





ORIGINAL ARTICLE

Perinatal Experiences of Black Women During COVID-19: A Qualitative Study Guided by the Public Health Critical Race Praxis

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ABSTRACT

Pregnancy during the COVID-19 pandemic presented unique challenges for all women; however, the experiences of Black women were particularly affected by intersecting processes and systems such as race, class, gender, socioeconomic status, and healthcare access. The objective of this study was to explore the perinatal experiences of Black women amidst the COVID-19 pandemic. This was a qualitative study. Inclusion criteria were self-identification as a Black woman aged 18–49; experienced at least one pregnancy from March 2020 to May 2023; received at least one dose of COVID-19 vaccine during the perinatal period; and residence in Greater Philadelphia. Interviews ($n = 22$) were conducted by trained researchers and were audio-recorded and transcribed verbatim, and analyzed inductively. Participants were incentivized for their time. The average age of the participants was 33.5 (± 6.2) years. Of 28 pregnancies, 22 resulted in live births, two ended in miscarriages, two in abortions, and two participants were pregnant during data collection. Three main themes were identified: (1) emotional impact of COVID-19; (2) experiences of COVID-19 illness during pregnancy and postpartum; and (3) impact of COVID-19 mitigation measures on perinatal experiences. The perinatal experiences of Black women during the COVID-19 pandemic revealed critical gaps in our maternal healthcare system. Hence, culturally sensitive and targeted crisis preparedness and readiness strategies, such as community-led response teams, for minority groups during health crises like the COVID-19 pandemic, are warranted.

1 | Introduction

The COVID-19 pandemic has profoundly impacted global health systems, exposing and exacerbating existing racial and ethnic disparities (Ndumbe-Eyoh et al. 2021). As the virus spread, it became evident that marginalized communities, particularly Black and other communities of color, faced a

disproportionate burden of illness, mortality, and disruption to essential services such as reduced access to prenatal appointments, the suspension of community-based programs such as breastfeeding support groups, and limitations on doula or family presence during childbirth (Krishnan et al. 2020). The pandemic's multifaceted challenges have illuminated the systemic inequalities that permeate healthcare, necessitating a

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closer examination of how these disparities manifest in specific populations, especially during critical life events such as pregnancy and childbirth (Williams 2024).

Perinatal experiences during the COVID-19 pandemic presented unique challenges for all expectant mothers; however, the experiences of Black women were particularly affected by intersecting processes and systems such as race, class, gender, socioeconomic status, and healthcare access (Dahl et al. 2023; Njoku et al. 2023). Many healthcare facilities implemented restrictive policies aimed at minimizing virus transmission, including limitations on hospital visitors and changes to maternity care protocols (Iness et al. 2022). These adaptations, while necessary to protect the public's health, left many Black women feeling isolated and unsupported during a time that should be characterized by care, social support, and community (Golden 2021). Moreover, the pandemic disrupted routine healthcare services, leading to increased anxiety and stress among pregnant individuals who were already navigating a complex and inequitable healthcare system (Diamond et al. 2020).

Black women in the United States face a disproportionate burden of maternal-infant morbidity and mortality compared to other racial and ethnic groups (Bridges 2020). According to recent studies, Black women are three to four times more likely to die from pregnancy-related causes and are at a higher risk for adverse pregnancy outcomes (Howell et al. 2016; Louis et al. 2015; Wang et al. 2021). This alarming trend is compounded by the impact of the pandemic, which has further complicated access to quality healthcare (Barach et al. 2020). Many Black families faced job losses, reduced income, and food insecurity, creating additional barriers to adequate prenatal and postpartum health and maternal wellbeing (Bellerose et al. 2022; Dolin et al. 2021). Additionally, restrictive hospital policies and reduced access to community-based support systems, such as doulas and birthing centers, compounded these challenges, leaving Black women to navigate pregnancy and childbirth with limited resources and support (Krishnan et al. 2020).

The pandemic-related restrictions on healthcare access have been particularly detrimental to Black individuals, who frequently encounter systemic barriers rooted in historical and contemporary injustices and racism (Reyes 2020). The intersection of racism, economic hardship, and healthcare disparities has resulted in heightened stress and anxiety for Black pregnant individuals, who must navigate not only the challenges posed by the virus but also the pervasive inequalities within the healthcare system (Liu and Glynn 2022; Mehra et al. 2023). The mental health implications of social isolation, compounded by physical distancing measures and the absence of traditional support networks, further complicated perinatal experiences during the COVID-19 pandemic among Black women (Koenig et al. 2024; Meaney et al. 2022). Despite these challenges, there remains a gap in the literature regarding the specific ways Black women experienced and coped with these intersecting burdens during the pandemic, particularly during the perinatal period.

While previous research has documented the disparities in maternal health outcomes among Black women and the

challenges they face in accessing quality care, few studies have explored their unique experiences during the COVID-19 pandemic (Howell et al. 2016; Louis et al. 2015). Studies conducted prior to the pandemic have highlighted systemic racism, implicit bias in healthcare, and socioeconomic inequalities as key contributors to adverse maternal health outcomes among Black women in the US (Dahl et al. 2023; Mehra et al. 2023). However, the pandemic introduced additional layers of complexity, including disruptions to essential services, increased social isolation, and heightened mental health challenges, which have not been fully explored in the context of Black women's perinatal experiences (Reyes 2020). This study seeks to address this gap by centering the voices of Black women to understand how they navigated the unique challenges of pregnancy, childbirth, and postpartum care during the pandemic. By examining their experiences, we aim to illuminate the systemic barriers that contributed to their challenges and identify opportunities for improving maternal health equity during times of heightened public health crisis.

The purpose of this study was to explore the perspectives and perinatal experiences of Black women amidst the COVID-19 pandemic, using a critical lens. The theoretical framework guiding this research is the Public Health Critical Race Praxis (PHCRP), which emphasizes the importance of understanding the intersectionality of racism, race, class, and gender in public health research and practice (Ford and Airhihenbuwa 2010a, 2010b). PHCRP provides a lens through which to examine how systemic racism and intersecting identities (e.g., race, sex, gender, social class) shape health outcomes and experiences. Key concepts of PHCRP include the centrality of racism as a structural determinant of health, the importance of centering marginalized voices in the conceptualization and production of knowledge, and the need for transformative action to address intersecting systemic inequalities (Ford and Airhihenbuwa 2010a, 2010b). This framework is particularly relevant for understanding the experiences of Black women during the perinatal period amidst the COVID-19 pandemic, as it allows for a nuanced exploration of the ways structural racism and intersecting inequalities impact pregnancy, childbirth, and postpartum experiences. By applying PHCRP, this study seeks to contribute to the growing body of research aimed at dismantling systemic barriers and promoting perinatal health equity for Black women.

2 | Materials and Methods

2.1 | Study Setting

The Greater Philadelphia region includes five counties in Pennsylvania (Bucks, Chester, Delaware, Montgomery, and Philadelphia), four counties in Southern New Jersey (Burlington, Camden, Gloucester, and Mercer), and one county in Northern Delaware (New Castle). An in-depth description of the study setting is detailed elsewhere (Olorunsaiye, Degge, Osborne, et al. 2025; Olorunsaiye, Degge, Gordon, et al. 2025). Briefly, Philadelphia has a long history of redlining and racial segregation, whose impacts persist in contemporary social and structural inequalities and racial inequities in health outcomes (Servon et al. 2023;

Equity Report | Our America [n.d.](#)). It is also the largest city in the study area, has a large population of Black residents, and is one of the 10 largest cities in the US. Compared to the 2022 US median household income of \$74,755, the median household income in Philadelphia was \$56,517. Additionally, Black households in Philadelphia made about half the income of non-Hispanic white households in 2022 (Mosbrucker-Garza [2024](#)). There are also stark differences in maternal mortality in the area; although Black women accounted for only 43% of live births from 2013 to 2018, nearly three-fourths of all pregnancy related deaths occurred in Black women during the same period (Maternal Mortality Report Finds Non-Hispanic Black Women Represent 73% of Pregnancy-Related Deaths in Philadelphia [2024](#)). Additionally, COVID-19 infection and hospitalization rates among pregnant people were disproportionately skewed towards Black patients compared to white patients (Burris et al. [2022](#)). Some factors that were associated with the increased seropositivity rates in Black pregnant patients included neighborhood factors (e.g., deprivation, and crowding), structural factors (e.g., lack of healthcare access, lack of access to vaccines and testing and vaccination sites in lower-income areas), many of which are linked to the persisting structural impacts of redlining and segregation (Barber et al. [2020](#)).

