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Facilitators of COVID-19 vaccine acceptance among Black and Hispanic individuals in New York: A qualitative study

Zainab Totah Osakwe PhD, NP, MSN^{a,*}, Jennel C. Osborne RN, PhD^b, Nonso Osakwe MD, MPH^c, Ana Stefancic PhD^d^a College of Nursing and Public Health, Adelphi University, NY^b Harriet Rothkopf Heilbrunn School of Nursing, Long Island University, NY^c New York Presbyterian Hospital, Department of Medicine/Infectious Disease, Bronxville, NY^d Department of Psychiatry, Columbia University, NY

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Background: Black and Hispanic individuals experience poorer outcomes related to coronavirus disease (COVID-19), yet have alarmingly lower uptake of the COVID-19 vaccine compared to non-Hispanic White individuals.

Objective: To explore the perceptions of barriers and facilitators of COVID-19 vaccine acceptance among Black and Hispanic adults in the New York.

Methods: A qualitative study consisting of one-on-one semistructured interviews with Black and/ or Hispanic adults in New York state was conducted. Participants were recruited from local businesses, community-based social service agencies and Black and Hispanic churches and a college. All data were collected between February and March 2021. Transcripts were analyzed using qualitative thematic analysis.

Results: A total of 50 individuals (32 [64%] women; mean [SD] age, 42.04 [15.99] years) participated. The majority of participants identified as Black (n = 34, 68%), 9 (18%) identified as Hispanic, 3 (6%) as Black and Hispanic, and 4 (8%) as White and Hispanic. Twenty-two participants (44%) had high-school level education or less. Mistrust emerged as a central barrier to COVID-19 vaccine acceptance. Facilitators of effective COVID-19 vaccine messages include (1) key informants: like me, (2) personalized community outreach, (3) present the facts, and (4) communicate across multiple media platforms.

Conclusions: This qualitative study found that among Black and Hispanic participants, receipt of reliable vaccine related information, social networks, seeing people like themselves receive the vaccination, and trusted doctors are key drivers of vaccine acceptance.

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The coronavirus disease 2019 (COVID-19) pandemic has caused high morbidity and mortality in the United States, with new variants spreading.¹ While the pandemic has impacted everyone, racial/ethnic minorities have shouldered a disproportionate burden of the pandemic, with higher rates of infection, hospitalization, and death among Black and Hispanic/Latino individuals compared to White, Non-Hispanic individuals^{2–6}—further magnifying existing health disparities among these groups. Although much progress has been made in vaccinating individuals in the United States against COVID-19, alarming levels of vaccine hesitancy in Black and Hispanic communities pose significant challenges to achieving high levels of

COVID-19 vaccine uptake. Nationally representative studies from early 2021 indicate that vaccine hesitancy has remained especially high among Black (43%) and Hispanic (36.5%) individuals.⁷ More recent estimates of hesitancy rates show that 30.2% of Hispanics and 41.6% of Blacks remain hesitant to obtain the COVID-19 vaccine.⁸ This is particularly alarming because overcoming vaccine hesitancy in Black and Hispanic communities is essential to improve vaccination coverage in these populations and reduce COVID-19 related disparities.^{9,10}

While barriers to vaccine acceptance among Black and Hispanic individuals, including mistrust of the healthcare system, are well documented,^{8,11} less is known about facilitators—factors that may drive COVID-19 vaccine acceptance - among minoritized racial/ethnic groups. Researchers have found that recommendations from individuals' healthcare provider and transparency about vaccine safety

* Address correspondence to Zainab Totah Osakwe, PhD, NP, MSN, College of Nursing and Public Health, Adelphi University 1 South Ave Garden City, NY 11530.

E-mail address: zosakwe@adelphi.edu (Z.T. Osakwe).

