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Beyond Birth Work: Addressing Social Determinants of Health With Community Perinatal Support Doulas

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Abstract

Adverse maternal and infant health outcomes among African Americans are increasingly recognized as indicators of a critical public health crisis in the United States. Research has found that stress is related to structural racism and the social determinants of health (SDOH) that cause avoidable, unfair inequities in resources, education, power, and opportunities across ethnic groups. This paper describes the SDOH needs and experiences of pregnant Black women from the perspective of doulas and Birthing Beautiful Communities (BBC) clients. The design was a qualitative description, using data collected over time (2017–2018, 2020–2021, and 2023). This study took place in Cleveland and Akron, Ohio and the sample included 58 clients, 26 doulas, and 2 resource intake specialist assistants (RISAs). Qualitative data included individual client interviews, three doula focus groups, and one interview with two BBC RISAs. Three coders used content analysis to deductively identify SDOHs and calculate the number of interviews that contained information about specific SDOHs. Although the sample reported issues with all SDOH, particular ones caused a cascade of SDOH effects. Transportation issues, for example, impeded women from being able to make it to work, doctor's appointments, and to purchase essential baby items (e.g., food, infant supplies). An inability to work—whether because of transportation challenges or pregnancy-related health complications—led to unstable housing and an inability to deal with transportation challenges. Many clients mentioned that housing was a major issue, with many clients experiencing housing instability. Implications include ensuring SDOH information is collected from a trusted source who can advocate and ensure access to a wide range of local resources, ensuring policies protect pregnant women from experiencing a cascade of SDOH that may contribute to continuing health disparate infant and maternal health outcomes in African American women.

Keywords

maternal child, mixed-methods, public health, community-based care, perinatal support doulas, social determinants of health

Justice, Equity, Diversity and Inclusion

(1) This study explored the social determinants of health (SDOH) experienced by pregnant Black women who utilized community-based doula services. Specific SDOH triggered cascades, demonstrating how housing instability, health, and transportation challenges interact as barriers to work and attending appointments. The findings suggest links between social factors and maternal and infant health outcomes.

(2) Adverse maternal and infant health outcomes among African Americans are increasingly recognized as indicators of a critical public health crisis in the United States. Stress related to structural racism and the SDOH causes avoidable, unfair inequities in resources, education, power, and opportunities. Our theoretical framework, design, and methodological approaches all focused on centering Black women's voices. We examine how SDOH can negatively affect maternal and infant health and effective ways to address those issues. Our findings emphasize the need for comprehensive support and policies to address systemic disparities in maternal and infant health outcomes.

Introduction

Addressing the Burden of Health Disparities and Inequities

Mitigating adverse maternal and infant health outcomes is a critical public health crisis in the United States. Despite intentional efforts and medical advancements, the rates of maternal and infant deaths continue to rise (Dagher & Linares, 2022). Persistent racial disparities in birth outcomes between African Americans and Whites persist even when controlling for socioeconomic factors such as education and income (Fishman et al., 2020). Research recognizes the multifaceted nature of these disparities, attributing them to systemic and structural racism, the environmental context of maternal residence, nutritional deficiencies, and the enduring impact of long-term toxic stress on the mind and body (Condon & Sadler, 2019). To fully understand the mechanisms and pathways causing maternal and infant mortality, we must understand the comprehensive role of social determinants of health (SDOH) and the protective interventions that reduce adverse health outcomes.

Doula Support as an Innovative Intervention

Doula services provide a cost-effective solution to address SDOH. Doulas are nonclinical labor support who facilitate prenatal education, attend medical appointments, and offer emotional and informational support. Doulas help women navigate the complexities of the healthcare system ensuring that their concerns are acknowledged and addressed. Studies highlighting the effectiveness of doula support have found that women supported by a doula are less likely to need pain medication or have a cesarean birth, have shorter labor, and report more positive birth experiences (Bohren et al., 2017; Hodnett et al., 2005; Lunda et al., 2018). When doulas accompanied their clients to medical appointments, clients felt their doula acted as a communication bridge ensuring their providers made them feel seen and heard, and helped them address their basic needs (Collins et al., 2023).