2.2 | Study Design and Data Collection

This was a qualitative study involving participants in the Greater Philadelphia area, as defined above. Based on the background of structural racism and racial inequities in maternal mortality in the study area, we used a critical lens to design and conduct this study. The PHCRP framework consists of four overlapping and nonlinear focus areas which have been applied in research and practice to counter the dominant narrative in knowledge production and action (Ford and Airhihenbuwa [2010b](#), [2010a](#)). The application of the PHCRP as a framework guiding this study is detailed in prior publications (Olorunsaiye, Degge, Osborne, et al. [2025](#); Olorunsaiye, Degge, Gordon, et al. [2025](#)). Briefly, Focus Area 1: Contemporary Patterns of Racial Relations – explored how racism operates in relation to pregnancy and COVID-19; Focus Area 2: Knowledge Production – elucidated the predominant experiences represented in the extant literature on maternal health and COVID-19; Focus Area 3: Conceptualization and Measurement – was applied in data collection, analysis, and interpretation; Focus Area 4: Action – recommendations for improving the perinatal experiences of Black women and birthing people in the face of widespread and disruptive public health crises.

To counter the underrepresentation of Black women's voices in the production of knowledge on perinatal experiences during the pandemic, the inclusion criteria were (1) self-identification as a Black woman or pregnancy capable person between the ages of 18 and 49 years; (2) residence in Greater Philadelphia as defined above; (3) experienced at least one pregnancy between March 2020 and May 2023; (4) received at least one dose of COVID-19 vaccine during the preconception, pregnancy, or postpartum period.

The semi-structured interview guide was developed and pre-tested by the study team and some community members with the lived experience of concepts explored in the larger study, which was, designed to explore the vaccination experiences of Black women who were pregnant or postpartum since the introduction of the COVID-19 vaccine (Olorunsaiye, Degge, Gordon, et al. [2025](#)). The interview guide included questions about perceptions and knowledge about COVID-19, COVID vaccine perceptions and information, vaccination experiences, and pregnancy and maternal health care experiences. The questions relevant to this manuscript can be found in Figure 1. Participants were recruited by the research team at various community events, such as community baby showers; through recruitment flyers placed strategically in businesses, daycare centers, businesses, and local community-based organizations; and via referral/word-of-mouth by other participants. Eligible individuals, who expressed interest in participating in the study were screened by the researchers to verify eligibility and scheduled for a one-on-one interview. The data were collected from November 2022 to May 2023. Interviews were conducted in-person or virtually, via a password-secured Zoom platform, and each lasted approximately 45–60 min. Participants provided informed consent before interviewing, and with their permission, each interview was audio-recorded. We reviewed interview audio files periodically to assess information saturation (Guest et al. [2020](#)). By the 20th interview, there was no more new information identified; hence, we stopped interviewing after the 22nd interview. In this paper, we report findings about perinatal experiences during the pandemic.

2.3 | Data Analysis

Each interview audio file was transcribed verbatim. We reviewed and compared the transcripts with audio files for accuracy. We used an inductive thematic approach to analyze the data, following the six-step process of Clarke and Braun, described in the rest of this paragraph (Braun and Clarke [2006](#)). First, we read the transcripts to familiarize ourselves with the data. Thereafter, the transcripts were coded in NVivo using open coding. The codes were reviewed by the authors, and differences resolved via discussion to reach a consensus. Furthermore, we reviewed the codes to identify patterns and themes. We also reviewed the themes and discussed discrepancies to reach a consensus; and finally, we wrote up the results and findings (Braun and Clarke [2006](#)).

2.4 | Trustworthiness

Trustworthiness is a crucial aspect of qualitative research, as it is essential for researchers to demonstrate transparency (Adler [2022](#)). One key way we established trustworthiness was by clearly outlining the theoretical orientation that guided our study. Additionally, all members of the research team played an active role throughout the research process to contribute to rigor. For example, we discussed the study objectives and interview guides to ensure a shared understanding of the study's primary aims. The process of triangulation was also integral to ensuring trustworthiness. This involved multiple

1. Tell me about any pregnancy/pregnancies you have experienced from 2020 to the present.
 - a. Probe: Number of pregnancies, when each occurred and intendedness, did the pregnancy result in a live birth? If no, probe for how the pregnancy ended (other pregnancy outcomes may include miscarriage, abortion, stillbirth, or pregnancy loss).
 - b. Probe: If more than one pregnancy occurred between 2020 to the present, inquire if respondent received vaccination across more than one pregnancy period.
 - c. Tell me about your healthcare experience during the pregnancies you referred to earlier?
 - i. Probe for prenatal, childbirth, postpartum, and health care for the baby.
 - ii. Probe for each pregnancy since 2020.
2. Were there any other ways, besides healthcare, that your pregnancy experiences were affected by the pandemic?
3. How did you feel about COVID-19?
 - a. Probe: Why did you feel that way?
 - b. How likely did you think you or your baby were to get COVID-19?
 - c. How severe did you think it would be if you or your baby got COVID-19?
4. To your knowledge, have you been infected with COVID-19?
 - a. If yes, probe: did you test to confirm it was COVID-19? When did this happen?
 - b. Was the infection mild or severe? Why did you respond this way about the severity, or otherwise, of the infection?

Socio-demographic questions

- What is your age?
- What is the gender that you identify with?
- What is the highest level of education you have completed?
- What is your occupation? Please be specific
- What is your marital status?
- What is your religious affiliation
- How do/did you pay for health care during pregnancy?
- Did you receive any government benefits, e.g., the Supplemental Nutrition Assistance Program (SNAP), Women, Infants, and Children (WIC), housing assistance, etc., between 2020 and now? If so, which benefits did you receive?
- In which country were you born? Please write the name of the country.
- If you were not born in the United States, how long have you lived in the United States?
- What language do you speak predominantly at home?

FIGURE 1 | Excerpt of relevant interview questions.

team members comparing audio files and transcripts (Craig et al. 2021). For further triangulation, the authors reviewed and discussed coding differences and discrepancies, as well as the interpretation of the codes. This process also served as a reflexive effort to minimize biases within the research team. Member checking, another form of triangulation used in this study (Adler 2022; Stahl and King 2020), involved sharing identified themes with participants via a newsletter, receiving feedback through a virtual meeting and email, and incorporating that feedback into the analysis and interpretation. To further enhance rigor, we also used illustrative quotes to support the descriptive narrative of our findings.

2.5 | Ethical Considerations

The Institutional Review Board of Arcadia University approved this study (Ref: 22-08-02). We obtained written or verbal informed consent based on the interview format (in-person or virtual). We informed participants that they could decline to answer any question they did not wish to answer and could end

the interview at any time without consequences. Upon completion of data collection, we stored consent information separately from interview audio files and transcripts to protect participants' confidentiality. Additionally, interview audio files were deidentified before transcription. Only the study team had access to the transcripts. Illustrative quotes are identified using pseudonyms, and findings are reported collectively for all participants. We provided a \$25 gift card to each participant as an incentive.