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might reduce vaccine hesitancy among Blacks.¹² Our study elaborates further on barriers and facilitators of vaccine acceptance and extends prior work by including the perspectives of both Black and Hispanic individuals using semistructured interviews. Understanding facilitators of COVID-19 vaccine acceptance among Black and Hispanic individuals can inform evidence-based interventions to improve levels of COVID-19 vaccination across these communities.

METHODS

Participants and settings

This study was part of a larger qualitative descriptive study aimed at gaining an understanding of facilitators of vaccine acceptance among Black and Hispanic individuals in New York. Sixty-seven participants were enrolled in the larger study. Sixty-seven were enrolled in the larger study (50 were interviewed in English and 17 Spanish language). The findings presented in this article are specific to analysis of interviews conducted in English. We conducted semi-structured interviews with Black and/or Hispanic adults (age ≥ 18 years) who lived in the New York metropolitan area—the US epicenter of COVID-19 during the early phase of the pandemic.¹³ Recruitment strategies included: (1) posting flyers in local businesses and community-based social services agencies, (2) making announcements at predominantly Black and Spanish-speaking churches and, (3) posting online flyers on a college internal website. Eligible participants were: (1) adults; (2) current New York state residents; (3) self-identified Black and/or Hispanic; and (3) English and/or Spanish speaking. A convenience sampling strategy was used. Study staff screened all potential participants for eligibility, confirmed interview language preference (English or Spanish) and scheduled interviews for those eligible. We also reached out to 11 participants directly upon referral from 1 community-based social service agency. The findings presented in this article are specific to analysis of interviews conducted in English. Seventy-six individuals were screened. Of these, 67 (88%) were eligible to participate and provided informed consent to participate in the study. Seventeen participants preferred to be interviewed in Spanish and were interviewed by a Spanish-speaking study staff. Overall, 7 individuals who met eligibility criteria did not participate in the study because they were not reachable via telephone as scheduled. In addition, 2 participants screened were not enrolled; 1 self-identified as white, and the second participant lived outside New York.

All participants provided verbal informed consent, including permission to record the interview. Following the interview, participants received a \$20 e-gift card or cash as compensation. This study adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ) reporting guideline.¹⁴ All procedures were approved by the Adelphi University Institutional Review Board.

Interview procedures

Data were collected using a semi-structured open-ended interview guide. The interview guide was informed by literature review (Appendix A).^{15–17} Two PhD prepared nurse researchers (J.O. and Z.T.O.) with experience in qualitative interviewing techniques, conducted interviews via Zoom or telephone when possible, and otherwise face-to-face. Face to face interviews were conducted in the conference room of the community-based social service agency. A total of 50 interviews were undertaken via telephone (n = 26), Zoom (n = 13), and in-person (n = 11). All participants were asked if they received or planned to receive the COVID-19 vaccine. Sample qualitative interview questions included: (1) “What would encourage you to have the COVID-19 vaccine,” and (2) “What needs to change for you to accept the COVID-19 vaccine?” “Interviews were conducted in

participants’ preferred language (Spanish or English), audio recorded, and transcribed verbatim, with self-reported demographic information collected following the interview. Interviews were audio-recorded and initially transcribed using artificial intelligence-based transcription application Otter.ai. The Otter transcripts were reviewed by the interviewers (J.O. and Z.T.O.), and edited to confirm accuracy of audio-recordings, and then deidentified for analysis. To enhance rigor, we (J.O. and Z.T.O.), debriefed after each block of 2 interviews were conducted to evaluate the need for subsequent interviews and assess data saturation. Interviews were conducted until data saturation was reached, that is, no new themes emerged,¹⁸ was achieved after 41 interviews. Two additional interviews were conducted to solidify confidence that data saturation was reached. We also conducted 7 additional interviews beyond saturation because the participants were already scheduled and confirmed to be interviewed. Interviews were conducted between February and March 2021 and lasted an average of 25 minutes.

