

Designing a Community Engaged Training Program on COVID-19 for African American and Latinx Communities in South Mississippi: Results from Qualitative Focus Groups Exploring Community Member Perceptions

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Abstract

Objective: The purpose of this study was to explore attitudes and perceptions on COVID-19 awareness and education among African American and Latinx community members and stakeholders in south Mississippi through qualitative methods. *Design:* Virtual focus groups were conducted in Forrest, Hancock, Harrison, Hinds, and Jackson Counties via Zoom meetings. Community residents and stakeholders (N=56 total) participated. Zoom meetings were audio and video recorded, transcribed, and analyzed utilizing thematic analysis. A demographic survey was also administered. *Results:* Knowledge about COVID-19, vaccines, attitudes towards and beliefs about preventing COVID-19, intentions to prevent COVID-19, information seeking on COVID-19 preventative behaviors, and impact of COVID-19 were identified as themes. *Conclusion:* Themes identified were consistent with other underserved areas in the South and provided key topics for development of Community Health Advisor training session curriculum.

Keywords: COVID-19, health disparities, Mississippi, African American, Latinx, focus groups

Introduction

A disturbing attribute of the COVID-19 pandemic is the exacerbation of health disparities that disproportionately affect minority populations. Across the country, racial/ethnic minority groups had substantially higher rates of infection, hospitalization, and death due to COVID-19, when compared with their White counterparts (CDC, 2022). Analysis of data on virus infections and deaths from the CDC over the course of the pandemic demonstrate that during periods of COVID-19 surges, disparities have largely widened and narrowed when overall infection rates have decreased. According to the Kaiser Family Foundation, federal, state, and local data reveal that people of color have experienced a disproportionate burden of infection and deaths, indicating large disparities among African Americans, American Indian and Alaska Native, and Hispanic populations (Hill & Artiga, 2022).

In Mississippi, health disparities are incredibly apparent, partly due to the increased prevalence of comorbidities affecting vulnerable minority populations (Mills et al., 2021). Data associated with COVID-19 cases, hospitalizations, and mortality is evolving as the pandemic continues, with specific patterns related to race and ethnicity and between cases and death varying over time (Hill & Artiga, 2022). During the Fall of 2020, African Americans comprised 37.8% of Mississippi's population, but accounted for 52.4% of those who tested positive for COVID-19 and 50.3% of Mississippi's deaths from COVID-19. By comparison, Mississippi's white, non-Hispanic population comprised 59.1% of the state's population and accounted for less than 30% of those who tested positive for COVID-19. Hispanics included 3.4% of Mississippi's population and accounted for 3.3% of those who tested positive for COVID-19 (Johns Hopkins University and Medicine, 2022; Mississippi State Department of Health [MSDH], 2022; Staneva, Dobbs, & Byers, 2021; US Census Bureau, n.d.).

Responding to a federal announcement, the University of Mississippi Medical Center (UMMC), in partnership with the Mississippi State Department of Health (MSDH), The University of Southern Mississippi (USM), Tougaloo College (TC), and several local community organizations, proposed to establish the Mississippi Community Engagement Alliance against COVID-19 (MS CEAL). This was part of a nationwide initiative funded by the National Institutes of Health (NIH). Significant community engagement strategies were needed to identify current levels of information, misinformation, and strategies for outreach. At the time of investigation, little research had been conducted to explore the knowledge levels, attitudes, and awareness of COVID-19 among racial and ethnic populations in Mississippi. Additionally, insufficient information was available on vaccination attitudes, practices, and potential hesitancy for vulnerable populations as vaccinations clinical trials were ongoing.

Previous research has demonstrated that racial and ethnic minorities are disproportionately affected by COVID-19-related disease and mortality due to long-standing social, political, economic, and environmental injustice. Further, COVID-19 inequities are exacerbated by institutional distrust (Asare, Okafor, & Bautista, 2020; Best, Fletcher, Kadono, & Warren, 2021). Some research (Webb Hooper, Nápoles, & Pérez-Stable, 2021) notes evidence may exist in varying social conditions, underlying comorbidities, or unidentified biological factors. Members of racial and ethnic minority populations are more likely to live in poverty, lack health insurance,

live in low-resource neighborhoods with limited access to primary care, overcrowded housing, and/or have jobs that do not offer paid leave or the opportunity to work from home (Gaglioti et al., 2018; Smith et al., 2017; Vander Wielen et al., 2015). Chronic conditions like obesity, heart disease, diabetes, cancer, and asthma that have been found to increase the risk of severe COVID-19 illness, hospitalization, and death disproportionately. These chronic conditions disproportionately affect African Americans, Hispanics/Latinx, Native Americans, and Native Hawaiians and Pacific Islanders (Henry Akintobi et al., 2020; Mahajan, & Larkins-Pettigrew, 2020; and Raifman, & Raifman, 2020). It has also been demonstrated that many of these marginalized populations may be hesitant to utilize the healthcare system due to distrust (Cuevas, O'Brien, & Saha, 2016) and institutionalized racism (Bailey, Krieger, Agénor, Graves, Linos, & Bassett, 2017).

One of the five initiatives within MS CEAL was designed to address COVID-19 morbidity and mortality disparities through the development of Community Health Advisors (CHAs) in south Mississippi. This project sought to conduct urgent community-engaged research and outreach focused on COVID-19 awareness and education to address the widespread misinformation about COVID-19 and promote an evidence-based response to the disease, using a CHA model. To explore attitudes and perceptions on COVID-19 awareness and education among African American and Latinx community members and stakeholders across Forrest, Hancock, Harrison, Hinds, and Jackson Counties, qualitative focus groups were facilitated as a form of community engagement and data collection. This work was also conducted as the foundation for development of session modules and training curriculum design. The purpose of this article is to describe thematic findings from the focus groups.