Geographical Context

The Greater Cleveland area is one of the most segregated cities in the United States (Ahern, 2022). Racial segregation is ubiquitous, with sharp contrasts between primarily White versus Black communities. Mapping reveals that nearly one-quarter and one-third of the populations of Cleveland and Akron, respectively, live in poverty (U.S. Census Bureau, 2022). More than half of the residents in both cities rent their homes and live in unaffordable housing (housing costing more than 30% of household income; U.S. Census Bureau, 2022). Less than one-quarter of Cleveland and Akron residents have a bachelor's degree or higher (U.S. Census Bureau, 2022).

Program Context

Birthing Beautiful Communities (BBC) is the first and only perinatal support doula program in Northeast Ohio dedicated to addressing infant and maternal mortality. Founded in 2014, BBC serves Cuyahoga and Summit counties, offering free services to individuals and families who are at an increased risk of pregnancy and infant loss. BBC doulas go beyond traditional doula support offering more intensive, frequent, and varied services. They connect pregnant women to vital prenatal care and education, advocate for them throughout labor and delivery, and provide multifaceted assistance up to 1 year postpartum (Collins, Brown, et al., 2021; Hmiel et al., 2019). BBC maintains a "baby bank" that provides clients with essential baby items, as well as formula and donor breast milk, which was essential during the national formula shortage.

BBC has achieved remarkable birth outcomes among its clients, maintaining zero incidences of maternal death, a 99.2% infant survival rate, a 92% full-term birth rate, and an 86% breastfeeding initiation rate (vs. Ohio's 68.8% for Black women [Ohio Department of Health, 2021]). These rates are in stark contrast to the outcomes in Cuyahoga County, where, in 2021, Black babies accounted for only 35% of births, but 59% of infant deaths, and more than 80% of preterm births (First Year Cleveland, 2023).

Innovating in Addressing SDOH

BBC has a unique approach to address the SDOH that affects pregnant Black women and their families. Table 1 lists the SDOH BBC addresses, how doulas are trained to address them, and SDOH-related client services. BBC provides Uber rides to medical appointments and grocery stores. To meet nutritional needs, they supply families with food boxes and DoorDash gift cards. To support housing needs, BBC piloted a rental and utility assistance program (April–December 2022). However, realizing their doulas needed additional support in addressing the SDOH so doulas could focus on the women's pregnancy needs, since 2021 BBC has directed women expressing a need for supplementary support to a resource intake specialist assistant (RISA). The RISA received specialized training in community resources, developed a comprehensive resource guide of community

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Table 1. Innovating in Addressing SDOH.

Domain	BBC service model	Client services
Economic stability	Doulas are hired as independent contractors from the community, earning a livable wage and providing doula support services.	Access to courses addressing financial literacy, budgeting, and goal planning. Clients also have access to the organization's "baby bank" which stores essential baby and postpartum items (diapers, wipes, clothes, car seats, pack-n-plays, and sanitary napkins, etc.) and the donor bank that has donated breast milk and formula.
Education access and quality	Doulas receive holistic training and the opportunity to become certified in lactation, postpartum care, and grief recovery peer support.	BBC Young Educated Parents (Y.E.P) program works directly with adolescents providing additional career planning support and coaching until the age of 22.
Healthcare access and quality	Doulas receive training related to systemic and medical racism and strategies related to client advocacy.	Prenatal advocacy courses; reviewing client rights and providing strategies for how to better advocate for oneself by reviewing various real-life case scenarios.
Neighborhood and built environment	Doulas receive training centered on healthy food options for pregnant and lactating women.	Clients receive prenatal and postpartum classes related to nutrition, healthy eating habits for pregnant and lactating women. Patients can also request Uber rides to medical appointments and grocery stores.
Social and community context	Doulas receive training and educate clients and the community regarding the impact of systemic, structural, and medical racism on maternal and infant health.	Clients receive classes centered on the impact of systemic, structural, and medical racism on maternal and infant health.