Data analysis

Conventional content analysis was used to identify emerging categories and themes from qualitative interviews.¹⁹ A multidisciplinary team (A.S., J.O., and Z.T.O.) used an inductive open-coding process to first identify meaningful categories and concepts for labeling and organizing data from 8 transcripts into a codebook.²⁰ Two investigators then independently coded the 8 transcripts, compared how they applied and interpreted codes, resolved discrepancies with input from a third investigator, and revised the codebook based on these consensus discussions. Two investigators (J.O. and J.T.O.) used the final codebook to code all 50 transcripts in NVIVO, with 25% of transcripts double-coded to ensure consistent application of codes.

Through an iterative process, 3 investigators examined and discussed coded excerpts that were relevant to capturing facilitators of COVID-19 vaccine uptake to identify themes and illustrative quotes. Similarities and differences in codes across subpopulations (eg, Black vs Hispanic, gender and age) were then examined using cross tab queries in NVIVO and discussed by the research team to identify patterns and associations in the data. Strategies for rigor included frequent debriefing during interviewing, coding, and analysis stages; using in-vivo codes emerging directly from raw text; multiple coders.²¹ To ensure trustworthiness of this study,²² an audit trail was kept with the team’s detailed record of codes and code categories generated during the ongoing data analysis. Investigator triangulation included the use of multiple coders and full team discussions to reduce coding bias.

RESULTS

Sample characteristics

The present study reports on interviews conducted in English. Fifty individuals (32 [64%] women; mean [SD] age, 42.04 [15.99] years) participated (Table 1). Sixty-eight percent of participants identified as non-Hispanic Black, 9 (18%) as Hispanic, 3(6%) as Black and Hispanic, and 4(8%) White and Hispanic. Twenty-two participants (44%) had high-school level education or less. When asked whether they had received the COVID-19 vaccine, most participants reported either no or maybe [don’t know] (58%).

Barriers to taking the COVID-19 vaccine: Mistrust

Mistrust emerged as a central barrier to COVID-19 vaccine acceptance, with concerns revolving around historical medical mistreatment, which interacted with current racial/ethnic inequities; the rapid timeline of vaccine development; and limited access to reliable vaccine information.

Table 1
Characteristics of study participants

Variable	Avg. \pm SD/N (%)
Age (years)	
Average (SD)	42.04 \pm 15.99
Gender	
Male	18 (36%)
Female	32 (64%)
Race/Ethnicity	
Non-Hispanic Black	34 (68%)
Hispanic	9 (18%)
Hispanic Black	3 (6%)
Hispanic White	4 (8%)
Education	
Less than high school	3 (6%)
High school	19 (38%)
Some college	10 (20%)
College	15 (30%)
Graduate school	3 (6%)
Location	
Bronx	23 (46%)
Brooklyn	2 (4%)
Long Island	6 (12%)
Manhattan	3 (6%)
Queens	6 (12%)
Westchester	10 (20%)
Vaccine	
Received	3 (6%)
Willing to accept	18 (38%)
May be willing to get vaccinated	9 (18%)
Refused	20 (40%)

Avg., average; GED, General Educational Development test; SD, standard deviation.

Historical mistreatment. Mistrust of the COVID-19 vaccine was mentioned by both racial/ethnic groups but was most pronounced among Black participants. For many, this was directly linked to medical exploitation and mistrust of the government, pharmaceutical industry, and healthcare system: “Black and brown people are sick and tired of the nonsense. . . knowing what has happened in the past with vaccines that the government has put out there? I'm distrustful in that. . .” [Black male]. Similarly, a Hispanic Male expressed his hesitation: “in Puerto Rico, there was some experimenting done with birth control. . . [Puerto Rican women] were pretty much like guinea pigs in the beginning. So that's the kind of concern that I have with this. . . let me wait and see.”