3 | Results

3.1 | Characteristics of Study Participants

The average age of participants was 33.5 (± 6.2) years (Table 1). Among the 22 participants in the study, there were a total of 28 pregnancies, of which 22 resulted in live births, two ended in miscarriages, two in abortions, and two participants were pregnant at the time of interviewing. Most study participants (17) had a college degree or higher, and most (16) were

TABLE 1 | Social and demographic characteristics of study participants ($n = 22$).

Variable	Mean (Standard deviation)/Frequency
Mean age	Mean = 33.5 (Standard deviation: 6.2)
Number of pregnancies during pandemic	28
Pregnancy outcomes	
Live birth	22
Miscarriage/abortion	4
Currently pregnant	2
Education	
High school or less	2
Some college/Associates	3
Bachelors	8
Graduate/professional ^a	9
Gender	
Female	22
Employment status	
Unemployed	6
Employed	16
Marital Status	
Single	7
Married	14
Widowed	1
Religion	
Christian	17
Muslim	3
Jewish	1
Spiritual	1
Insurance	
None	0
Public	6
Private	16
Received public assistance during pandemic	
Yes	10
No	12
Language spoken predominantly at home	
Arabic	1
English	20
Fulani	1
Nativity	
US-born	20
Not US-born	2

^aGraduate/professional degree: Master's, doctoral, and terminal degrees.

employed. Twenty women were born in the US. Seven of the women were single, and one was widowed. Most women identified as Christian, three as Muslim, one as Spiritual, and one as Jewish. Most study participants (16) had private insurance during their most recent pregnancy. Ten women received public assistance during the pandemic, including the Supplemental Nutrition Assistance Program (SNAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). One woman spoke Arabic, one spoke Fulani, and others spoke English, predominantly at home.

3.2 | Themes Identified

Congruent with the Contemporary Patterns of Racial Relations, Knowledge Production, and Conceptualization and Measurement focus areas of the PHCRP, we identified three main themes, including (1) emotional impact and concerns about COVID-19; (2) experiences of COVID-19 illness during pregnancy and postpartum; and (3) impact of COVID-19 mitigation measures on pregnancy experiences. The following results narrate the three main themes and related sub-themes.

3.2.1 | Theme 1: Emotional Impact and Concerns About COVID-19 Infection

Consistent with the knowledge production focus area of PHCRP, this theme elucidates the narratives of Black women around the emotional toll of concerns about contracting COVID-19 infection during the perinatal period. Specifically, the perinatal experiences of Black women are underrepresented in extant literature, and centering their lived experiences through the co-production of this knowledge begins to fill this gap. Women in the study described their feelings, fears, and concerns about COVID-19 infection and perceptions on how the illness could affect their pregnancy or baby. On the one hand, some women did not think the infection would be severe or life-threatening if they contracted COVID-19 while pregnant or breastfeeding, and as a result, they expressed mild concern.

So, I didn't think it would be too severe. Um, there's always that chance in the back of your mind that it can go really bad, but overall, like I think we were trusting and hoping that, you know, it wouldn't be life threatening should we, uh, contract the virus.

(Rachel)

On the other hand, some participants expressed concern about themselves or their babies contracting COVID-19. Such concerns may be related to the disproportionate burden of severe maternal morbidity and mortality and infant mortality in the Black population.

I sanitized everything and kept good hygiene. I know it would have been very serious if me or my baby got it.

(Mina)

Moreover, due to the dearth of accurate information on the disease and the proliferation of misinformation in the media

and social media sources, several participants were especially concerned about contracting COVID-19 and its potential effects on pregnant individuals. This finding may equally be related to the burden of infection and complications, including death, in Black communities and other populations of color.

Oh, yeah, I was super concerned, especially because we didn't have a lot of information about it. I mean people who were really sick, dying, you know, on a ventilator going to hospital...they didn't come out or were like severely impacted by COVID-19, so I was super concerned about it.

(Malika)

Just because of the pregnancy. I think my doctor like the first visit, when I found out I was pregnant was like, just don't get COVID-19, like...because we're just not sure of the effects on the baby, and sometimes it can be difficult. So, he was like, if you can help it, you know, it's better to just be safe.

(Shayla)

3.2.1.1 | Personal Health and Pregnancy Vulnerabilities Heightened Concerns About COVID-19. For some women in the study, their concerns about contracting COVID-19 were informed by the perception of decreased immunity as a result of being pregnant, and also due to pregnancy-induced health issues.

So, I was very scared, especially with me, being vulnerable, being pregnant. And uh, my immune system wasn't at a hundred percent because I was pregnant. I was very terrified of getting the virus. So, during pregnancy, uh, actually, with both [pregnancies], I had gestational diabetes, and then gestational hypertension.

(Linda)

Congruent with Focus Area 1 of the PHCRP, Contemporary Patterns of Racial Relations, including the accumulation of risk factors for COVID-19, e.g., high burdens of underlying health conditions, some participants' concerns about COVID-19 infection were heightened due to pre-existing health conditions.

I was like, scared, if I could explain my feelings, because I am a diabetic also, and I'm more vulnerable to COVID-19 than other people.

(Halima)

I have asthma, and I have a flow murmur in my heart, as well as like ... cardiac and respiratory history, which concerned me.

(Tasha)

Faced with limited access to accurate and trusted information on COVID-19, other participants were very worried about the potential impact of COVID-19 on their baby with respect to

birth defects and other adverse effects, as illustrated in the following quote:

So, I was very scared to get it myself, but more importantly, for the baby, because I didn't know if like, if I got sick with that [COVID-19], then, um, if it would do something to the baby. Well, I was thinking about birth defects, like, we just didn't know at the time, So, um, yeah, it was definitely fear from a medical aspect of, like, what do we do if I get COVID-19, how would that affect me? How would that affect the baby?

(Jessica)

3.2.1.2 | Concerns About the Impact of COVID-19 on Friends and Family. For other participants, their concerns about getting COVID-19 came from its impact on friends and family who developed very severe illness, disability, or died as a result of COVID-19. This finding is likely related to the increased burden of infection and death in marginalized populations, and many participants narrated knowing or hearing about someone who developed severe complications or died from COVID-19 infection.

I was very cautious. It was actually very scary. I could see it had done damage all around the world and, personally, I lost a friend.

(Mina)

No, it wasn't on any other medical issues that I had. I was just, you know, I was hearing that people were, you know, dying from it [COVID-19], or having strokes or different stuff, and I'm like, I don't know what this thing could do to me and my baby, so I just didn't feel comfortable.

(Deja)

3.2.1.3 | Worry, Fear, and Precautions. Participants reported worrying and feeling afraid of contracting COVID-19. According to Halima, the worry and fear felt worse than contracting the infection itself, highlighting the heightened anxiety in this population. It is worth mentioning that Halima reported being at increased risk for infection due to an underlying health condition. She also noted the lack of access to comprehensive information about COVID-19, a concern that was similarly corroborated by several participants.

The experience of worrying, of fear; it is worse than getting the disease itself. Yeah, because one of the things [is] that we [didn't] have, like, comprehensive information about [COVID-19].

(Halima)

Others reported taking precautions such as sanitizing, frequent testing, and keeping good hygiene. Some precautions participants reported taking were either based on the prevalent information available early in the pandemic, or simply self-preservation measures. Jessica's concerns and precautions were twofold: the ability to visit and spend time with her parents, and

the ability of her parents to safely help with preparing for the birth of her [Jessica's] baby.

