critical importance emerging from our study was individuals' perception that targeted messaging for Black and Asian people was counterproductive. This included celebrity endorsements of the vaccine, which were seen to be patronising. For the Black and Asian individuals in our study, local networks were a trusted source of information on the vaccine. This perception is in line with findings indicating that prestige-based endorsements of the COVID-19 vaccine—through vaccination of celebrities, religious leaders, or politicians—are far less effective than vaccination of expert scientists, or of friends and family members [29], and suggest that these sources of information need to be utilised in COVID-19 vaccine campaigns. In light of these findings, which have not been reported in prior research related to COVID-19 vaccine uptake, it may be useful to consider campaigns targeting specific concerns, such as fertility, and exploring if these would be more successful, and received as less patronising or blaming than those targeting specific ethnic groups. This needs to be examined in future research.

The findings of this study support those of recent and related reports that Black and Asian people feel that they are being blamed for an uncertain response to the vaccine; a lack of trust in government and institutions seem to at least partly inform these views [30, 31]. A sensitive approach to messaging around COVID-19 vaccination aimed at Black and Asian communities is thus needed, which avoids eliciting

perceptions of blame. Furthermore, participants' varied views on and diverse experiences with the vaccine should be recognised within campaigns and any messaging around the vaccine, ensuring that Black and Asian people are not treated as a single, homogenised group.

Increasing Trustworthiness in Public Health Messaging: Areas for Exploration

Findings from this research highlight four key elements that should be examined in relation to increasing trust in public health messaging about the COVID-19 vaccine among hesitant Black, Asian, and minority ethnic people—agency, independence, transparency, and experience. Efforts to develop campaigns to increase uptake of the vaccine in these groups should explore these areas as part of such campaign and intervention development.

1. *The Role of Agency in Black and Asian Individuals' Decision-Making on the COVID-19 Vaccine*

Participants wanted authorities to present the public with evidence-based information with which they could make their own decisions. Our findings indicate that removing an individual's agency from their decision-making may result in them seeking alternative information which may be inaccurate. Further work is needed to explore the role of agency in the context of COVID-19 vaccination decisions.

2. *The Influence of the Independence of Institutions on Building Trust*

There was very limited trust in the government, but participants largely trusted the NHS. However, that trust waned when they felt the NHS was being used as a government tool or mouthpiece. In this regard, participants preferred listening to doctors, scientists, or experts who were somewhat removed from the vaccine roll-out. There was also general distrust of those who possibly stood to gain commercially from the roll-out, such as pharmaceutical companies. Further examination of the influence of the independence of institutions on trust in the COVID-19 vaccine is needed.

3. *The Role of Transparency of an Organisation or Information Source in its Trustworthiness*

Regardless of whether they would access the information, participants wanted to know that all the information on the vaccine was public and accessible. This was reflected in participants' desire for a range of sources of information that could be verified against one another. Campaigns designed to increase COVID-19 vaccine uptake in Black and Asian individuals should determine what role the availability and/or signposting of information plays in their success.

4. *The Role of an Individual's Real-World Experience with COVID-19 Vaccines in Their Perceived Reliability as a Source of Information*

Participants cited everyday people sharing experiences of having had COVID-19 and/or the vaccine as trustworthy. Participants also said they trusted front-line healthcare workers to discuss the COVID-19 vaccine, whereas they had less trust in those very senior in organisations like the NHS, since they had less tangible experience. Some participants associated individuals having seniority in the NHS with being aligned with the government's agenda. They did not necessarily trust faith leaders or celebrities on the issue of vaccines for the same reasons, and felt those who were local to the individual, such as their own GP, were more credible. Efforts to increase COVID-19 vaccine uptake in Black and Asian communities need to investigate the impact of transparency on trustworthiness and how this in turn impacts on vaccine uptake.

5. *The Role of Community Engagement in Facilitating COVID-19 Vaccine Uptake*

A central aspect emerging across themes described how local networks were trusted sources of health information. Some participants suggested that community engagement would facilitate the uptake of the COVID-19 vaccine. Thus, research focusing on the development of campaigns and interventions should examine the effectiveness of community engagement in increasing vaccine uptake in Black and Asian communities.