Historical mistreatment in the context of current inequities further fostered mistrust. One participant highlighted how the “Black and brown. . . community was hit harder” by COVID-19, because of “how we were treated when we go to the hospital” or from avoiding treatment due to not being able to “cover the bills,” but also commented on how the message of targeting racial/ethnic minorities exacerbated vaccine skepticism: “They keep saying, ‘the community that we have to target’. . . they're using certain words that only talks about the Black and brown people. . . even in the United States, they tested out like, vaccines on Black people. And a lot of Black people got sick. . . So I don't see these people doing anything to benefit the Black and brown people” [Black female]. Related, participants speculated that Black and Hispanic communities were hesitant to receive the vaccine due to beliefs that minority communities generally receive lower quality healthcare and so “we as Latinos will not receive the same quality of a vaccine. . .” [Latina Female].

Too fast to be effective. Participants' perceptions that the vaccine was developed “too fast” further exacerbated distrust, evoking questions about efficacy: “I don't really trust it yet. I don't believe the CDC or Fauci—I don't think they put a lot of study into it. . . They rushed the vaccine. . . I will wait until the last, then it may be better.” [Black Female]

Many participants also associated the quick production time to the conviction that the vaccine was still in an “experiment stage” and

not safe or proven to be protective: “normally, vaccines take a lot longer to be released or to be fully tested, or all the clinical trials. . . And I want to make sure it's completely safe before I can get.”

Limited access to reliable vaccine information. Most Latino participants shared that the language barrier posed a major challenge, emphasizing that lack of understanding about the vaccine was often linked to the system's failure to effectively communicate with Spanish speaking individuals: “I believe for Latinos there's not a lot of information. . . we don't have the right resources. . . in Spanish news you don't get the same amount of COVID Information like you see in English. . .” [Hispanic female]” Another Hispanic participant, undecided about the vaccine, highlighted her need for more information even after her parents were vaccinated: “are they already like, protected? for how long? A month. . . Six months? One year? I don't know. . . Nobody knows.”

Facilitators of COVID-19 vaccine acceptance

Influence of social networks. Most participants regarded family (including spouse, children, siblings), friends, or friends of friends as influential to their decision-making about COVID-19 vaccine acceptance. For most participants who got the vaccine, their decision hinged on their social networks to tip the balance towards the vaccine: “when [my husband] took the vaccine, I said (to myself), kind of think about this. . . because I want to be aligned with what he's doing. So, that's what really changed [me]” [Black Female]. Participants reported that friends or family affirming the importance of the vaccine and sharing their personal experiences of receiving the vaccine decreased participants' fears and motivated them to receive the vaccine: “I know a group of people that took it. . . and they are okay. . . they say you should take the shot. . .” [Black male]. Similarly, a Hispanic female stated: “my relatives have been telling me about their experiences with the vaccine - like how they feel, if they have gotten sick after. . . one of my relatives works closely with a lot of people and have all gotten the vaccine. And haven't experience any cases ever since. So I think that's a great motivator for me to get the vaccine. . .”

Another participant described wanting to get the vaccine to motivate others: “I just feel like if they had more friends or relatives who got it done. . . that's another reason why I want to get it done. . . maybe I could encourage other people or other friends who don't believe it, to get it done” [Hispanic female]. The potential influence of social networks was also highlighted by participants who were not yet willing to get vaccinated, because they did not know any network members who got the vaccine: “Because I haven't personally known anyone who, who have taken it and said, ‘well, I'm okay.’” [Black female].

Role of a trusted doctor. Participants shared that they trusted their doctors, felt their doctor was the best person with whom they could have vaccine-related discussions, and that they would consider taking the vaccine if their doctors clearly recommended it to them or provided it directly. One participant scheduled his vaccine appointment on the instruction of his cardiologist: “I am going to take it because I trust my cardiologist. . . if she says I should take it, I will take it.” [Black male]. Reliance on doctors' advice to get vaccinated included doctors in the media (eg, Dr. Fauci and Sanjay Gupta) and on social media: “I go on the Facebook to Dr. Jen Caudle, an African American doctor. . . She explained it very good, she makes sure you understand what she has to say. . . I would follow her. . .”

Adopting effective COVID-19 vaccine messages. Participants identified effective communication strategies that may increase vaccine uptake.