SDOH = social determinants of health; BBC = Birthing Beautiful Communities.

partners, and identified a contact person to reduce referral barriers.

Study Purpose. This study aimed to describe the SDOH needs and experiences of pregnant Black women from the perspective of perinatal support doulas and BBC clients before, during, and after the COVID-19 pandemic.

Methods

Design

Employing a qualitative description approach within a social constructivist and transformative framework (Creswell & Plano Clark, 2011; Kim et al., 2017), we sought to articulate and shed light on the specific needs around SDOH and perspectives of women most impacted by pregnancy-related health disparities. We explored the experiences of BBC clients receiving services and staff delivering services to Black pregnant women before, during, and after the COVID-19 pandemic.

Participants and Recruitment

In the study conducted before the pandemic, 29 clients who had given birth while enrolled with BBC and 14 doulas participated. In the study conducted during the pandemic, 29 clients (who were either pregnant or had given birth during the pandemic) and 12 doulas participated. Participants were in their late 20s (27 before the pandemic [SD = 7.9], 28 during the pandemic [SD = 4.5]), more than 90% were African American, and had one or two children (including the baby born during the study period). Doulas identified clients who fit the study criteria and provided their names to researchers, who then contacted clients to explain the study, assure them their participation or non-participation would not affect their care, and schedule interviews. Doulas were notified of the focus groups through an announcement by their supervisor. The after-pandemic study involved one interview with two BBC RISAs. RISAs were intake specialists working within the organization who expressed an interest in receiving additional training related to how to access and appropriately refer clients to community resources.

Procedures

The study conducted before the pandemic (summer and fall of 2017, and winter of 2018) involved in-person focus groups with doulas which were held during a regularly scheduled meeting. In the before-pandemic study, we interviewed individual clients face-to-face. We conducted both the focus groups and individual interviews in a BBC office. The study conducted during the pandemic (late summer and fall of 2020 and winter of 2021) also involved focus groups with doulas and individual interviews with clients, but all activities were conducted over Zoom. Client interviews lasted 20 to 60 min, and doula focus groups, 60 to 90 min. The after-pandemic study's RISA interviews took place in September 2023 over Zoom and consisted of one interview with both BBC RISAs that lasted 45 min.

All participants gave written informed consent and clients received a $50 gift card as a token of appreciation. A Black

Table 2. Interview Guide.

Intake question (original study only)
- Were there issues around transportation, housing, employment, or education that you had to deal with during pregnancy? How was BBC helpful in managing these?

Pregnancy questions
- Pregnancy can be a stressful time. Please share any examples of how the doula relieved any emotional strains you were dealing with. *APRIL 2020 Modification: How do you feel this was affected by the COVID-19 pandemic?*
- If there were things the doula knew you needed help with, for example, transportation to appointments, or child care emergencies, how available and open was she or BBC staff to helping out? *APRIL 2020 Modification: How do you feel this was affected by the COVID-19 pandemic?*
- What other challenges did you have while pregnant? How did BBC help with those? *APRIL 2020 Modification: How do you feel this was affected by the COVID-19 pandemic?*

Post-delivery and going home
- How did BBC work with you/support you to prepare for the trip home and the things you anticipated needing to do once you returned home? *APRIL 2020 Modification: How do you feel this was affected by the COVID-19 pandemic?*
- What did you discover you needed but would have difficulty getting? How did BBC assist you?
- How did the support from BBC and the doula make a difference for you in managing the physical demands after delivering?
- How did the support from BBC and the doula make a difference for you in managing any emotional tensions from family demands? *APRIL 2020 Modification: How do you feel this was affected by the COVID-19 pandemic?*

If you need additional services that BBC did not provide, how helpful were they in helping you access the proper agencies? *APRIL 2020 Modification: How do you feel this was affected by the COVID-19 pandemic?*

BBC = Birthing Beautiful Communities.

doctoral-level researcher was the primary interviewer for all interviews. A professional transcriptionist transcribed the interviews. The Cleveland State University Institutional Review Board approved all research protocols. Interviews continued until saturation was reached (i.e., interviews no longer yielded new information).