We were testing weekly just so that they [parents] could be the two people who we could at least go to their house, sit in the backyard with them, or they could come over and help us straighten up the house and get it ready for the baby.

(Jessica)

For some participants, even after social distancing measures were lifted, they continued to take additional precautionary measures to avoid infection and for self-preservation. Julia said

Yeah, I think that is important. And that's why I gotta be mindful of, like, the settings that I go into, because I don't want to [be] infected...so, definitely, I want to be mindful of where I go, so I don't get the virus.

(Julia)

Similarly, Susan continued to take precautionary measures in the postpartum period, even after vaccination.

I'm still doing all the sanitary precautions and masking. And, you know, keeping the social distance as much as I can.

(Susan)

In another dimension, and consistent with the Knowledge Production Focus Area of the PHCRP, women discussed taking other precautionary measures during pregnancy or postpartum. For example, despite personal concerns about vaccine safety and fear of adverse effects, they discussed accepting the COVID-19 vaccine as a measure to protect their babies through breastfeeding. This finding implies a commitment to protecting their infants/babies through maternal antibodies acquired through vaccination and transmitted via breastfeeding. This was despite their concerns and worries about vaccine safety and the impact of vaccination on breastfeeding, indicating a gap in access to accurate health information for decision making.

I was vaccinated during breastfeeding. I had some concerns about it [vaccination]...I didn't know if it was going to decrease my milk supply...but I think that I looked at it as it being a more positive thing that, maybe, uh, my daughter would get more, um, like immunity against it [COVID-19] through breastfeeding.

(Zia)

Highlighting the role and trust in informal sources of health information in Black communities, Diana recalled

I guess I either read, or somebody told me, like, the antibodies can cross over into the breast milk, and it doesn't seem like there was any data thus far that there was any other, like, potential concern from the fact that I got the vaccine, to my baby. And so, for the most part, they would

get the benefit of the antibody. So that seemed like a good thing for her. And yeah, mainly her.

(Diana)

In yet another dimension of precautionary measures to protect their baby, according to Shayla's and Jessica's respective accounts, they took steps to pump and store extra breastmilk after they were vaccinated. Both women believed such "vaccinated" breastmilk could be potential treatment if any of their children got infected with COVID-19.

I purposely like got [vaccinated] while I was breastfeeding and then I also, like, pumped extra to have extra [breast milk], I guess, in case either one of my kids got COVID-19. Um, I guess, the breast milk that had, like the antibodies in it...so, I guess, first thinking back, I thought it was good, or it would be helpful because I saved it, um just thinking like if one of my kids got it, maybe this would help them get well.

(Shayla)

Similarly, Jessica said

Um, I was, I remember having, uh, like bags of breast milk in the freezer, and uh, we started marking the ones after getting the vaccine with a "V" so it would be "V1" for when I had the first dose, and then "V 1&2" for after I got the second dose in June or July 2021. Shortly after the second [vaccine] dose, I stopped breastfeeding. But my son did get vaccinated breast milk with both doses, so um, I can only hope that that helped protect him as long as it did, because he didn't get COVID-19 until January 2022, after he had been in daycare since July or August of 2021.

(Jessica)

3.2.2 | Theme 2: Experiences of COVID-19 Illness During Pregnancy and Postpartum

In this theme, we highlight related focus areas of the PHCRP: (1) Knowledge Production, and (2) Conceptualization and Measurement. Through participants' narratives, we describe the lived perinatal experiences of COVID-19 and the range of symptoms, from mild to severe illness, as well as the added anxiety as a result of infection.

...it was about the first couple weeks in 2021, I had just come back from New York and um, I was in bed for about a week, um, had low appetite, um, was very lethargic. Um, but then after that week I was fine. So, um, it wasn't a fun time but um, it wasn't like anything very severe.

(Rachel)

For Deja, her symptoms were severe and, somehow, she knew she had COVID-19.

But when I got it, it was, it was, it was eating me alive. As the symptoms were coming, I just knew it had to be COVID-19. Like my body, I never felt like that, ever, in my entire life. I don't get sick often, so when I got COVID-19, I knew it was COVID-19. So, it was like a big decline. It was severe. [I had] cold, chills, fever, very high fever. I was throwing up a lot. No taste. No smell, nothing. I could barely walk by the gate without a headache. It was just horrible!

(Deja)

Another participant recalled experiencing severe illness from COVID-19 while she was breastfeeding, causing additional anxiety about the potential impact on the baby.

I went to the laundromat and came home on Friday [and] was completely fine. The next day, Saturday morning, I woke up completely sick, like I had the flu. I ended up going to the emergency room, and that's how I found out I was COVID-positive. What made me know was my taste and my smell were completely gone...and it was very severe for me. Um, I had it really bad. And I, I just remember I was in bed for over a week...I couldn't eat, and I could barely drink. Um, I had just given birth to my son, but I was still actively breastfeeding, so I was scared about that. The fact that, you know, whether it [COVID-19] could pass through breast milk.

(Linda)

3.2.3 | Theme 3: Impact of COVID-19 Mitigation Measures on Perinatal Experiences

Related to Focus Area 1: Contemporary Patterns of Racial Relations; Focus Area 2: Knowledge Production; and Focus Area 3: Conceptualization and Measurement, of the PHCRP, this theme and subthemes explicate the diverse perinatal experiences of women in the study, encompassing the continuum of pregnancy care (i.e., prenatal, childbirth, and postpartum periods), and healthcare for the baby. Besides healthcare experiences, this theme also includes women's narratives about important social experiences (e.g., social support and cultural traditions) during the perinatal period.

3.2.3.1 | Impact on Maternal Health Care Experiences. Some participants reported their pregnancy being affected by COVID-19 mitigation measures. Telehealth/virtual appointments were used for some prenatal appointments such as doula appointments.

I did have a doula. Um, whenever I would meet with my doula up until, um, ... up until I went into labor, those meetings were virtual.

(Jessica)

While most women were still able to attend their routine medical appointments, they reported changes in clinic or hospital policies that limited access to health facilities.

For the very first [prenatal] visit I could bring someone, and my doula actually came with me to that first visit, but every subsequent visit, um, I had to come by myself.

(Jessica)

I had what I know to be all of the regular appointments like...the stress test. My husband could not come with me to any of those appointments, so that was a direct result of COVID-19.

(Linda)

Other hospital policy changes included having only one companion at the time of childbirth. In Jessica's case, she had to choose between her doula and her husband coming with her.

Then that [delivery] week, we found out one person could be in the room with me, and I was faced with having to choose my husband or my doula, and I was going back and forth, back and forth. Um, so, we ultimately decided that my doula would be on the phone, like through FaceTime, while my husband would be in the room...

(Jessica)

Jessica further explained that had her doula not been allowed to be with her during childbirth, she would have had to undergo a Cesarean section.

Once I got to, um, eight centimeters and all [labor] progression stalled for hours, and it was then that my doula really kicked in the high gears...My doctor, was also really nice, but she kept mentioning a C-section, C-section. And at one point my doula was like, "hey, let us do what we need to do. And then, once you get, once we get to like a certain point where a C-section is like the last resort, then you can come and let us know what the options are. But until then, let's see what works before we just jump to the C-section um choice." And then, my doula, she just kept putting me in all these different positions. I ultimately ended up getting an epidural, which I'm totally fine with. But, um, yeah, I feel like, had my doula not been there to kind of ask me what I really wanted, and be able to communicate that to the nurses, and the doctor, while I was, like, kind of working on pushing out a baby, um, I probably would have had to have a C-section which would have been a lot longer recovery, and just like a major surgery that I had never had before.

3.2.3.2 | Impact of Social Isolation on Perinatal Experiences. Many participants spoke about not being able to host or attend social events. Instead, they felt forced to either host events such as baby showers virtually, or not have them at all.