Methods

Design

Virtual focus groups were used for this qualitative study. The research team (USM, Institute for the Advancement of Minority Health, and Magnolia Medical Foundation) leveraged established local partnerships through which potential participants were informed of the focus groups. Local partnerships included community-based organizations located in the areas of interest that were actively engaged with community members and had extensive networks. These community-based organizations had significant ties in the communities through their work with community health clinics, faith-based organizations, and racial and ethnic minority businesses. Community-based organization partners also participated in community events through health fairs, personal protective equipment giveaways, and food baskets to address food insecurity in the community.

The research team recruited participants with the assistance of community-based organizations local to the populations of interest, through e-mail, telephone calls, one-on-one conversations (word of mouth sharing), flyers (posted in clinics and businesses frequented by racial and ethnic community members), and social media announcements. The research team used telephone/e-mail scripts to explain the study, determine eligibility, and invite individuals to attend focus group discussions.

Individuals invited to attend these focus groups were African American residents or stakeholders in Forrest (greater Hattiesburg area) or Hinds (greater Jackson area) or Latinx residents in Hancock, Harrison, and Jackson Counties (Mississippi Gulf Coast), who were at least eighteen

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years of age and had the ability and access to log into an online Zoom meeting. Stakeholders were defined as individuals who lived, worked, volunteered, and/or held a leadership position in the communities they represented. Counties were chosen at the time to reflect the hot spots in the state and various racial and ethnic populations as identified by NIH, while reflecting existing partnerships and infrastructure to conduct research and implement interventions with USM.

A moderator's guide (see Appendix A) was developed for use with all focus groups to gather data in the following three areas: (1) current states of awareness, attitudes, fears, beliefs, myths, and knowledge about risks and exposure, and factors that drive the spread of the virus; (2) identifying community needs associated with COVID-19 that are not often captured in formal data collection methods, such as those that are related to the built environment, education, housing, employment, and mental health; and (3) knowledge and utilization around preventative health practices, treatment, and likelihood of participation in clinical trials and vaccinations for racial and ethnic minorities. The moderator's guide was developed among a team of trained qualitative researchers who actively work in the communities of interest. Content areas were identified by NIH.

Once developed, the moderator's guide was translated into Spanish and verified for translation accuracy by the Mississippi State Department of Health bilingual providers for facilitation with Latinx community members. The Spanish translation was also reviewed by a bilingual Community Health Worker (CHW) for regional translation language for the community of interest. The moderator's guide was not pilot tested due to the time limitations associated with the project plan. Because focus groups were designed to be a minimum of ninety minutes, a \$25 incentive (gift card to local business) was offered for focus group participation.

A total of four virtual focus groups were conducted in English with African American community members and stakeholders in Forrest County and Hinds County. Two virtual focus groups were facilitated completely in Spanish among Hispanic/Latinx community members and stakeholders in Hancock, Harrison, and Jackson Counties. Each focus group had a primary facilitator, notetaker, and a non-participant observer present for the discussion. The virtual focus groups conducted in Spanish had a bilingual facilitator, two bilingual note-takers, and one bilingual non-participant observer.

A brief demographic survey (see Appendix B) was administered via Qualtrics to all focus group participants following the oral presentation and consent process at the beginning of the focus groups. The demographic survey also contained two additional questions related to underlying comorbidities to ascertain if chronic conditions were a concern related to COVID-19 protocols. The demographic survey was also translated into Spanish and verified for content prior to dissemination. The study was approved by the Institutional Review Board of The University of Southern Mississippi, protocol #20-455.

Data Analysis

All discussion groups used a moderator's question guide and were audio and videotaped for transcription. After each group discussion, videos, facilitator notes, and Zoom transcripts were reviewed for accuracy, understanding, and to address reliability issues. All personal identifiers were removed during transcription to ensure confidentiality. All data collected during focus

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groups were coded and organized into broad conceptual categories and substantive themes using standard qualitative research procedures and thematic analysis (Graneheim & Lundman, 2004). Several strategies were employed to enhance rigor and ensure trustworthiness of the data (Cohen & Crabtree, 2008; Pope & Mays, 1995). To reduce researcher bias, a multidisciplinary, racially diverse team of reviewers participated in the analysis. Additionally, member checking (or participant or respondent validation) was conducted for respondent validation of focus groups' findings; participants were asked to check for accuracy and resonance of their experiences.

Demographic survey data were collected and managed using Qualtrics tools through USM's academic license. Demographic survey questions were analyzed and reported by frequency and percent within each categorical answer choice.

Results

Focus Group Participant Characteristics

Fifty-six African American and Hispanic/Latinx community individuals completed the demographic survey. Participants ranged in age from 18-65 years or older. Fifty-eight percent of participants were African American and 42% were Hispanic/Latinx. Two focus groups among African American community residents were completed in Forrest County, while two additional focus groups were conducted in Hinds County (see Table 1). Although community members worked primarily in Forrest County, some resided in Lamar County.

Two focus groups were conducted with Hispanic/Latinx community residents in Hancock, Harrison, and Jackson Counties. Due to possible miscommunication in translation, sixteen community residents reported Country of Origin (versus County of Residence); they were USA (10, 62.5%), Peru (2, 12.5%), Guatemala (2, 12.5%), Mexico (1, 6.25%), and Dominican Republic (1, 6.25%).

Table 1

Demographic Characteristics of Study Sample (n=56)

Characteristic	n (%)
<i>Gender</i>	
Female	49 (87.5%)
Male	7 (12.5%)
<i>Age</i>	
18-25 years	6 (11%)
26-34 years	6 (11%)
35-44 years	13 (24%)
45-54 years	19 (34%)
55-64 years	6 (11%)
65 years or older	4 (7%)
Prefer not to answer	1(2%)
<i>Race/Ethnicity</i>	
African American	32 (58%)
Hispanic/Latino	23 (42%)

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Tables 2 and 3 provide the breakdown by gender, age, education level, marital status, employment status, annual income, and insurance type by race/ethnicity of focus group participants, noting great variability across all categories of focus group participants. Although various gender identities were offered, all participants reported identifying as either female or male. Most of the participants were female. Higher education levels (approximately 63% having bachelor's or master's degrees) among African American participants were reported. More than 52% of Hispanic/Latinx community residents reported having no form of health insurance. Only three African American community residents reported serving in the armed forces with no representation among Hispanic/Latinx community residents.