Interview Guide

Table 2 includes the interview questions, all of which were developed in collaboration with BBC staff. The doula questions asked about the doulas' work and how they helped clients address SDOH. The client questions asked clients about services received and their birth experiences at intake/enrollment, during pregnancy, delivery, and postpartum. In the during-pandemic study, all interview questions were adapted to explore how the pandemic had affected service delivery. The RISA interview guide was adapted from the doula interview guide, focusing on questions related to SDOH, their roles, major challenges and strengths associated with the role, success stories, and recommendations for the organization.

Analysis: Establishing Trustworthiness and Rigor

In the pre-pandemic study, four coders (two master's level and two PhD level researchers) developed a coding framework based on inductively coding the interview transcripts. For the during-pandemic study, three researchers, including one master's and two PhD level researchers, again reviewed the interview transcripts line-by-line, inductively, without using the original coding framework. The research teams for both studies held regular team meetings to identify significant interview excerpts, discuss their significance, and develop themes that emerged. One theme that emerged from the pre-pandemic study was "social determinants and stressors" (coded as "clients_social determinants of health" in the doula interviews). The theme included issues mentioned across interviews, such as childcare, housing, car, employment, education, food access, and relationship issues that caused stress. For this study, the analysts re-analyzed the transcripts, focused on deconstructing this theme into its parts, and examining the SDOHs specifically, qualitatively, and quantitatively, using content analysis. One team member common to both research teams managed the transcripts, codes, and memos in Atlas ti. Trustworthiness followed Lincoln and Guba's framework (1985), using prolonged engagement, the interview protocol, and peer debriefing. We ensured dependability through coder discussions and reliability checks while we maintained confirmability through researchers' discussions about reflexivity, investigator triangulation, and source triangulation. One research team member is embedded at BBC as a research consultant (HR) and regularly attends BBC meetings, adding a level of proximity to BBC's work.

Results

Quantitative: Counts of SDOH Across Interviews

A total of 34 (59%) clients mentioned having at least one SDOH need. Of those 34, quantitative analysis of the qualitative data (counts) indicated that housing was the most often mentioned SDOH, mentioned by 47% of clients (see Figure 1), transportation was mentioned by 44%, employment by 41% instrumental/material needs by 18%, healthcare issues by 15%, education issues by 9%, and legal issues by 6%.

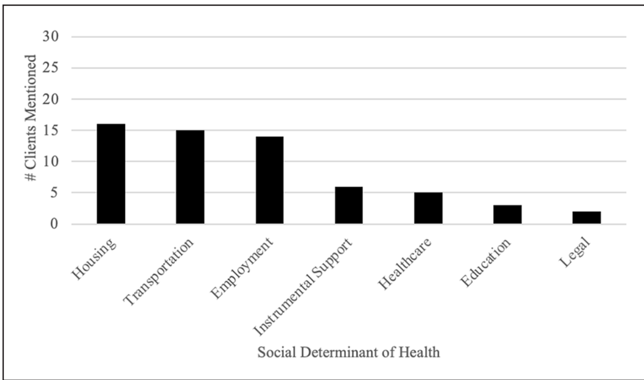

Figure 1. Social determinants of health mentioned in interviews ($N=34$ unique clients).

Qualitative

As mentioned above, we deconstructed the general theme of SDOH and stressors developed in the analysis of the larger study (see Collins et al., 2019). We found that transportation, food and housing, education, and employment, and how SDOHs were addressed were all important categories of this theme. We also discuss how the pandemic played an important role. Figure 2 displays the relationship between the central theme and its categories, along with representative excerpts from the interview transcripts.

Transportation

Transportation was a major benefit BBC provided; many clients did not have their vehicles. Participants shared frustrations and experiences with their car being unreliable, breaking down, or having only one car in the family. Having access to free Uber rides to attend medical and non-medical appointments helped with tasks like grocery shopping:

> The transportation thing was the biggest thing, being able to go to . . . appointments or WIC/doctor appointments, going to the welfare building, which I hate going to, or even, . . . going to the grocery store. . . . which was really helpful. . . . I was like "Oh, y'all take us to the store. I don't gotta wait a couple of days." [Client, 10232017]

Clients felt access to transportation prevented further financial strain and the potential harm of missing appointments. The doulas shared their approach. "We do provide services, if it's transportation, even if it's childcare. Anything that may be a hindrance to them is where we step in and try to help relieve as much stress as possible" [Doulas, 072720].