Key informants: Like me. Overall, participants expressed a preference for vaccine information to be delivered by someone relatable, and of similar racial/ethnic background, which enhanced trustworthiness: “if it's African American doctors saying it, like I feel like it would be more relatable than someone who's not of my race. Like it's easier to relate with someone who's- who looks like me, honestly.”

[Black female] One Hispanic man articulated: “I follow a doctor for a long time. . . Now he’s in Univision. . . He tries to simplify the facts in a way that you can understand. His name is Juan Rivera. . . . I feel like he cares about us. . . once I asked him a question about a vaccine. . . he explained to me how important for me in my age. . . he explained to me everything. . . directly.”

Personalized community outreach. Regarding methods for vaccine messaging, Hispanic participants expressed the need for close face-to-face interaction, preferring in person discussion: “Have Latin speaking people out there! Pamphlets, interact with the community adaptable by social media! Say ‘hey, we’re gonna have a van here. We’re gonna be giving out masks but we want to talk to you guys about getting the shot. . . we can help you set up appointments, to take the shot” [Hispanic male]. Another Hispanic woman explained: “Have someone. . . come with [the vaccine] already in the hand. . . And maybe sit down and explain a little bit more about the question, they can answer it. . . like someone that may be not so young, maybe mid age, female. And I would identify with like a Hispanic. . .”

Present the facts. To increase vaccine confidence, participants described the need for more reliable information about vaccine content, duration of protection, and long-term effects and side effects: “I’d like to know exactly what the vaccine. . . is made from and what is it said to do? . . . Does it prevent you from getting COVID? Does it reduce your chance of getting COVID?” [Black female]. Participants called for trustworthy individuals in their own communities to relay concrete information in understandable ways (eg, discussing “protection” vs “effectiveness”) to inform decision making: “someone who is not biased about it. . . say, ‘here is this one vaccine. . . here is what it has’ . . . just give you the facts about the vaccine. . .” [Hispanic female].

Communicate across multiple media: To access COVID-19 vaccine information, participants most relied on social media including YouTube, Facebook, and WhatsApp in addition to television news: “Instagram. . . a lot of posts on Twitter. And then of course, the main television outlet CNN has been saying a lot about it.” [Black female]. Participants also reported seeking information online, with many using Google or phone news alerts. To reach everyone, a Hispanic participant emphasized using a radio station to disseminate information to the Hispanic population about community-based vaccination activities: “Social media and. . . especially radio. . . La Mega in the morning.” Although less common, TikTok was the source of vaccine information for our youngest participants (18-21 years): “Instagram and Tok-tok videos make me feel like. . . is it really safe to take it?” [Black female].

DISCUSSION

This qualitative study explored barriers and facilitators of COVID-19 vaccine acceptance among Black and Hispanic New Yorkers. Vaccine hesitancy was commonly rooted in mistrust that was connected to historical mistreatment, current inequities, rapid vaccine development, and, inadequate access to reliable vaccine information, particularly in Spanish. Facilitators of vaccine acceptance included knowing social network members who were vaccinated, having a trusted doctor’s advice regarding vaccination, and having vaccine messages delivered by key informants that “look like” participants from minority communities, who could focus on presenting vaccine facts in ways that were easy to understand, across multiple media, and particularly for Hispanic populations, in-person community outreach that would allow for more personalized discussion.

Unsurprisingly, historical mistreatment and the persistence of health inequities fueled high levels of mistrust voiced by our participants. These findings highlight the need to use trusted sources, acknowledge current inequities, directly explain how the vaccine was developed with such unprecedented speed, and especially for Hispanic individuals, expand access to reliable and transparent

information. These trust building strategies are essential to ensure that messages tailored to minority communities do not backfire.