Table 2

Demographic Characteristics of African American Focus Group Study Sample (n=32)

Characteristic	n (%)
<i>Gender</i>	
Female	29 (91)
Male	3 (9)
<i>Age</i>	
18-25 years	2 (6.25)
26-34 years	2 (6.25)
35-44 years	10 (31.25)
45-54 years	11 (34.38)
55-64 years	2 (6.25)
65 years or older	4 (12.5)
Prefer not to answer	1(3.13)
<i>County of Residence</i>	
Forrest	11 (34.38)
Hinds	13 (40.63)
Lamar (work in Forrest)	8 (25)
<i>Marital Status</i>	
Never married	7 (22.58)
Separated/Divorced	6 (19.35)
Living with Significant Other	1 (3.23)
Married	16 (51.61)
Widowed	1 (3.23)
<i>Education</i>	
Less than 12 th grade	0 (0)
HS Diploma or Equivalent	0 (0)
Some College	6 (18.75)
Community college graduate	6 (18.75)
BS Degree	5 (15.63)
MS Degree or Higher	15 (46.88)
<i>Employment Status</i>	
Not Employed	1 (3.23)
Disabled	0 (0)
Part-time	3 (9.68)
Full-time	21 (67.74)
Retired	4 (12.9)
Other (not specify)	1 (3.23)

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<i>Income Level</i>	
Less than \$17,000	2 (6.25)
\$17,000 - \$24,999	0 (0)
\$25,000 - \$34,999	5 (15.63)
\$35,000 - \$49,999	9 (28.13)
\$50,000 - \$64,999	4 (12.5)
\$65,000 - \$79,999	1 (3.13)
\$80,000 - \$94,999	1 (3.17)
\$95,000 or more	2 (6.25)
Prefer not to answer	8 (25)
<i>Insurance Type</i>	
Private (you pay for)	6 (18.75)
Group (employer pays for)	16 (50)
Affordable Care Act	3 (9.38)
Medicare	4 (12.5)
Medicaid	1 (3.13)
None	1 (3.13)
Other (Tricare)	1 (3.13)

Table 3

Demographic Characteristics of Hispanic/Latinx Focus Group Study Sample (n=23)

Characteristic	n (%)
<i>Gender</i>	
Female	19 (82.61)
Male	4 (17.39)
<i>Age</i>	
18-25 years	4 (17.39)
26-34 years	4 (17.39)
35-44 years	3 (13.04)
45-54 years	8 (34.78)
55-64 years	4 (17.39)
65 years or older	0 (0)
<i>Marital Status</i>	
Never married	2 (8.7)
Separated/Divorced	1 (4.35)
Living with Significant Other	8 (34.78)
Married	12 (52.17)
Widowed	0 (0)
<i>Education</i>	
Less than 12 th grade	4 (17.39)
HS Diploma or Equivalent	3 (13.04)
Some College	1 (4.35)
Community college graduate	8 (34.78)
BS Degree	4 (17.39)
MS Degree or Higher	1 (4.35)
Prefer not to answer	2 (8.7)
<i>Employment Status</i>	
Not Employed	3 (13.64)
Disabled	0 (0)

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Part-time	7 (31.82)
Full-time	5 (22.73)
Retired	0 (0)
Other (self-employed)	1 (4.54)
Other (housewife)	2 (9.09)
Prefer not to answer	4 (18.18)
<i>Income Level</i>	
Less than \$17,000	6 (26.09)
\$17,000 - \$24,999	1 (4.35)
\$25,000 - \$34,999	5 (21.74)
\$35,000 - \$49,999	0 (0)
\$50,000 - \$64,999	2 (8.7)
\$65,000 - \$79,999	1 (4.35)
\$80,000 - \$94,999	1 (4.35)
\$95,000 or more	0 (0)
Prefer not to answer	7 (30.43)
<i>Insurance Type</i>	
Private (you pay for)	7 (30.43)
Group (employer pays for)	1 (4.35)
Affordable Care Act	0 (0)
Medicare	1 (4.35)
Medicaid	1 (4.35)
None	12 (52.17)
Other (Ambetter)	1 (4.35)

When participants were asked about chronic conditions such as hypertension, heart disease, and/or cancer, African American community residents reported the following conditions: hypertension (15, 60%), cancer (2, 8%), diabetes (4, 16%), obesity (2, 8%), other (renal failure and thyroid) (2, 8%), and two participants (8%) preferred not to answer. One resident reported having high blood pressure as “other,” which may be due to a lack of knowledge regarding the clinical term associated with high blood pressure (counted under hypertension). When asked about others living in the home with chronic conditions, African American community residents reported the following: hypertension (10, 50%), diabetes (4, 20%), obesity (1, 5%), emphysema/COPD (1, 5%), other/asthma (2, 10%), and 2 (10%) preferred not to answer.

When asked if any of the Hispanic/Latinx participants had chronic conditions such as hypertension, heart disease, and/or cancer, community residents reported having the following conditions: hypertension (4, 30.77%), obesity (1, 7.69%), other/hyperthyroidism and fibromyalgia (2, 15.38%), and 5 (38.46%) preferred not to answer. When asked about others living in the home with chronic conditions, Hispanic/Latinx community residents reported the following: hypertension (5, 29.41%), cancer (1, 5.88%), diabetes (1, 5.88%), obesity (1, 5.88%), other/stroke (1, 5.88%), and 7 (41.18%) preferred not to answer.

Focus Groups Findings

Six total focus groups were conducted, three of which took place in late November 2020 and early December 2020. Two focus groups were facilitated in late December 2020 and one in late January 2021. The timing and scheduling of focus groups allowed for changes in knowledge, attitudes, and beliefs to be recognized as COVID-19 information was shared through various

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media channels, and misinformation, concerns, and fears of the priority populations could be highlighted.