Basic Needs: Housing and Food

Clients experienced food insecurity and housing instability. One talked about how her doula helped her. "I know when I was down on my luck with food, she pointed me to different resources and places that I could go to" [102320]. The doulas shared another client's situation with food insecurity:

> They often run out of food at the lady's house where she lives, and since she has no income of her own, no food source of her own and is too young to go to Hunger Centers, she kind of falls between the cracks. So I have to try to teach her to advocate for herself. [Doulas, 072820]

Here, the doulas talked about the need for the client—who was quite young—to speak up and make her needs known to the people with whom she was living. They also talked about how they helped formally. "We help them get resources, like we help them filling out the food stamps paperwork" [Doulas, 072720].

Regarding housing, clients shared that eviction and unsafe housing situations often resulted in the need for relocation. One client mentioned that she had been homeless following her baby's birth while another mentioned going into a shelter. Clients often described living with friends and family, situations which could be unstable or necessitate a move if the relationships were strained or difficult. One client said,

> I need to get placed into some type of housing somewhere. [Public housing] is automatically out of my head. I don't even wanna go there, 'cause I don't want my child raised up down the way. . . . I've been living with my mother ever since, and I'm not on her lease. I'm not supposed to be there, and then me and her clash. [Client, 12282017]

Expanding on a similar situation, the doulas talked about one client whose housing became unstable.

> [The] weekend she had her baby, her husband graduated from college, so and they had to move within four days of having the baby because college closed. So they're dealing with all kind of stressors. [Doulas, 072820]

Through the pilot program, BBC offered up to 3 months of financial assistance for eligible clients, which helped alleviate financial distress associated with unstable housing. The pilot program served 70 clients. A total of 43 payments were made supporting rental assistance, and 56 supporting utility assistance (e.g., water, gas, electric, sewer, phone).

Education and Employment

Clients discussed how their pregnancy affected their employment and education. Several discussed being enrolled in a school or training program and having to drop out to save money "I stopped [school] so that I could work to save up money for the coming baby. So that's on hold" [1032018b]. Her high-risk pregnancy affected many other facets of her life. "I do hair and nails. Nobody wanted to hire a pregnant woman . . . so I couldn't work . . . but there wasn't really