[The] baby shower, like the baby shower was virtual, as was everybody at that time.

(Jessica)

[I thought it was] fairly likely [we would get COVID-19], and it was just because, like, you don't know who has it. So not so much [concern for] my baby, but more so me. Like I was concerned about getting it so, at my baby shower everybody had to be COVID-tested. Everybody had to wear masks.

(Malika)

3.2.3.3 | “Robbed” of Social Support. Some participants recounted having to be very cautious by avoiding social events and limiting company.

I didn't think we [own self and baby] would get COVID-19 because I wasn't going out to any social events.

(Mina)

Due to physical distancing measures as a COVID-19 mitigation measure, Jessica recalled feeling like she had been robbed of the typical first pregnancy experiences. She said

It wasn't like...the quintessential pregnancy experience that you think of when you think of your first baby. So, it was kind of like, yeah, I had a baby, but I was kind of robbed of the whole experience, and people doting on me. So yeah, it was really isolating.

(Jessica)

4 | Discussion

The findings of this study reveal the profound and multifaceted impact of the COVID-19 pandemic on Black women's perinatal experiences, highlighting the complex intersections of race, gender, and socioeconomic factors that significantly affect maternal health outcomes and well-being. Through the lens of the PHCRP (Ford and Airhihenbuwa 2010b) used as a theoretical framework, we contextualized these findings by describing how the pandemic exacerbated pre-existing disparities and shaped the lived perinatal experiences of Black women; we also proffer recommendations and policy implications of this study, aligned with the “Action” Focus Area of the PHCRP. Our results uncovered several themes that characterize these experiences: the emotional impact and concerns about COVID-19 infection; experiences of COVID-19 illness during pregnancy and postpartum; the impact of pandemic mitigation measures on pregnancy experiences; healthcare interactions; social isolation (exemplified by the inability to have traditional celebrations like baby showers); and access to social support. These themes collectively underscore the profound effect of the pandemic on Black mothers.

Our study participants expressed a spectrum of emotions about the pandemic; some expressed mild concerns due to an optimistic view of the infection's severity, while others conveyed serious fears rooted in personal experiences and the pandemic's societal impact Ndumbe-Eyoh et al. (2021), Gur et al. (2020), and Chandler et al. (2021), noted that the complex reality of being a Black pregnant or postpartum woman was further complicated during the pandemic (Ndumbe-Eyoh et al. 2021;

Gur et al. 2020; Chandler et al. 2021). In concordance with the findings of Gilliam et al. (2024), the unique challenges faced by Black women during this period can be attributed to multiple intersecting factors, including racial and sociodemographic identity, systemic racism, limited access to healthcare, and increased health risks associated with pregnancy (Gilliam et al. 2024). Our findings also align with previous studies that reveal both Black and Latina pregnant women experienced higher rates of anxiety and depression during this period, largely due to systemic inequalities and socioeconomic challenges (Avalos et al. 2022; Lara-Cinisomo et al. 2024; Njoroge et al. 2022). Additionally, during the pandemic, compared to their white counterparts, the greater levels of worry that were reported by Black women align strongly with persisting racial inequalities in maternal health care (Gur et al. 2020). The implications of these findings indicate an urgent need for culturally competent health education, community-based support systems, and policy changes aimed at enhancing maternal health equity. By recognizing the interplay of structural racism, systemic bias, social determinants of health, and individual experiences, public health interventions can better support vulnerable population and improve health outcomes.

The experiences of COVID-19 illness among Black pregnant and postpartum women reveal a significant spectrum of severity and a range of associated concerns. The precautionary measures taken to avoid contracting COVID-19 during the perinatal period, together with vaccine safety concerns, contributed to women's heightened levels of anxiety and worry for their babies and themselves. Another source of concern was the fear of transmitting COVID-19 through breastfeeding to their infants. This result is supported by other studies showing that breastfeeding mothers were significantly worried about passing the virus to their infants, resulting in stress and, in some cases, early cessation of breastfeeding (Pereira et al. 2020; Ergün et al. 2022; Özcan and Güngör 2024). These findings, interestingly, contrast somewhat with current medical guidelines. The Centers for Disease Control and Prevention (CDC) (Centers for Disease Control and Prevention 2020), the American College of Obstetricians and Gynecologists (ACOG) (“COVID-19 Vaccines: Answers From Ob-Gyns,” n.d.), and other health organizations' guidelines advised mothers with COVID-19 to continue breastfeeding while following appropriate infection prevention precautions. However, the anxiety observed among mothers in our study indicates a disconnect between official recommendations and mothers' perceived risks. This discrepancy has significant implications for maternal mental health and breastfeeding practices. Therefore, it is crucial for healthcare providers and public health organizations to deliver clear and consistent messages to address safety concerns during breastfeeding.

Mitigation measures that were required during the pandemic were viewed as interruptions to normal birthing support systems for women of color. The restriction of physical support during perinatal appointments was a key concern for our participants. Dahl et al. (2023) similarly reported that the multiple types of stressors during this period where safety was a priority conflicted with longing for social supports (Dahl et al. 2023). The requirement to attend prenatal appointments alone, without partners or support persons, is particularly concerning given

the historical context of Black women's experiences of systemic bias in healthcare settings. Previous studies have documented that the presence of advocates or support persons, such as doulas, during perinatal healthcare appointments helps Black women navigate racial bias in healthcare and ensures their concerns are heard and properly addressed (Rice et al. 2024; Hardeman et al. 2020; Hawkins et al. 2021). Additionally, research indicates that African American women with higher levels of social support report less psychological distress during perinatal care (Giurgescu et al. 2015). Therefore, the importance of having support during childbirth cannot be overstated. A participant noted that her doula acted as an advocate during childbirth, helping her achieve a successful vaginal birth instead of the Cesarean section recommended by the attending obstetrician. Black women often navigate pregnancy as a potentially dangerous experience due to the challenges of medical racism and obstetric violence (Campbell 2021). While Cesarean sections can be beneficial for mothers and babies when medically necessary, their systemic overuse for Black women and people of color can result in higher medical costs and an increased risk of avoidable adverse maternal and fetal outcomes (Valdes 2021). Recognizing the importance of social support for Black women, it is essential to maintain this as a part of responsive and preventative interventions during public health emergencies (Dahl et al. 2023).

The inability to attend social events and host in-person baby showers was another issue of concern. For pregnant women of color, being unable to physically participate in these traditional and ceremonial celebrations which were significant milestones in their lives, led to additional feelings of disappointment and loss (Dove-Medows et al. 2022; C. E. Williams et al. 2023). In navigating this challenge, some of our study participants reported moving with the trending technological shift to virtual spaces to mitigate these difficulties. This aligned with findings from other studies, where women hosted virtual baby showers to fulfill the need for pregnancy rituals, which are an integral part of pregnancy norms for women of color (C. E. Williams et al. 2023; Kinser et al. 2022). Furthermore, the shift to telehealth services and restricted access to in-person care represents a significant modification to traditional prenatal care delivery. While telehealth offered some continuity of care, particularly for doula services, the findings suggest that these changes may have intensified existing disparities in maternal healthcare access for Black women. This aligns with previous research that the rapid transition to virtual care during the pandemic potentially exacerbated existing racial inequities in maternal health outcomes (Zhang et al. 2024; Kern-Goldberger and Srinivas 2022). Therefore, there is a need to develop and implement programs to improve digital literacy among Black women, focusing on effectively using telehealth platforms and accessing online health resources during stable periods and emergencies.