As previously mentioned, focus group questions centered around three main areas related to COVID-19. From the synthesis of focus group discussions, five main themes emerged: (1) knowledge about COVID 19; (2) vaccines; (3) attitudes towards/beliefs about preventing COVID-19; (4) intentions to prevent COVID-19; and (5) information seeking: COVID-19 preventative behaviors. An additional theme related to the impact of COVID-19 was identified with Latinx population members.

Theme 1: Knowledge about COVID-19

Knowledge associated with COVID-19 was divided into the following four subthemes: (1) myths about sources of COVID, (2) myths about COVID, (3) COVID-related facts, and (4) personal experiences with COVID. Myths about sources of COVID-19 included “The Lord is allowing it to happen to bring people back to him” (African American, Hinds County), to “I’ve heard people say that it comes from the government. It’s some type of virus released by the government or some type of attack” (African American, Forrest County). Most conversations centered around “China” as a reference point, including one participant who said, “I heard that it was caused by someone who ate bat in China” (Latinx, MS Gulf Coast).

Myths about COVID-19 include, “Drink bleach; it will take care of everything” (African American, Forrest County) and “African Americans cannot get COVID because of the melanin in the skin” (African American, Hinds County). A Latinx participant shared this learned lesson, “I particularly had so much fear of getting sick that I started doing something that someone told me to prevent getting sick with COVID-19. They told me to drink ½ cup of apple vinegar every morning and that will prevent it to happened. Well, I did it for a couple of weeks, and I got very sick of my stomach. And I had to go to the doctor. I am feeling better, but now I know that was not true.”

While there were myths about COVID-19 and the sources from which it originated, correct COVID-19 information was available. An African American Hinds County participant highlighted COVID symptoms that one could “lose your taste, your smell, and some people have body aches and severe headaches.” Another participant in the same group stated, “one of the facts is that it can change form. It may not be the exact same way it was when it started out – mutate.”

Both African American and Latinx community participants discussed personal experiences associated with having COVID-19. The focus groups were conducted during the pandemic when stay-at-home orders and social distancing restrictions were strictly enforced (October 2020-January 2021), and positive personal cases of COVID-19 had not largely been experienced by focus group participants. For those respondents who had experienced COVID-19 or had a direct family member with COVID-19, they noted the severity and lasting side effects.

Theme 2: Vaccines

Most of the conversation pertaining to vaccines were related to hesitancy or access issues. While vaccines were not readily available to persons of all ages, focus group participants were mixed

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on whether they would get the vaccine. Very few participants (prior to 2021) would “get the vaccine” (African American, Hinds County), with most participants wanting to “think about it...I would wait first on other people to get the vaccine” (Latinx, MS Gulf Coast). After January 2021, one participant stated:

I think, for me, in the beginning, I said I wouldn't take it because it was developed so fast that there hadn't been enough testing. They hadn't done enough research to it and that I would just wait. Somebody that's gonna start, you know, howling at the moon and growing hair from their eyes, I didn't wanna be one of them. So I think, initially that was my thought, that it just had not had enough research, but again as [participant 3] was saying, when you started to actually do some research yourself to get information about it, to know more about it, I just decided it was better for me to go ahead and get the vaccine and to get my mom the vaccine. I'll get her the vaccine as well, and you know, I felt pretty safe about getting that done, getting information myself, not necessarily what was being said to me, but getting information myself because you just can't trust what's being said (African American, Hinds County).

Participants also noted access to vaccines as an additional issue. One participant said, “And also the racism...I think they call it vaccination inequalities, where the vaccine is being sent. Which neighborhoods you know are receiving a supply of these vaccines versus those that are not” (African American, Forrest County). Another participant verbalized, “I think it's the pharmaceuticals – the pharmacies, CVS and Walgreens. And so what they were doing is the government was sending CVS, Walgreens, Wal-Mart the vaccines, but if you think about it, minority communities don't have the big pharmacies in those communities. Those citizens and residents have to go to the suburbs to where those stores are located, so there's a lot of logistics, you know, based on our communities and our races, that is really not helping us at this point” (African American, Hinds County). For Latinx community members on the Mississippi Gulf Coast, access issues were also related to cost. One participant stated, “it should be free for those that do not have health insurance.”

A subtheme under Vaccine for Hispanic focus group participants was related to clinical trials. Most of the Latinx community on the Mississippi Gulf Coast that participated in the focus group had little knowledge about clinical trials (“What is a clinical trial?”) or knowledge of any available or existing clinical trials to participate.

For African American participants, three additional subthemes identified included (1) lack of information on vaccine side effects, (2) long term effects of COVID-19, and (3) “representation matters.” Several respondents noted there was little information on vaccine side effects as they were still in the testing phase and concerns that COVID-19 was a relatively newer disease with little research or data on long term effects. Interestingly, visibly seeing African Americans discuss and get vaccines was an issue highlighted among African American participants. One participant noted, “So representation matters. Having someone that looks like you may bring a little more information to the situation” (Forrest County).

Theme 3: Attitudes towards/beliefs about preventing COVID-19

Attitudes towards and beliefs about preventing COVID-19 were associated with subthemes linked to cultural influences, political influences, saying versus doing, and fear of contagion. Cultural influences had varied perspectives between African American and Latinx focus group participants. For African American participants, discussions on cultural influences related more to lack of self-care and “not taking care of ourselves” (Hinds County), and lack of preparation or decision-making issues, such as advanced directives, wills, and life insurance policies. For Latinx participants, discussion regarding cultural influences pertained more to the social and familial ties that connect the family unit.

Political influences and racism were both discussed as issues by all focus group participants. African American focus group participants discussed racism more in terms of politics associated with the President (former) and Governor. For example, “I think racism was intertwined in this COVID pandemic from the very start. You know, as we all know, we all know the president” (Hinds County). Another respondent said, “You had a presidential task force and the president was sending out, you know misinformation. And I felt like once the presidential Task Force found out from the data that was coming in from around the nation. They were finding out that hey, this was disproportionately affecting minority communities. I think that's when they stopped meeting. They didn't meet as regularly afterwards. You know he's like, hey, it's affecting minorities. Hey, you know. They on they own, you know what I'm saying” (Forrest County).