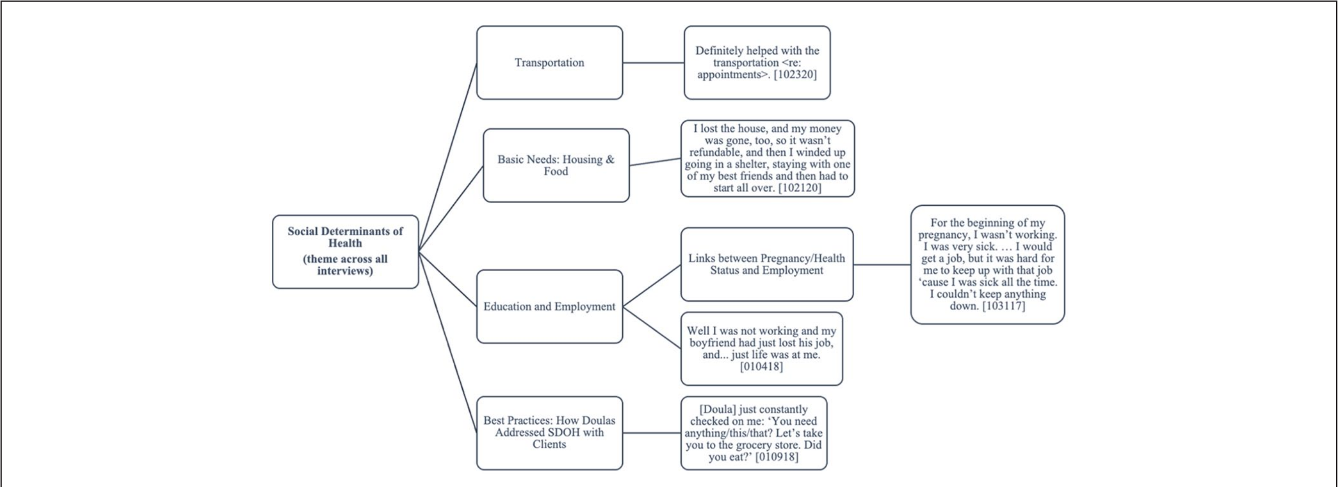

Figure 2. Analysis process of deconstructing general theme of social determinants of health.

nothing to pay the rent with" [Client, 12282017]. Losing a job during pregnancy and the timing of the baby's birth affected decisions to seek further employment and/or training. The doulas shared this perspective and gave one example of a similar situation. "I have a client right now, she lost her job. She lost her medical care. Two days later, she had a bad car accident" [Doulas, 072720]. This quote emphasizes the detrimental impacts of a client's loss of employment on her ability to seek healthcare and cushion the impacts of unforeseen events like an accident.

Links Between Pregnancy/Health Status and Employment

The interviews revealed that SDOHs were interconnected, especially those affecting employment. Clients described the necessity of quitting their jobs due to pregnancy-related health concerns, especially when their employers could not make accommodations. One client described the following:

> I had a high-risk pregnancy. I had a very rare condition called ICP. You don't find out about that until your third trimester. . . .I was having to go back and forth to the doctor's office. I went two or three times a week. . . .Employment was [an issue] from the beginning. . . .I was just left in limbo. [Client, 12282017]

Clients described how their pregnancy-related health concerns, such as being put on bed rest and/or having frequent medical appointments, threatened their ability to maintain employment and pay bills. One client described having to go to the doctor "every 2 weeks to get ultrasounds" and receive weekly shots. She said, "So it was a lot, and they bed-rested me. I couldn't go to work" [Client, 12192017]. It is essential to recognize the interconnections between SDOH, which were illuminated throughout the interviews. One SDOH tended to signal or portend others.

Best Practices: How SDOHs Were Addressed

Central to the BBC model is the trust and strong relationships they foster with their clients. Doulas were available nearly 24/7 working to address their clients' concerns, and they emphasized the variety of needs clients presented:

> So if there's a food restriction or a housing situation or childcare, mom may have another kid and don't know what they're gonna do with the baby when they go into labor, or as simple as transportation, or even just simple as getting baby needs or maternity needs for themselves, we try to find resources in the community and in our office to help support them. [Doulas, 07272020]

Doula focus groups revealed that doulas were allocating a considerable amount of time to address SDOH. This highlighted the need for and value of the RISA, allowing the doulas to focus on clients' social support, pregnancy-specific needs, and time needed for documentation and care coordination. RISAs expressed feeling valued, knowing they were fulfilling an important role in the organization and collaborating to help families:

> We connect the dots of life trying to make sure that we can lift some of the stressors for our families. . .. we want them to recognize that walking through motherhood doesn't have to be a journey they go through alone, so we empower them to make their own decisions but know that they can fall back on us if they ever need it . . . awareness is key and communication is everything. [RISA, 09062023]

Doulas shared that clients had some shame and embarrassment and were afraid of the potential repercussions of admitting their SDOH needs, such as child welfare involvement. Some clients' interviews supported this hypothesis, one client said, "You don't just run across people that want to see

you do good and not have your child in child services and all of that. It's rare that you run across that" [Client, 122817]. So how did doulas connect with clients about SDOH? One doula said, "[Clients] don't always tell you everything, but some things you have to kind of read between the lines and notice." The doulas talked about how they initiated their conversations, built rapport, and recognized clients' feelings while exploring their life situations. The RISAs concurred, noting that after initial reluctance, clients, with ongoing support, became more open and receptive, and felt "deserving of the assistance."