In a recent qualitative study, Momplaisir et al (2021) conducted focus groups with Black individuals and identified facilitators similar to ours, including recommendations from a trusted provider, having a record of safety over time, and social norms (social networks).¹² Our study underscores the importance of these findings given that Momplaisir et al conducted their focus groups before the vaccine was available,¹² while our interviews were conducted amid widespread vaccine distribution. Findings from our study, emphasize the critical role of the trusted doctor, and need for vaccine messages to be provided by Black and Hispanic individuals, which may in turn activate the social networks of the larger community. Participants noted that regardless of mistrust of the healthcare system, their own doctor remained a trustworthy source of COVID-19 vaccine information, and recommendation by their doctor would be key to getting vaccinated. This critical role of physicians underscores the urgent need to support physicians and other providers, including nurse practitioners in minority communities to invest time during clinic visits to educate patients and recommend vaccination.²³ Other studies have also shown that health care providers in general are the most trusted and credible sources of vaccine information, and one of the most important predictors of vaccination.^{24,25}

Our study extends those of previous researchers on the critical influence of social networks on COVID-19 vaccine uptake in Black and Hispanic individuals.¹² We found that having friends/family who had received the vaccine was a significant influence on participants’ decision to take the vaccine, often representing the driving factor among those who had been on the fence. Unfortunately, many participants still lacked any vaccinated friends/family to tip their decision. Recent interventions have employed a 3-tiered approach to increase COVID-19 vaccine acceptance, which included the engagement of Black faith leaders, the delivery of education about COVID-19 vaccination by Black health-care professionals, and development of a mobile vaccine clinic in a predominantly Black community,²⁶ this approach may also be effective in Hispanic communities. Other researchers have found that increasing vaccine literacy improves vaccination uptake in racial/ethnic minority populations.²⁷ These strategies are reflective of findings from our present study, emphasizing the role of social networks and enhanced communication pathways to increase COVID-19 vaccine acceptance.

Hispanic participants emphasized inequities in access to COVID-19 related information, with media coverage in Spanish perceived as less robust and not capturing the severity of the pandemic or importance of vaccinations like media in English. Previous reports during the early phase of the pandemic also noted that COVID-19 disparities may, in part, be linked to inadequate information related to the pandemic in Spanish.^{28,29} Community-based delivery, with personalized (one-to-one) opportunities to receive tailored messages and engage in vaccine related discussion, with other Hispanic individuals may facilitate vaccine acceptance. Interventions must increase efforts to provide culturally and linguistically appropriate COVID-19 vaccine information to Hispanic populations tailored to the effect and importance of the COVID-19 vaccine for the protection of their own health and that of the community.³⁰ The integral role of Spanish-language radio as a public health tool and an important source of information on health-related issues in the Hispanic community is well documented.^{31,32} Recent studies have shown that the use of Spanish language radio is an effective mode of COVID-19 vaccine messaging compared to word of mouth or social media.³³ As COVID-19 vaccines for children roll out, it remains important to better understand facilitators of vaccine acceptance for children among Black and Hispanic communities.³⁴

Our findings should be interpreted in the context of potential limitations. First, our sample was largely limited to the New York

metropolitan area and had an underrepresentation of younger age groups (ages 18–21). Second, while our participants were assured of confidentiality and their responses appeared to be very candid, we cannot rule out the possibility socially desirable responses. Third, although interviews were conducted via Zoom, phone, and in-person interviews, we found consistency in responses between Zoom, phone and in-person interviews.

In conclusion, our findings have implications for COVID-19 Vaccine acceptance among Black and Hispanic individuals in the U.S - a group with low acceptance of the COVID-19 vaccine, who continue to experience a disproportionate high burden of severe disease and death due to COVID-19. Acknowledging historical mistreatment and current healthcare inequities, developing ways to engage trusted doctors in patient outreach and initiating vaccine conversations, activating key members of social networks, and having vaccine messages delivered by key informants who “look like” those in the community to deliver “the facts” and directly address key questions is essential to bridging the vaccine gap and reducing racial/ethnic disparities.

SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found in the online version at <https://doi.org/10.1016/j.ajic.2021.11.004>.

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