Latinx focus group participants noted racism towards racial and ethnic minorities as issues. One participant recalled that “it is a terrible disease; it affects you afterwards, but there are many people that do not listen. And the first ones to be blamed are the Hispanics, even if they wear the mask better than others.” Another Latinx focus group participant said, “There would be groups of people, more white people that would not want to wear mask. If people of color were not wearing mask, they would be more criticized.”

Focus group participants reflected that many individuals would verbally articulate the need for wearing masks and social distancing but did not practice proper wearing of masks or staying home to socially distance. The lack of social distancing and improper wearing of masks was reported as occurring among younger populations, such as young adults. One participant recalled, “I think young people are not listening to the guidelines and following what we know is true. They are the ones spreading the virus!” (Latinx, MS Gulf Coast). Additionally, a fear of contagion was verbalized among focus group participants. One Latinx participant said, “I am afraid to get it while I work, but there is nothing I can do. I have to work.” An African American participant articulated that she was “actually fearful of going to the doctor's office, and I actually let my ears get really infected because I was trying to treat it myself because I really didn't want to expose myself by going into a doctor's office. And we had already done the telehealth” (Forrest County).

Theme 4: Intentions to prevent COVID-19

All focus group participants had strong intentions for preventing the spread of COVID-19. Participants discussed protecting family members, social distancing practices, and community needs as subthemes. Methods discussed for protecting family members included frequent hand washing, wearing of masks, sanitizing areas, and practicing social distancing, even during

holidays and with extended members of the family. Participants were careful to consider family members with comorbidities, compromised immune systems, and those that were elderly.

For Latinx participants, community needs discussed included access to COVID-19 testing sites and centers, costs associated with COVID-19 testing, finding health care providers for care when sick or infected, and translation services when seeking care. For African American participants in Forrest and Hinds Counties, community needs discussed in detail were more related to access for older populations and technology barriers. For instance, one participant noted that she “realized the elderly, a lot of them don't have the Internet. A lot of them don't have computers or smart devices. They may not know how to use them” (Forrest County). Another respondent said, “There may not be a person who is there now to facilitate them (older adults) going online and having the patience and know how to go ahead and make that appointment. They didn't have a phone number (to call and make an appointment). You had to go online and make your appointment. You know, you gotta think of disparities. You know there are not a lot with resources in Mississippi. A lot of those counties, the Internet service is not there” (Hinds County). Additionally, one person commented “...about transportation... Can we assist you with transportation there?” (Hinds County).

Theme 5: Information seeking: COVID-19 preventative behaviors

Sources for accurate information for Latinx members that are bilingual and African American focus group participants were CDC, Department of Health, and television news station (MSNBC, CNN, and local news networks). A few stated that Google or social media would be a source of information but not the only source of information. Individuals like Dr. Fauci, Dr. Thomas Dobbs, or CHWs from various community partners were also recognized as dependable sources. Participants shared, “It's been said that community health care workers can promote the knowledge about COVID and knowledge about the vaccine way better than, you know your doctors and your nurses, not saying that they're not great, they are. But to get to the community folks, the people already working in the community, community health workers, and mobile units are the way” (African American, Hinds County) and “I have learned in my group (community education class on diabetes lead by Hispanic CHW), and any information I receive I have passed it along to family and friends” (Latinx, MS Gulf Coast). Additional sources for information sharing that could be trusted included extended family members who were health care providers and information received from their churches. A participant noted:

...“most people trust their churches. If they're going to a church, they're trusting that church. If a person doesn't go to church, they say – well, you know Sister so and so got out here to such and such, and they will go to that church simply ‘cause they met that pastor or they met that layperson. It's somebody in that church that they trust; it's somebody in that community that they trust. Who better knows the people in the community except those people that are constantly in the community. And they, they just trust them.

Hispanic focus group participants that primarily spoke Spanish explained that in the beginning of the pandemic it was difficult to find information in Spanish in Mississippi. They would use Spanish speaking health professionals, CHWs, and community-based organizations for information and resources.

Theme 6: Impact of COVID

Latinx focus group participants discussed the impact of COVID-19 as a theme to be highlighted. Mental health issues, physical health, economic impacts, and the education of children were also recognized. For those that experienced COVID-19, mental health issues associated with isolation were significant. One Latina participant expressed how COVID-19 affected her husband. He contracted COVID-19 when he was working away from the family and had to isolate by himself. He is primarily Spanish speaking and has “emotional scars now. He is very afraid to get it again.” Physical health was impacted by weight gain and lack of physical activity.

Economic-related issues were coupled with mandated quarantine, sickness, and inability to work, thereby creating problems with insufficient money to pay rent, purchase food for the family (especially in a one-income household), and costs associated with health care (with no health insurance). Different focus group participants expressed, “the fact that he had to be isolated for so many days, we are almost out of money;” how “I have lost my job and it is difficult to pay rent and buy groceries; and that “...people that were evicted from their apartments and houses because they were not able to pay for their rent” impacted their communities.

The education of children was a subtheme under the impact of COVID-19 for focus group participants. Discussions about children of primarily Spanish speaking parents and virtual learning for children were highlighted as significant issues. Many Spanish speaking parents do not have the resources for educating their children in online environments, where language, literacy, and translation issues are paramount. They have little or no internet access in the home, devices or equipment, transportation to hot spots, or childcare for siblings while the student is learning in places where they can access the internet. Internet access is a separate issue with broadband technologies needed for many of the online platforms for student learning. For those school systems that provided handouts, lessons, and worksheets via paper modules, some Spanish speaking families could not “get transportation to get the paperwork at school because parents work all day and can’t help the student get their work.”

Additionally, many children receive breakfast and lunch through reduced or free lunch programs in primary and secondary schools. However, not all school systems provided these meals during this time. One participant who works at an elementary school commented, “I know of some of my Hispanic students that do not have enough food.”