Pandemic Impact

While the COVID-19 pandemic brought about numerous challenges and disruptions, it also prompted organizations to have a heightened awareness about the value of community resources and support networks (Rice et al., 2024). The adaptation to these new challenges resulted in greater utilization of existing resources and increased access to new initiatives that addressed emerging needs:

> I feel like the resources in the community have been a lot more receptive to the needs of our moms because of COVID-19, versus you have to go on a waiting list or certain qualifications needed to be met for you to receive services. So with a lot of the benefits that have been coming during COVID, COVID has been very I guess rewarding to the moms as well, because we're finding ways to meet them more than just the basic food or transportation. We're able to help find resources for masks, and toiletries and even diapers . . . all sorts of things that we're coming up with collectively to provide for our moms to make sure that they have what they need during COVID. Especially we're trying to keep them safe from having to go out as much and being around other people, and some moms, they have smaller children as well, so it's like "How about you just let me run this errand for you? Let me know what you need. I'll go grab it," for WIC and things of that sort. I'll say, too, from personal experience, it's been a lot easier to find resources available for them. [Doulas, 072720]

The short-term availability of additional resources not only alleviated immediate challenges but also fostered an environment through the doulas that enhanced support and well-being for the clients.

Discussion

Doulas contribute to improving overall maternal and infant health outcomes and promoting a more equitable and supportive perinatal experience. Recognizing that health outcomes are influenced by factors beyond medical care, doulas advocate for their client's needs while addressing social concerns. However, pregnant women often have multiple needs related to SDOHs. These needs are not discrete, often overlap, and are interconnected. We found, consistent with past research, that when one SDOH became an issue, more followed, causing a cascade that affected pregnant women's stress (Condon & Sadler, 2019). Doulas play a crucial role in addressing SDOH by providing comprehensive support and guidance to clients while also addressing health literacy during the perinatal, labor, and postpartum periods (Kozhimannil et al., 2016).

Supporting clients with housing-related needs was taxing for doulas when clients' various pregnancy-related social, emotional, and other needs are prominent (Collins et al., 2023; Collins, Brown, et al., 2021; Collins, Rice, et al., 2021; Hmiel et al., 2019). This study adds to the body of research that speaks to the important SDOH needs of Black women and the ways those needs were met in an innovative, holistic manner. SDOH needs were first met by perinatal support doulas, and later by SDOH specialists because screening and referral for SDOH is complex with numerous interconnections and profound impacts. Thus, effectively addressing SDOH requires a comprehensive, multi-pronged, and integrated care approach, and a dedicated service provider, such as the RISA, may be necessary. In our work, incorporating the RISA into the BBC team was a vital addition that helped to support both doulas' work and families' needs.

Across all client interviews, some clients shared that they did not discuss their SDOH needs because they did not want to overwhelm their doulas. There are also cultural expectations that Black women have strength, resilience, and perseverance in the face of societal and personal challenges (Davis, 2015; Watson & Hunter, 2016), so they might have also felt the need to handle SDOH challenges themselves. Such resistance to reaching out for help can result in mothers disregarding their own physical, emotional, and mental health, increasing the risk of accumulated toxic stress and adverse health and pregnancy outcomes (Condon & Sadler, 2019; Geronimus, 1992). RISAs worked to address this issue by being creative and flexible in developing responses to clients' needs. Their work highlights the complex and integrated social needs that might be missed when addressing the maternal and infant mortality crisis. For example, when housing was the greatest need, the RISA served as a pipeline connecting clients directly to larger housing programs in the city rather than either simply referring them out, or the organization developing and maintaining an in-house program focused on housing (an expensive and perhaps not efficient option). The RISA's integration into BBC, a trusted organization (see Collins, Brown, et al., 2021), ensured that there was a team member well-versed in social services that could identify clients with the greatest needs and connect them to resources in a timely, culturally sensitive, and culturally humble manner.