Tone and Format

When creating COVID-19 vaccine communications for Black and Asian people who are hesitant or lack confidence, based on our findings, we recommend the following in relation to tone and format:

1. It is fundamental for any communications directed at Black and Asian people to recognise that they are not one homogenous group.
2. Acknowledge that some ambiguity exists relating to the potential long-term impacts of the COVID-19 vaccine.
3. Recognise the legitimacy in some level of scepticism based on deep-rooted mistrust in institutions experienced by Black and Asian people.
4. Create content that has a conversational format providing as much information as possible. Avoid overly simplistic approaches to communication.
5. Ensure messages are practical and accessible (e.g. available in multiple languages).

6. Ensure the tone speaks *to* the audience as opposed to *at* them. Do not share strong directional messages without providing more context.

Strengths, Limitations, and Future Directions

Our study presents an effort to explore Black and Asian individuals' confidence in COVID-19 vaccination. A key strength of this work lies in the insights it provides which will be useful to public health campaigns designed to increase vaccine uptake in these groups. While previous work has described the disparities between vaccine uptake in Black and Asian individuals, and the broader population, very little work has attempted to understand where these differences come from. Furthermore, we collected in-depth data from 95 participants, a sizeable number for a qualitative study, which allowed for not only depth but breadth in our findings. Still, some limitations need to be acknowledged.

It was challenging to recruit older participants for the present study. This is likely because at the time of recruitment, people over the age of 70 had already been offered the vaccine. This segment of the population is also more at risk of death or becoming seriously ill if they contract COVID-19 [32] and therefore more likely to get vaccinated [33]. Therefore further research is needed which elicits the views of older Black and Asian participants. Furthermore, other characteristics (e.g. religion, gender, socioeconomic status) could be examined in relation to participants' responses, in order to make these more nuanced. Also, it would be useful to explore whether views have changed now that COVID-19 vaccination is available to all adults in England, and booster doses are being offered. Finally, it is possible that the monetary incentives offered to participants may have had an impact on participants' responses. However, given the often very critical opinions voiced by participants, there is little evidence that the monetary incentives led to socially desirable responses.

Many participants felt vaccination necessary only for those from vulnerable groups. This replicates research on the general UK population using protection motivation theory, which showed a link between perceived susceptibility to COVID-19 and vaccination intention [21]. Further research is needed which applies a theoretical framework such as protection motivation theory to COVID-19 vaccine hesitancy in Black and Asian individuals and tests this on a larger scale.

Vaccine hesitancy is a complex phenomenon and affected by multiple factors [2]. To fully understand what drives COVID-19 vaccine hesitancy in Black and Asian individuals in the UK, further, larger-scale studies are needed, preferably combining quantitative and qualitative methodology to fully understand this phenomenon.

Psychosocial factors in COVID-19 vaccine hesitancy need to be examined using models of health behaviour as well as qualitative exploration, similar to other research focusing on the general UK population [21, 25]. Such research needs to provide a differentiated perspective on the diverse ethnic groups that exist in the UK and will therefore recruit substantial numbers of participants.

Conclusions

The present research sought to gain an understanding of factors affecting COVID-19 vaccination hesitancy in Black and Asian individuals, to help address concerns about the vaccine. Our findings suggest respecting individuals' agency and the influence of others' real-world experience with the vaccine in the decision to get vaccinated. Furthermore, transparency of information provided on the vaccine, and the independence of the bodies providing this information, is important. Targeted messaging may not be advisable; instead, it needs to be explored if local networks, which tend to be trusted sources of information, could be used in COVID-19 vaccine campaigns. Any such efforts, however, need to be cognisant of the higher levels of medical mistrust found in many ethnic minority communities, which may extend to local networks perceived to be delivering these messages on behalf of the NHS. It is critical to consider these aspects in any campaigns to increase uptake of the vaccine in Black and Asian individuals.

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Declarations

Ethics Approval The authors adhered to the Social Research Association and Market Research Society ethical guidelines in this work. Details of the informed consent and ethical consideration process used for the study can be shared on request. The study was performed in accord-

ance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Consent to Participate Informed consent was obtained from all participants involved in the study.

Consent to Publish The authors affirm that research participants provided informed consent for publication.

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