4.1 | Strengths and Limitations

This study contributes to knowledge on how the COVID-19 pandemic impacted the perinatal experiences of Black women in the United States. First, our findings provide insights into the experiences of Black women who were vaccinated against

COVID-19. Second, contrary to mainstream knowledge, by using a critical lens informed by the PHCRP, we explicate the strength and resilience of Black women who were pregnant during the pandemic, and the many strategies they employed in coping with the added stressors of COVID-19, notwithstanding fear and concerns for safety. Despite these strengths, this study has limitations. Our findings are not generalizable to all Black women in the US, but to well-educated Black women who received at least one dose of COVID-19 vaccination. Had we included the experiences of women who had not received any dose of the vaccine, our findings may have been different. However, the focus of the study was not on reasons for non-vaccination, which has received more attention in extant literature. Qualitative studies are not designed to be generalizable but are intended to provide a nuanced understanding of lived experiences. Nonetheless, we took several steps to ensure the rigor and the trustworthiness of our findings.

4.2 | Implications

The COVID-19 pandemic has exposed critical gaps in maternal healthcare, particularly in the perinatal experiences of Black women, who bear a disproportionate burden of adverse maternal and infant outcomes. To address these disparities, there is an urgent need for tailored crisis preparedness strategies, including community-led response teams designed to support marginalized population groups during health emergencies. Such strategies should include the development of community-based doula programs led by Black perinatal workers, who provide culturally competent advocacy and support. However, the limited access and utilization of community doulas in the US is influenced by several structural barriers, including lack of insurance coverage for doula services, financial constraints, and a shortage of culturally competent and racially diverse doulas. These factors disproportionately affect Black women, who would benefit the most from such support but are least likely to access it due to structural inequalities.

Additional strategies include the deployment of mobile maternal health units in underserved areas to ensure continued access to prenatal care, COVID-19 testing, and vaccinations. Trusted support networks, composed of Black midwives, mothers, and community leaders, can disseminate accurate, culturally relevant health information and build trust in public health response (MacLellan et al. 2025). Emergency birth planning support could be offered through community organizations. This can help Black women prepare for rapidly changing hospital policies, including restrictions on support persons. Mental health and grief support circles, facilitated by culturally competent therapists, can address the emotional toll of crisis-related isolation and loss, providing safe spaces for healing and resilience (Catalao et al. 2023; MacLellan et al. 2025).

Furthermore, government and policy makers must commit to structural reforms that address the root causes of maternal health inequities, including racism, socioeconomic disadvantage, and underrepresentation in healthcare leadership. This includes expanding Medicaid and private insurance coverage for doula services, investing in the training and

certification of diverse doulas, and supporting co-production models that involve Black women in the design and delivery of maternity services. From a research standpoint, there is a need for longitudinal and community-engaged studies that examine the effectiveness of culturally tailored interventions during health crises. Research should also explore how intersecting factors – such as race, gender, and class – shape maternal health experiences and outcomes, and how these can be mitigated through inclusive, equity-driven strategies.

Finally, a critical yet often overlooked component is the need to develop and implement programs that improve digital literacy among Black women, particularly in navigating telehealth platforms and accessing online health resources. The COVID-19 pandemic accelerated the adoption of digital health technologies, including remote consultations and online care platforms, which have now become integral to healthcare delivery (Peek et al. 2023). However, this shift has also exacerbated the digital divide, disproportionately affecting women of color who may lack access to devices, internet connectivity, or the digital skills needed to engage with these services (Litchfield et al. 2021). Community-based digital training initiatives, supported by public health agencies and local organizations, are essential to bridge this gap and ensure equitable access to virtual care during both stable periods and public health emergencies (Peek et al. 2023).

5 | Conclusion

The broader context of structural racism cannot be overlooked when discussing the impact of the COVID-19 pandemic on the perinatal experiences of Black women. Black women already experience higher maternal morbidity and mortality rates compared to other racial groups. The experiences of Black women during the COVID-19 pandemic have revealed critical gaps in our maternal healthcare system. Hence, there is a need for culturally sensitive and targeted crisis preparedness and readiness strategies such as community-led response teams for minority groups during health crises like the COVID-19 pandemic. Addressing these disparities is not only a matter of health equity but also a crucial step in improving overall public health resilience. By implementing targeted strategies and fostering a more inclusive approach to emergency preparedness, the healthcare system can truly serve all members of our society, even in times of crisis.

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Ethics Statement

The Institutional Review Board of Arcadia University approved this study (Ref: 22-08-02). Informed consent was obtained from all individual participants included in the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data available on request due to privacy/ethical restrictions.

References

- Adler, R. H. 2022. "Trustworthiness in Qualitative Research." *Journal of Human Lactation* 38, no. 4: 598–602. <https://doi.org/10.1177/08903344221116620>.
- Avalos, L. A., N. Nance, Y. Zhu, et al. 2022. "Contributions of COVID-19 Pandemic-Related Stressors to Racial and Ethnic Disparities in Mental Health During Pregnancy." *Frontiers in Psychiatry* 13: 837659. <https://doi.org/10.3389/fpsyt.2022.837659>.
- Barach, P., S. D. Fisher, M. J. Adams, et al. 2020. "Disruption of Healthcare: Will the COVID Pandemic Worsen Non-COVID Outcomes and Disease Outbreaks?" *Progress in Pediatric Cardiology (Highlights of the 23rd Annual Update on Pediatric and Congenital Cardiovascular Disease: Vision 2020)* 59: 101254. <https://doi.org/10.1016/j.ppedcard.2020.101254>.
- Barber, S., I. Headen, B. Branch, L. Tabb, and K. Yadeta. 2020. COVID-19 in Context: Racism, Segregation, and Racial Inequities in Philadelphia: Drexel University Urban Health Collaborative. <https://drexel.edu/uhc/resources/briefs/Covid-19inContext/>.
- Bellerose, M., M. Rodriguez, and P. M. Vivier. 2022. "A Systematic Review of the Qualitative Literature on Barriers to High-Quality Prenatal and Postpartum Care Among Low-Income Women." *Health Services Research* 57, no. 4: 775–785. <https://doi.org/10.1111/1475-6773.14008>.
- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3, no. 2: 77–101. <https://doi.org/10.1191/1478088706qp0630a>.
- Bridges, K. M. 2020. "Racial Disparities in Maternal Mortality." *New York University Law Review* 95: 1229.
- Burris, H. H., A. M. Mullin, M. B. Dhudasia, et al. 2022. "Neighborhood Characteristics and Racial Disparities in Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Seropositivity in Pregnancy." *Obstetrics and Gynecology* 139, no. 6: 1018–1026. <https://doi.org/10.1097/AOG.0000000000004791>.
- Campbell, C. 2021. *Medical Violence, Obstetric Racism, and the Limits of Informed Consent for Black Women*. SSRN Scholarly Paper. Social Science Research Network. <https://papers.ssrn.com/abstract=3839733>.
- Catalao, R., L. Zephyrin, L. Richardson, Y. Coghill, J. Smylie, and S. L. Hatch. 2023. "Tackling Racism in Maternal Health." *BMJ* 383: e076092. <https://doi.org/10.1136/bmj-2023-076092>.
- Centers for Disease Control and Prevention. 2020. "Care for Breastfeeding People: Interim Guidance on Breastfeeding and Breast Milk Feeds in the Context of COVID-19." *Centers for Disease Control and Prevention*. https://archive.cdc.gov/www_cdc_gov/coronavirus/2019-ncov/hcp/care-for-breastfeeding-people.html.
- Chandler, R., D. Guillaume, A. G. Parker, et al. 2021. "The Impact of COVID-19 Among Black Women: Evaluating Perspectives and Sources of Information." *Ethnicity & Health* 26, no. 1: 80–93. <https://doi.org/10.1080/13557858.2020.1841120>.
- COVID-19 Vaccines: Answers From Ob-Gyns. n.d. Accessed November 12, 2024. <https://www.acog.org/womens-health/faqs/covid-19-vaccines-answers-from-ob-gyns>.
- Craig, S. L., L. B. McInroy, A. Goulden, and A. D. Eaton. 2021. "Engaging the Senses in Qualitative Research via Multimodal Coding: Triangulating Transcript, Audio, and Video Data in a Study With Sexual