Discussion

The COVID-19 pandemic has substantially affected people of all nations, continents, races, and socioeconomic groups. Mississippi is no exception. The rapid spread of COVID-19 and the severity of its symptoms has tested the limits of health care and social services delivery systems. Responses of underserved racial and ethnic minority community members reflect significant health disparities that need to be addressed. Recent research published on perceptions of COVID-19 among underserved populations have reinforced data presented in this article. For example, an Alabama CEAL study that conducted virtual focus groups on COVID-19 awareness and education to address the widespread misinformation about COVID-19 and promote an evidence-based response to the disease with African American and Latinx community members during the same period as the focus groups reported here found similar barriers and challenges

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for prevention, coping, and testing (Bateman et al., 2021). Utilizing a PRECEDE-PROCEED model, they (2021) found that challenges for prevention included apathy, difficulty with social distancing, lack of information, and mixed messages from authority figures. Challenges for coping were food insecurity, mental health issues, isolation, economic hardships, lack of health care access, and issues with virtual schooling and church services. Challenges to testing included misunderstanding, fear, mistrust, testing restrictions, and location of testing sites.

Asare, Okafor, & Bautista (2020) conducted a cross-sectional study that aimed to determine the associations between the Health Belief Model (HBM) constructs and adherence to public health safety recommendations about COVID-19 among African Americans. This study identified several modifiable factors that influence participants' adherence to the recommended public health safety guidelines for COVID-19, specifically that HBM constructs of perceived susceptibility (chances of getting COVID 19 are great, physical health makes it more likely to get COVID-19, and worry a lot about getting COVID-19), perceived severity (COVID-19 is a deadly disease, COVID-19 is a hopeless disease, getting COVID-19 will be more serious than other diseases, and getting COVID-19 will change my life), and perceived benefits (social distancing, consistent hands washing, and wearing of face mask). Specific HBM constructs identified in this study were also noted in the focus groups' themes.

Similarly, gender representation was consistent to other recent studies on COVID-19 in the South, with females comprising a majority of participants (Asare, Okafor, & Bautista, 2020; Bateman et al., 2021; Scarinci et al, 2021). It was noted in a study on perceived susceptibility among rural and urban adults in Alabama that women perceive higher levels of susceptibility during the pandemic, tend to be more concerned over their health and the health of their families, and are inclined to seek medical care more frequently than men (Scarinci et al., 2021). Bateman et al (2021) reported female participants at 67% (pg. 54) in their virtual focus groups; educational attainment was not collected. Although findings from Asare, Okafor, & Bautista (2020) were quantitative in nature, over 65% of participants were female (pg. 274), and 57.74% had graduate or higher degrees.

The qualitative focus groups were also facilitated to assist in the development of training session curriculum. From the identified themes (knowledge about COVID-19; vaccines; attitudes towards/beliefs about preventing COVID-19; intentions to prevent COVID-19; information seeking: COVID-19 preventative behaviors; and impact of COVID-19), the following curriculum topics were condensed and designed for delivery in the CHA program:

- Socio-determinants of health (race/ethnicity, gender, SES, environment) and how each affects COVID-19
- Effects and stressors of COVID-19 on vulnerable communities (addictive behaviors, alcohol and drug abuse, impacts to mental health, and need for self-care)
- Generation and cultural gaps: addressing attitudes of younger generations and backlash to social distancing and PPE
- Vaccines information – Making informed decisions

Following community engagement principles (Ahmed & Palermo, 2010) and guidance from community members and stakeholders who participated in focus groups, it was important to

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consider the pandemic environment in the design of the CHA program. This included sessions delivered online due to social distancing and stay-at-home orders, convenient sessions for working adults, training sessions that did not require a long commitment, data from reliable sources, and information in Spanish for Latinx community members. It was also imperative that information was applicable and could be shared easily with others and that program delivery was interactive. Data collected in focus groups would be shared as foundational information for the program and serve as entrée into the COVID-19 topics for training. CHA project design, curriculum, and outcomes are described in a separate publication in progress.

Limitations and Strengths

This study utilized a virtual technology platform (Zoom) for the qualitative focus groups. Requirements included access to the internet through a cell phone, tablet, or computer and the ability to participate in a Zoom call. As such, findings are limited in that perspectives of individuals with access to technology were included in the study. It is also possible that the full range of African American and Latinx community members and stakeholders across Forrest, Hancock, Harrison, Hinds, and Jackson Counties were not represented by the participants selected.

Additionally, the moderator's guide was lengthy with twenty-two priority questions and additional probing questions. As focus groups passed the ninety-minute mark, some of the questions were shortened in depth to accommodate for time, possibly leaving out discussions on priority community needs. As COVID-19 information and practices changed quickly, and access to supplies became available, some questions in the moderator's guide were not as pertinent to the evolving body of knowledge.

Despite these limitations, the utilization of the Zoom platform enabled the research team to access participants during a time of social distancing in a convenient and effective manner. While it did take additional time to work with participants to ensure that they were set up via cell phone, tablet, or computer before the focus group was conducted, it proved to be a viable tool for collection of qualitative data that could be easily utilized by participants. This research was conducted with members of the research team who facilitated the focus groups that were representative of the communities being served in terms of race and ethnicity. Focus groups conducted with Latinx community members were conducted in Spanish, with bilingual capabilities of all research team members.

Conclusion

The evolving COVID-19 pandemic is one of the greatest public health threats to emerge in modern times and has disproportionately impacted communities of color in the United States. This study was designed to explore attitudes and perceptions on COVID-19 awareness and education among African American and Latinx community members and stakeholders across Forrest, Hancock, Harrison, Hinds, and Jackson Counties in Mississippi through virtual, qualitative focus groups. Data was needed to develop an understanding on the current state of awareness, attitudes, fears, beliefs, and myths of African American and Latinx community members in south Mississippi. Additional knowledge about risks and exposure, access to PPE

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supplies, and factors that drove the spread of the virus were necessary to provide a baseline for best practices among local racial and ethnic minorities. Identification of community needs associated with COVID-19 that were not captured in most formal data collection methods were essential for development of community-engaged interventions that best assisted underserved populations. Knowledge and utilization around preventative health practices, treatment, and likelihood of participation in clinical trials and vaccinations for racial and ethnic minorities were needed to develop strategies for primary and secondary prevention efforts.

