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COMMENTARY

Examining the Role of Psychosocial Influences on Black Maternal Health During the COVID-19 Pandemic

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Abstract

Introduction Due to the disproportionate impact of COVID-19 on communities of color, racial disparities in maternal mortality and morbidity are likely to increase. However, neighborhood and social support factors have yet to be discussed as potential mechanisms by which COVID-19 can exacerbate racial disparities.

Methods We examined literature on the role of neighborhood factors and social support on maternal health outcomes and provided analytical perspective on the potential impacts of COVID-19 on Black birthing people.

Results Even prior to the pandemic, Black individuals were disproportionately impacted by psychosocial stress. However, the compounding effect of pre-existing and current pandemic psychosocial stressors may be a mechanism by which racial disparities are exacerbated and result in higher rates of maternal mortality and morbidity in Black women.

Conclusion We recommend continued monitoring of data related to racial disparities in maternal mortality and morbidity throughout the pandemic. Given that Black women may be disproportionately impacted by psychosocial stress, it is necessary for leadership structures and communities to recognize the potential for worsening disparities and intervene.

Keywords Maternal racial disparities · COVID-19 · Psychosocial stress · Social support

Significance

This commentary synthesizes several ways that the COVID-19 pandemic disproportionately impacted communities of color and enhanced psychosocial stressors on specifically, Black birthing people. It calls attention to the enhanced psychosocial stress that may result in exacerbations of the Black/white racial disparities in maternal outcomes and calls for careful research monitoring these trends and policyinterventions to mitigate them.

Introduction

The effects of racial disparities on health outcomes are more evident than ever before. COVID-19 continues to disproportionately affect communities of color. Black individuals are diagnosed with COVID-19 at higher rates and experience more severe forms of the illness (Price-Haywood et al., 2020). The age-adjusted mortality rate among Black people in the U.S. is 3.4 times greater than that of white people (Nguemeni Tiako et al., 2020). The greatest disparities are found in densely populated and historically segregated cities (Coughlin et al., 2020). Social determinants of health, such as low income and lack of access to healthcare are largely responsible for the increased rates of mortality and morbidity from COVID-19 among the Black population in the U.S. (Dorn et al., 2020). Black populations suffer higher rates of comorbidities such as obesity and diabetes, which affect the duration and severity of the illness (Gu et al., 2020). Social and community-level factors further compound disproportionate COVID-19 incidence rates within Black individuals (Selden & Berdahl, 2020). Some of the disproportionate and community-level factors include increased housing density,

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differential ability to social distance due to occupation, and complications from comorbidities (Yancy, 2020).

Due to the disproportionate effect of COVID-19 on communities of color, an increase in racial disparities for maternal mortality and morbidity between non-Hispanic white and non-Hispanic Black individuals (hereafter referred to as white and Black respectively) in the U.S. could occur in subsequent years. Preliminary evidence of the impact of COVID-19 on pregnancy and birth outcomes show increased likelihood of cesarean deliveries and postpartum hemorrhage in patients with COVID-19 and pregnant women[1] with COVID-19 are more likely to be hospitalized in the ICU than pregnant women without COVID-19 (Chi et al., 2020; Hcini et al., 2021). Prior to the pandemic, pregnancy-related mortality ratios were three to four times higher among Black women than white women (Creanga et al., 2014, 2017). Black women experienced higher rates of severe maternal morbidity than white women; 231.1 and 139.2 per 10,000 births respectively (Noursi et al., 2020). Black women also experienced a greater prevalence of preterm birth, fetal growth restriction, fetal demise, and inadequate receipt of prenatal care (Bryant et al., 2010). While studies that investigated the impact of the pandemic on maternal health outcomes found mixed results, the impact of psychosocial stress on outcomes and racial disparities during the pandemic has yet to be studied (Adhikari et al., 2020; Trocado et al., 2020). Additionally, long term outcomes of psychosocial factors are yet to be known. However, it is clear that the healthcare system is strained with overworked personnel and policies to restrict spreading the virus. This situation could compound the consequences of social determinants of health on communities of color, thereby worsening perinatal outcomes for women who have never contracted the virus (Hcini et al., 2021).