- and Gender Minority Youth.” Accessed June 16, 2025. <https://journals.sagepub.com/doi/full/10.1177/16094069211013659>.
- Dahl, A. A., F. N. Yada, S. J. Butts, et al. 2023. “Contextualizing the Experiences of Black Pregnant Women During the COVID-19 Pandemic: ‘It’s Been a Lonely Ride’.” *Reproductive Health* 20, no. 1: 124. <https://doi.org/10.1186/s12978-023-01670-4>.
- Diamond, R. M., K. S. Brown, and J. Miranda. 2020. “Impact of COVID-19 on the Perinatal Period Through a Biopsychosocial Systemic Framework.” *Contemporary Family Therapy* 42, no. 3: 205–216. <https://doi.org/10.1007/s10591-020-09544-8>.
- Dolin, C. D., C. C. Compheer, J. K. Oh, and C. P. Durnwald. 2021. “Pregnant and Hungry: Addressing Food Insecurity in Pregnant Women During the COVID-19 Pandemic in the United States.” *American Journal of Obstetrics & Gynecology MFM* 3, no. 4: 100378. <https://doi.org/10.1016/j.ajogmf.2021.100378>.
- Dove-Medows, E., J. Davis, L. McCracken, et al. 2022. “A Mixed-Methods Study of Experiences During Pregnancy Among Black Women During the COVID-19 Pandemic.” *Journal of Perinatal & Neonatal Nursing* 36, no. 2: 161–172. <https://doi.org/10.1097/JPN.0000000000000622>.
- Equity Report | Our America. n.d. Accessed April 27, 2024. <https://ouramericaabc.com/equity-report>.
- Ergün, S., S. Kaynak, and B. Aydın. 2022. “Fear of COVID-19 and Related Factors Affecting Mothers’ Breastfeeding Self-Efficacy During the Pandemic.” *Revista Da Escola de Enfermagem Da USP* 56: e20220130. <https://doi.org/10.1590/1980-220X-REEUSP-2022-0130en>.
- Ford, C. L., and C. O. Airhihenbuwa. 2010a. “Critical Race Theory, Race Equity, and Public Health: Toward Antiracism Praxis.” *American Journal of Public Health* 100, no. S1: S30–S35. <https://doi.org/10.2105/AJPH.2009.171058>.
- Ford, C. L., and C. O. Airhihenbuwa. 2010b. “The Public Health Critical Race Methodology: Praxis for Antiracism Research.” *Social Science & Medicine* 71, no. 8: 1390–1398.
- Gilliam, S. M., K. Hylick, E. N. Taylor, et al. 2024. “Intersectionality in Black Maternal Health Experiences: Implications for Intersectional Maternal Mental Health Research, Policy, and Practice.” *Journal of Midwifery & Women’s Health* 69, no. 4: 462–468. <https://doi.org/10.1111/jmwh.13609>.
- Giurgescu, C., D. P. Misra, S. Sealy-Jefferson, et al. 2015. “The Impact of Neighborhood Quality, Perceived Stress, and Social Support on Depressive Symptoms During Pregnancy in African American Women.” *Social Science & Medicine* (1982) 130: 172–180. <https://doi.org/10.1016/j.socscimed.2015.02.006>.
- Golden, M. 2021. *The Strong Black Woman: How a Myth Endangers the Physical and Mental Health of Black Women*. Mango Media Inc.
- Guest, G., E. Namey, and M. Chen. 2020. “A Simple Method to Assess and Report Thematic Saturation in Qualitative Research.” *PLoS One* 15, no. 5: e0232076.
- Gur, R. E., L. K. White, R. Waller, et al. 2020. “The Disproportionate Burden of the COVID-19 Pandemic Among Pregnant Black Women.” *Psychiatry Research* 293: 113475. <https://doi.org/10.1016/j.psychres.2020.113475>.
- Hardeman, R. R., J. Karbeah, J. Almanza, and K. B. Kozhimannil. 2020. “Roots Community Birth Center: A Culturally-Centered Care Model for Improving Value and Equity in Childbirth.” *Healthcare* 8, no. 1: 100367. <https://doi.org/10.1016/j.hjdsi.2019.100367>.
- Hawkins, M., D. Misra, L. Zhang, M. Price, R. Dailey, and C. Giurgescu. 2021. “Family Involvement in Pregnancy and Psychological Health Among Pregnant Black Women.” *Archives of Psychiatric Nursing* 35, no. 1: 42–48. <https://doi.org/10.1016/j.apnu.2020.09.012>.
- Howell, E. A., N. Egorova, A. Balbierz, J. Zeitlin, and P. L. Hebert. 2016. “Black-White Differences in Severe Maternal Morbidity and Site of Care.” *American Journal of Obstetrics and Gynecology* 214, no. 1: 122.e1–122.e7. <https://doi.org/10.1016/j.ajog.2015.08.019>.
- Iness, A. N., J. O. Abaricia, W. Sawadogo, et al. 2022. “The Effect of Hospital Visitor Policies on Patients, Their Visitors, and Health Care Providers During the COVID-19 Pandemic: A Systematic Review.” *American Journal of Medicine* 135, no. 10: 1158–1167.e3. <https://doi.org/10.1016/j.amjmed.2022.04.005>.
- Kern-Goldberger, A. R., and S. K. Srinivas. 2022. “Obstetrical Telehealth and Virtual Care Practices During the COVID-19 Pandemic.” *Clinical Obstetrics & Gynecology* 65, no. 1: 148–160. <https://doi.org/10.1097/GRF.0000000000000671>.
- Kinser, P., N. Jallo, S. Moyer, et al. 2022. “‘It’s Always Hard Being a Mom, but the Pandemic Has Made Everything Harder’: A Qualitative Exploration of the Experiences of Perinatal Women During the COVID-19 Pandemic.” *Midwifery* 109: 103313. <https://doi.org/10.1016/j.midw.2022.103313>.
- Koenig, M. D., N. Crooks, T. Burton, et al. 2024. “Structural Violence and Stress Experiences of Young Pregnant Black People.” *Journal of Racial and Ethnic Health Disparities* 11, no. 4: 1918–1932. <https://doi.org/10.1007/s40615-023-01661-y>.
- Krishnan, L., S. M. Ogunwale, and L. A. Cooper. 2020. “Historical Insights on Coronavirus Disease 2019 (COVID-19), the 1918 Influenza Pandemic, and Racial Disparities: Illuminating a Path Forward.” *Annals of Internal Medicine* 173, no. 6: 474–481. <https://doi.org/10.7326/M20-2223>.
- Lara-Cinisomo, S., B. Melesse, and M. E. Mendy. 2024. “Demographic and COVID-19-Related Factors Associated With Depressive and Anxiety Symptoms Among African American and Latina Women in a Midwestern State.” *Journal of Racial and Ethnic Health Disparities* 11, no. 1: 36–44. <https://doi.org/10.1007/s40615-022-01495-0>.
- Litchfield, I., D. Shukla, and S. Greenfield. 2021. “Impact of COVID-19 on the Digital Divide: A Rapid Review.” *BMJ Open* 11: e053440. <https://doi.org/10.1136/bmjopen-2021-053440>.
- Liu, S. R., and L. M. Glynn. 2022. “The Contribution of Racism-Related Stress and Adversity to Disparities in Birth Outcomes: Evidence and Research Recommendations.” *F&S Reports, Reimagining Reproductive Health: Eliminating Disparate Care, Disparate Access and Disparate Outcomes* 3, no. S2: 5–13. <https://doi.org/10.1016/j.xfre.2021.10.003>.
- Louis, J. M., M. K. Menard, and R. E. Gee. 2015. “Racial and Ethnic Disparities in Maternal Morbidity and Mortality.” *Obstetrics and Gynecology* 125, no. 3: 690–694. <https://doi.org/10.1097/AOG.0000000000000704>.
- MacLellan, J., C. Byrne, and C. Pope. 2025. “Co-Production in Maternal Health Services: Creating Culturally Safe Spaces, Respecting Difference and Supporting Collaborative Solutions.” *BMJ Quality & Safety* 34, no. 5: 285–287. <https://doi.org/10.1136/bmjqs-2024-018157>.
- Maternal Mortality Report Finds Non-Hispanic Black Women Represent 73% of Pregnancy-Related Deaths in Philadelphia. 2024. *Maternal Mortality Report*. City of Philadelphia Department of Public Health. <https://www.phila.gov/2021-03-23-maternal-mortality-report-finds-non-hispanic-black-women-represent-73-of-pregnancy-related-deaths-in-philadelphia/>.
- Meaney, S., S. Leitao, E. K. Olander, J. Pope, and K. Matvienko-Sikar. 2022. “The Impact of COVID-19 on Pregnant Women’s Experiences and Perceptions of Antenatal Maternity Care, Social Support, and Stress-Reduction Strategies.” *Women and Birth* 35, no. 3: 307–316. <https://doi.org/10.1016/j.wombi.2021.04.013>.
- Mehra, R., A. Alspaugh, J. T. Dunn, et al. 2023. “‘Oh Gosh, Why Go?’ Cause They Are Going to Look at Me and Not Hire’: Intersectional Experiences of Black Women Navigating Employment During Pregnancy and Parenting.” *BMC Pregnancy and Childbirth* 23, no. 1: 17. <https://doi.org/10.1186/s12884-022-05268-9>.