This study provided important information that has been used to develop community-based strategies to 1) address misinformation and provide accurate information; 2) work with local and state agencies and community-based organizations to provide access to COVID-19 testing and vaccination, and 3) identify and remove barriers to access and availability to COVID-19 resources. Additionally, this research provided insight into the factors driving access and availability of COVID-19 resources in three primarily African American and/or Hispanic communities in Mississippi. Both groups have shown a high degree of mistrust to the health care system. Furthermore, African American and Hispanic communities have higher chronic disease rates due to inequitable access and availability of health care, which is known to place them at risk for more severe COVID-19 infections. These disparities are especially evident in Mississippi.

Themes identified and discussed in this qualitative research also provided the foundational baseline necessary for curriculum development for the community engagement project designed to address COVID-19 morbidity and mortality disparities focused on the development of CHAs in south Mississippi. Findings from this research may be useful for others developing community-based interventions and programs and those that are adapting methodologies to incorporate a natural helper or CHA model for outreach and educational efforts as this pandemic continues.

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Appendix A

**Vulnerable Communities and COVID-19 Experiences
(90-120 minutes)**

Sign-on

- Wait for all participants (participants) to sign on to Zoom or arrive.

Introduction and purpose of focus group (2 minutes)

- Let me begin by thanking you all for being here. My name is (moderator name), and I'll be facilitating our discussion today on COVID-19. I am with (organizations) and am working with groups of community-based organizations and The University of Southern Mississippi on COVID-related health issues. We also have (list individuals), who will be taking notes on our conversations to make sure we get all your comments.
- We are working with a project that is in eleven states established as part of the NIH Community Engagement Alliance (CEAL) Against COVID-19 Disparities. These CEAL research teams will focus on COVID-19 awareness and education research, especially among racial and ethnic minority populations.
- We are interested in learning more about experiences related to COVID-19 in three main areas: 1) your current levels of awareness, fears, and beliefs about risks and exposure of the virus; 2) identifying community needs associated with COVID-19 that are not often captured in formal data collection methods, such as those that are related to the built environment, education, housing, employment, and mental health; and 3) knowledge and utilization around preventative health practices, treatment, and likelihood of participation in clinical trials and vaccinations for racial and ethnic minorities.

Introduction to the Focus Group Discussion and Rules (3 minutes)

- We provided you a copy of the consent form for participation prior to the call. Has everyone reviewed the consent form? (Pause and listen to everyone's verbal agreement). To ensure that everyone has reviewed and understands the consent form, I will read the consent form out loud for everyone to hear. (Read consent form. Ask for any questions and clarify answers to any questions). If you agree to participate in the focus group, please say I agree. (Pause and listen to everyone's verbal agreement). Does anyone not agree to participate in the focus group? (Pause and listen for anyone to object – If object, thank them for their time and ask that they leave the call). If you participate in this focus group call, you are consenting to participate in the research project. (Remind everyone to send you their signed consent form). Your verbal agreement will serve as your consent to participate. Please remember, all participation is voluntary, and you can withdraw your participation at any time.
- We are here to learn from you. There are no right or wrong answers – just different points of view and experiences, so please express what is on your mind. You'll notice that we're recording this Zoom conversation. That's so we'll be sure to get all your comments but let me assure you that your name will not be used in any way. Also, once we've made a transcript of our discussion, the video will be deleted. Please feel comfortable to say

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what's on your mind – both the positive and the negative. Of course, you may decline to answer any question at any time if it makes you feel uncomfortable. We will be using the information obtained from these focus groups to help us determine what types of information should be included in a Community Health Advisor training curriculum that we will develop. We may also share information learned from these focus groups in a presentation and in an article, we will write about the lessons we learn. Only group information will be shared in any presentations or manuscripts, and all information will be de-identified. If you are interested in a copy of anything that develops as a result of these focus groups, please complete the card with your contact information. We will share it with you after it is completed.

- We want to be respectful of everyone's time so I may need to stop discussion on one topic and move it to the parking lot. We can continue to discuss that topic at the end of the focus group. I have several topics to cover today, and I want to be sure that we discuss all of them within the time frame allotted. Does everyone agree that this is ok? Great! Let's begin!

Introduction of Participants (10 minutes)

- Opening – I'd like to go around the table and get each of you to introduce yourself. Please tell me your name, something that brings you joy, and something that makes you crazy (or aggravates you).

Discussion Questions (60 minutes)

Target area 1

1. COVID-19

- When I say "COVID-19," what's the first thing that comes to your mind?

2. How has COVID-19 impacted you individually?

- How has it impacted your immediate family?
 - Children
 - Parents
 - Divorced parents and visitation dynamics?

3. How has your day-to-day work changed, if at all?

- Can you think of any examples of how COVID has affected your work positively?
- Can you give me any example of how COVID has affected your work negatively?
 - What physical risks have you experienced on the job related to COVID?
 - What psychological risks have you experienced on the job related to COVID?

4. In what ways has COVID-19 impacted you?

- Income
 - Expenses you did not expect to have to address?
 - Loss of insurance or unable to make co-pay?
- Healthcare
 - Additional visits to the clinic?
 - Putting off elective procedures?
 - Preventative health appointments?

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- Housing
 - Availability of rental homes
 - Loss of leases
 - Homelessness
 - Food Security/Insecurity
 - Feeding more?
 - Access
 - Not able to afford foods

 - Mental Health
 - Stress and associated distress?
 - Workloads
 - Separation of work and homelife

 - Physical Health
 - How has COVID affected your physical activities level?
 - How has COVID impacted your eating habits?
 - Comorbidities?