Although healthcare providers often conduct brief SDOH screenings, the tools used are not universal (Moen et al., 2020). It is also important to note that busy physicians and other medical providers may not be well-equipped to screen for the SDOH, connect their patients to community resources, and/or follow up promptly. Screening for SDOH needs to

ensure clients feel safe giving information since screening can prompt worry that SDOH needs might lead to child welfare involvement. Mandated reporting may be a barrier if people are worried that revealing their needs may result in a social service report. If professionals across different disciplines (e.g., physicians, nurses, social workers, therapists, teachers) can refer families to someone like a RISA, families may be connected to resources rather than potentially being met from a punitive approach when they are experiencing a hardship. Having a reliable, knowledgeable, trusted referral source, while key on the micro level, neglects some structural solutions to assisting pregnant women with SDOH.

Social policies must protect against pregnancy-health-related employment loss. Paid sick leave should be a universal protection to keep women from experiencing a cascade of SDOHs that can severely affect their pregnancies and overall health. Policies and government initiatives are beginning to recognize what researchers have long understood about the devastating impacts of racism on health. In June 2020, the Cleveland City Council's Health and Human Services Committee officially declared racism as a public health crisis, and by October 2020, half of U.S. states had made similar declarations (Mendez et al., 2021). While declarations are a start, solid action through policy is also warranted. As we have seen in this study, many women are affected by SDOH, including pregnancy-related reasons for losing employment. While it is technically illegal to discriminate against pregnant women and many employers must accommodate them, if they are unable to do their jobs for health reasons, women tend not to be protected, especially if they are not eligible for the Family Medical Leave Act. It is essential that policymakers recognize and support efforts to promote universal paid sick leave (Center for American Progress, 2023).

Limitations

We believe that this study likely did not capture the fullness of women's experiences around SDOH for two reasons. First, during the pre-pandemic study's research team discussions, one interviewer said she noticed that few participants mentioned SDOH, despite the doulas' emphasizing how much help they gave clients with SDOH-related resources. After one interview, as the interviewer, BBC staff, and the client were standing in the hallway, the client told her doula (in front of the interviewer) that she needed a bus ticket. The interviewer noted that the client had not mentioned having transportation issues in the interview. It is important to explore why this occurred. It is possible the client did not think of the transportation issues during the interview. It is also possible she did not trust the interviewer enough to share it or she internalized her transportation needs as routine and not an "issue."

Another limitation to consider is that one SDOH question asked in the pre-pandemic study was rephrased in the during-pandemic study ("Were there issues around transportation, housing, employment, or education that you had to deal with during pregnancy? How was BBC helpful in managing these?") was adjusted to was there anything that you particularly may have needed? And did they have to assist at all with any referrals to another type of agency? Therefore, most of the direct SDOHs mentioned came from clients in the pre-pandemic study. This question was rephrased for the during-pandemic study because of concerns about clients' forthrightness in sharing with unknown and perhaps untrusted (research) interviewers in a virtual setting (Zoom).

BBC staff also mentioned that it was difficult to obtain appropriate documentation for the rental and utility assistance program. They said clients were reluctant to provide personal information and were hesitant to accept financial assistance. Although BBC is seen as a trusted organization in the community that reduces barriers and stigma that traditionally prevent clients from accessing the resources they need, there may have been clients who declined assistance because they were resistant to express their SDOH needs. Although the doulas worked to build rapport and trusted relationships with their clients, some were still apprehensive and required reassurance to accept assistance or pursue referrals the RISA suggested.

Conclusion

This study sheds light on the vulnerability of pregnant women when confronted with SDOH challenges. Doulas are pivotal figures in overcoming health access gaps by deeply understanding SDOH and actively promoting holistic well-being with their clients. Recognizing and addressing the SDOH is imperative for the development of effective policies and interventions aimed at improving the overall well-being of pregnant women. Doulas play a crucial role in addressing these determinants by fostering a more equitable and supportive perinatal experience. Service providers must carefully consider, financially plan for, and assess the importance of understanding the interconnections between SDOHs and how housing and transportation can act as facilitators to meeting other SDOHs. This role is particularly significant for African American women, who face the highest level of risk, further emphasizing the importance of integrating doula support into national strategies for improving maternal health and birth outcomes.

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