- Mosbrucker-Garza, K. 2024. "Pew State of the City: Philadelphia's Workforce Is More Educated Than Ever, but Poverty Divide lingers." *Public Media*. WHY. <https://why.org/articles/workforce-development-philadelphia-pew-report-state-of-the-city/>.
- Ndumbe-Eyoh, S., P. Muzumdar, C. Betker, and D. Oickle. 2021. "Back to Better": Amplifying Health Equity, and Determinants of Health Perspectives During the COVID-19 Pandemic." *Global Health Promotion* 28, no. 2: 7–16. <https://doi.org/10.1177/17579759211000975>.
- Njoku, A., M. Evans, L. Nimo-Sefah, and J. Bailey. 2023. "Listen to the Whispers before They Become Screams: Addressing Black Maternal Morbidity and Mortality in the United States." *Healthcare* 11, no. 3: 438. <https://doi.org/10.3390/healthcare11030438>.
- Njoroge, W. F. M., L. K. White, R. Waller, et al. 2022. "Association of COVID-19 and Endemic Systemic Racism With Postpartum Anxiety and Depression Among Black Birthing Individuals." *JAMA Psychiatry* 79, no. 6: 600–609. <https://doi.org/10.1001/jamapsychiatry.2022.0597>.
- Olorunsaiye, C. Z., H. M. Degge, D. Gordon, A. Osborne, and S. P. Ouedraogo. 2025. "Lessons From COVID-19: A Qualitative Study on the Vaccination Decision-Making and Experiences of Black Pregnant and Postpartum Women in the US." *Journal of Health Equity* 2, no. 1: 2484171. <https://doi.org/10.1080/29944694.2025.2484171>.
- Olorunsaiye, C. Z., H. M. Degge, A. Osborne, and D. N. Gordon. 2025. "COVID-19 Vaccine Literacy Among Black Pregnant and Postpartum Women in the USA." *Journal of Racial and Ethnic Health Disparities* Advance Online Version. <https://doi.org/10.1007/s40615-025-02430-9>.
- Özcan, H., and T. Güngör. 2024. "Breastfeeding Experience and Anxiety in Mothers With Covid-19 in the Postnatal Period: A Qualitative Study." *Archives of Public Health* 82, no. 1: 62. <https://doi.org/10.1186/s13690-024-01285-6>.
- Peek, N., M. Sujan, and P. Scott. 2023. "Digital Health and Care: Emerging From Pandemic Times." *BMJ Health & Care Informatics* 30, no. 1: e100861. <https://doi.org/10.1136/bmjhci-2023-100861>.
- Pereira, A., S. Cruz-Melguizo, M. Adrien, et al. 2020. "Breastfeeding Mothers With COVID-19 Infection: A Case Series." *International Breastfeeding Journal* 15, no. 1: 69. <https://doi.org/10.1186/s13006-020-00314-8>.
- Reyes, M. V. 2020. "The Disproportional Impact of COVID-19 on African Americans." *Health and Human Rights* 22, no. 2: 299.
- Rice, H. M., C. C. Collins, M. Singh, E. Cherney, and D. Hercbergs. 2024. "The Impact of Covid-19 on Community Perinatal Doula Support Services for Black Women." *Maternal and Child Health Journal* 28, no. 5: 858–864. <https://doi.org/10.1007/s10995-023-03858-3>.
- Servon, L., A. Charnov, C. Townsley, S. Porter, T. Dunne, and A. Atkinson. 2023. *The Precarious Road to Asset Building: Illuminating Structures of Inequality in Philadelphia*. Federal Reserve Bank. <https://www.philadelphiafed.org/community-development/inclusive-growth/the-precarious-road-to-asset-building-illuminating-structures-of-inequality-in-philadelphia>.
- Stahl, N. A., and J. R. King. 2020. "Expanding Approaches for Research: Understanding and Using Trustworthiness in Qualitative Research." *Journal of Development Education* 44, no. 1: 26–28.
- Valdes, E. G. 2021. "Examining Cesarean Delivery Rates by Race: A Population-Based Analysis Using the Robson Ten-Group Classification System." *Journal of Racial and Ethnic Health Disparities* 8, no. 4: 844–851. <https://doi.org/10.1007/s40615-020-00842-3>.
- Wang, E., K. B. Glazer, S. Sofaer, A. Balbierz, and E. A. Howell. 2021. "Racial and Ethnic Disparities in Severe Maternal Morbidity: A Qualitative Study of Women's Experiences of Peripartum Care." *Women's Health Issues* 31, no. 1: 75–81. <https://doi.org/10.1016/j.whi.2020.09.002>.
- Williams, C. 2024. "Pregnant Black Bodies in Peril: A Multi-Method Analysis of Obstetric Outcomes and Gestational Experiences." Doctoral Dissertation, Louisiana State University. https://doi.org/10.31390/gradschool_dissertations.6487.
- Williams, C. E., D. Berkowitz, and H. M. Rackin. 2023. "Exploring the Experiences of Pregnant Women in the U.S. During the First Year of the Covid-19 Pandemic." *Journal of Social Issues* 79, no. 2: 617–645. <https://doi.org/10.1111/josi.12567>.
- Zhang, R., T. Byrd, S. Qiao, M. E. Torres, X. Li, and J. Liu. 2024. "Maternal Care Utilization and Provision During the COVID-19 Pandemic: Voices From Minoritized Pregnant and Postpartum Women and Maternal Care Providers in Deep South." *PLoS One* 19, no. 4: e0300424. <https://doi.org/10.1371/journal.pone.0300424>.