Neighborhood and social support factors have yet to be discussed as potential mechanisms by which COVID-19 can exacerbate racial disparities. As healthcare systems are overwhelmed, hospitals have changed their labor and delivery policies during the pandemic such that key support members can be excluded from the birth experience (Raman, 2020). This could leave Black women more vulnerable than they already are. This commentary will describe neighborhood, social support, and other psychosocial factors specific to Black women that may serve as mechanisms to exacerbate existing disparities in maternal mortality and morbidity during the pandemic.

[1] The authors recognize that not all pregnant and birthing individuals identify as female. However, in keeping with the terminology of the most recent literature, and to accurately present findings related to women specifically, we use the term "women".

Neighborhood Factors

Neighborhood factors are a potential mechanism through which COVID-19 could exacerbate racial disparities in maternal health. Disparities in health outcomes based on neighborhood stem from racial segregation, limited options for exercise, and access to nutritious foods, maternity care, and reliable transportation (Taylor et al., 2019; Wolfson & Leung, 2020).

Racial Segregation

Black women are more likely to live in segregated neighborhoods as a result of persistent residential segregation and historical redlining practices and policies (Nardone et al., 2020; Taylor et al., 2019). Consequently, communities of color commonly experience higher rates of pollution, poverty, low socioeconomic status, and increased risk of violence, which can affect the mental and physical health of pregnant and postpartum women (Giurgescu et al., 2015). Residential segregation has also been associated with high COVID-19 incidence rates (Gu et al., 2020). This may be in part due to an abundance of multigenerational homes with overcrowded living spaces unsuitable for quarantining, and increasing risk for COVID-19 (Coughlin et al., 2020; Wolfson & Leung, 2020).

Additionally, Black residents are more likely to work in jobs deemed essential (Wolfson & Leung, 2020). Many individuals do not have the ability to work remotely in order to practice social distancing. Even for those who are not essential workers, staying home unemployed is not an option in a low-income household (Coughlin et al., 2020). Despite country-wide indications that neighborhoods with majority Black or Hispanic populations bear the burden of COVID-19 infection, some reports show that majority of testing sites are located in wealthier, whiter neighborhoods (Coughlin et al., 2020; McMinn et al., 2020). All of these circumstances may require using public transport, which further increases risk in pregnant women for exposure to COVID-19.

Maternity Care Deserts

Issues of access to quality maternity care that permeate communities of color are especially concerning for pregnant women. Over 12% of births in the U.S. occur in maternity care deserts, defined as areas with limited or scarce access to maternity care services due to minimal availability of obstetricians and insurance coverage for maternity care (March of Dimes, 2018; Taylor et al., 2019). Maternity care deserts disproportionately impact Black and Hispanic neighborhoods, leading to low quality or no obstetric care (Hung et al., 2017; Taylor et al., 2019).

Loss of resources in low income hospitals due to COVID-19 could additionally lead to closure of obstetric wards and increase the distance women have to travel to obtain care (Taylor et al., 2019). Limitations in obstetric care can compound inequities due to transportation barriers, and potentially place pregnant women at increased risk of contracting the virus. This could also discourage the utilization of prenatal care due to transportation barriers (Wolf et al., 2020).

Food Deserts

Food security is also a significant neighborhood factor that directly impacts quality of nutrition, and is necessary for pregnant women. Food security can be defined as adequate availability and accessibility to nutritious and satiating foods (Wolfson & Leung, 2020). This is difficult to achieve in food deserts and low-income communities. Those who face food insecurity often also work in low-paying jobs that do not provide the opportunity to work from home or take time off due to COVID-19. According to a recent survey of 1,500 individuals living under 250% of the federal poverty line in the U.S., those who reported very low food security reported being unable to take days off despite COVID-19 infection among family members (Wolfson & Leung, 2020). Such working and living conditions could negatively impact the health and safety of low-income communities amid the COVID-19 pandemic.