 - Racism
 - Asian disease and conflict from others
 - Harassment, verbal and/or physical
5. What are some facts that you have heard about COVID?
 6. What are some myths that you have heard about COVID?
 7. What are some things you have heard about COVID that you do not know if it is true?
 8. How do people in your community think COVID is spread?
 - Where do they think COVID comes from?
 9. How do you think you can protect yourself from COVID?
 10. What are PPE (personal protective equipment) materials that are available to you?
 - How accessible are PPE materials to you?
 11. What are some types of PPE that you regularly use?
 12. Where have you been getting information on COVID-19 to share with your family and friends?
 - Tell me about whether the information was a good fit for you in terms of language, reading level, culture, etc.?
 - How have you had to “translate – or put into other words” COVID-19 information that you have shared with others?
 - How have you shared this information with others?

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13. What are sources that you trust to get information on COVID-19?
- Local sources of information

Target area 2

14. What are some community needs that have become larger issues that are related to COVID-19?

- Education, K-12
- Housing needs
- Violence
- Transportation
- Food Security/Insecurity

15. What are some issues that you think are related exclusively to African Americans/Latinx that are of concern that we should know and talk about?

16. What information needs to be shared in the community that is currently not being addressed?

Target area 3

17. What are some things that you do regularly as preventative measures against COVID-19?

- How confident do you feel that you are correctly practicing preventative measures? (wearing masks correctly, washing masks regularly, using appropriate masks, washing hands, cleaning areas of frequent use, etc.)
- Testing?

18. What kinds of treatment options are available in your community for individuals with COVID-19?

- Issues with costs?
- Where do people go to get tested?

19. What do you know about clinical trials?

- Myths that are out there
- Participation amongst participants or family members?

20. If there were to be a vaccine available in the next few months, how likely are you to get the vaccine?

- What are some concerns you have about a vaccine?
- What are some things that you have heard that are related to a COVID vaccine?
 - Some people have suggested that a microchip will be required or implanted.
- What are some reservations that you have related to getting a vaccine?
- How likely are others in your community to get a vaccine?
- What would be a cost (out-of-pocket) that you would be comfortable paying for a vaccine?

21. What clinical trials are available to you in your area?

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- How likely would you be to participate in a current clinical trial for a COVID vaccine?
 - What would be some concerns that you might have related to a COVID clinical trial as compared to a different clinical trial (like a cancer drug)?
 - How likely is someone of your race/ethnic group to participate in a clinical trial for a COVID vaccine?
 - How likely is someone of your race/ethnic group to participate in any other type of clinical trial that is not related to COVID?
21. How confident are you that COVID-19 will finally be controlled with the development of a vaccine?
- What are some measures that will need to be in place for this to happen?
22. What are you doing for self-care?
- How important is self-care to you during the pandemic?
 - What strategies have you used?

Finally, we want to be sure that you have had an opportunity to share all your thoughts about COVID-19 and the experiences of individuals in the community responding to the pandemic. What other concerns or issues that we have not discussed would you like to talk about at this time?

Closing (5 minutes)

Thank you very much for sharing your thoughts with us today. The information that you have shared here today is invaluable.

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Appendix B

Please select one answer to the following questions unless otherwise indicated.

1. What is your gender?
 Female Male
 Transgender female Transgender male
 Gender Variant/Nonconforming Prefer not to answer
 Other _____
2. What is your age?
 18-25 years of age 26-34 years of age 35-44 years of age
 45-54 years of age 55-64 years of age 65 years of age or older
 Prefer not to answer
3. How would you describe your race/ethnicity? Please select all that apply.
 African American Caucasian
 Asian Hispanic/Latino
 Native American (Indian/Alaska Native) Other (please specify) _____
 Prefer not to answer
4. What is your county of residence?
 Forrest Hinds
 Other (please specify) _____ Prefer not to answer
5. What is your highest educational level?
 Less than 12th grade High school graduate/GED
 Some college Community college graduate
 Bachelor's degree Master's degree or higher
 Prefer not to answer
6. What is your current marital status?
 Never married Married
 Separated or divorced Widowed
 Currently living with a significant other Prefer not to answer
7. What is your current employment status?
 Full-time Part-time
 Retired Disabled
 Not employed Other _____
 Prefer not to answer
8. Have you served or currently serve in the Armed Forces?
 Yes No
 Prefer not to answer
9. What is the total household yearly income for all the people that live at your place?

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- | | |
|---|---|
| <input type="checkbox"/> Less than \$17,000 | <input type="checkbox"/> \$17,000 to \$24,999 |
| <input type="checkbox"/> \$25,000 to \$34,999 | <input type="checkbox"/> \$35,000 to \$49,999 |
| <input type="checkbox"/> \$50,000 to \$64,999 | <input type="checkbox"/> \$65,000 to \$79,999 |
| <input type="checkbox"/> \$80,000 or 94,999 | <input type="checkbox"/> \$95,000 or more |
| <input type="checkbox"/> Prefer not to answer | |

10. What type of insurance do you have?

- | | |
|--|---|
| <input type="checkbox"/> Private (you pay for) | <input type="checkbox"/> Group (your employer pays for) |
| <input type="checkbox"/> Affordable Care Act | <input type="checkbox"/> Medicaid |
| <input type="checkbox"/> Medicare | <input type="checkbox"/> None |
| <input type="checkbox"/> Other _____ | |

11. Do you have any of the following chronic conditions? Please select all that apply.

- | | | |
|---|---|--------------------------------------|
| <input type="checkbox"/> Hypertension | <input type="checkbox"/> Diabetes | <input type="checkbox"/> HIV/AIDS |
| <input type="checkbox"/> Heart Disease | <input type="checkbox"/> Obesity | <input type="checkbox"/> Hepatitis C |
| <input type="checkbox"/> Cancer | <input type="checkbox"/> Emphysema/COPD | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Prefer not to answer | | |

12. Does anyone who lives in your home have any of the following chronic conditions? Please select all that apply.

- | | | |
|---|---|--------------------------------------|
| <input type="checkbox"/> Hypertension | <input type="checkbox"/> Diabetes | <input type="checkbox"/> HIV/AIDS |
| <input type="checkbox"/> Heart Disease | <input type="checkbox"/> Obesity | <input type="checkbox"/> Hepatitis C |
| <input type="checkbox"/> Cancer | <input type="checkbox"/> Emphysema/COPD | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Prefer not to answer | | |