Living in a food desert can increase risk for cardiovascular disease, hypertension, and obesity, placing individuals at higher risk for serious illness due to preexisting comorbidities related to COVID-19 infection (Singu et al., 2020). Likewise, mandated closure of parks and recreational spaces due to COVID-19 aggravates the existing lack of safe and affordable places to exercise in communities of color and could worsen health outcomes (Coughlin et al., 2020).

Social Support

Previous research demonstrates that practical and emotional support from interpersonal relationships (social support) is a major mediating factor in improving health in pregnancy and postpartum (Glazier et al., 2004). However, connections to loved ones and broader network connections to social services and food security are strained during the pandemic. A recent survey found that COVID-19 positive women were 11 times more likely to not have visitors during childbirth than matched COVID-19 negative controls and to report increased clinical acute stress, higher levels of pain during delivery, lower newborn weight, and an increased rate of admission of their newborns to the NICU (Mayopoulos et al., 2020). Additionally, lack of access to healthcare services persists in minority and low-income communities (Kozhimannil et al., 2016). However, research indicates that doulas can be one potential beneficial point of connection and social support for Black women during pregnancy and childbirth. Doulas can help traverse an unresponsive healthcare system that devalued Black pregnant women, including due to implicit biases amongst healthcare providers (Abbyad & Robertson, 2011).

The drastic increase of COVID-19 cases was the impetus for banning the presence of a labor partner for women undergoing birth in several New York City hospitals (Arora et al., 2020). Women endured the psychological and physiological stress of labor and delivery alone without a partner, doula, or another support person. When a policy limited labor support in New York, midwives witnessed a surge of new requests for home births due to additional stress, uncertainty, and fear going into the delivery rooms alone (Van Syckle & Caron, 2020). Out-of hospital births carry a higher rate of perinatal death and other adverse birth outcomes (Snowden et al., 2016). This may be particularly pronounced during the COVID-19 pandemic as Emergency Departments are stressed and Emergency Medical Services may take longer to respond if needed during a home birth. The original policy restricting labor partners was overturned, and an executive order passed to ensure that pregnant women giving birth can have one support person during childbirth (Zucker et al., 2020).

Doula Support

The limitation of having one support person can prevent Black women from choosing support of a doula during childbirth. Social support is a vital part of birth and health outcomes of women, as studies have indicated that women value and benefit from social support during labor; a labor companion, such as a doula, improves health outcomes for women by providing emotional, psychological, and practical support and advice (Bohren et al., 2017; World Health Organization, 2016). Doulas are distinctive from other members of the birth team because they provide continuous support before, during, and after pregnancy. Studies have shown that doula support is associated with higher rates of unmedicated vaginal births, lower cesarean delivery rates, and less frequent preterm births (Kozhimannil et al., 2016). Doulas commonly build rapport with pregnant individuals if services begin during pregnancy to ensure needs are met during labor. According to Kozhimannil et al. (2016), pregnant women can experience less anxiety and discomfort during labor with increased social support. Black pregnant women tend to experience more stress related to racial discrimination and higher rates of conflict with partners during pregnancy than white pregnant women (Earnshaw et al., 2013). Additionally, implicit bias among clinicians can

affect treatment and communication with patients (FitzGerald & Hurst, 2017).

Limiting doula inclusion on the maternal care team is specific to the hospital, as some hospitals limit patients to one visitor. This can result in the pregnant patient having to choose between a doula, partner or other forms of social support. Some hospitals recognize doulas as part of the birth team and will still allow one additional visitor with the doula. For instance, The Women's Hospital of Texas allows pregnant patients to include a doula, in addition to one named visitor, during labor after the doula successfully completes the hospital's COVID-19 screening process (The Women's Hospital of Texas, 2020). Limiting visitors during labor can lower social support during a vital point in the pregnancy journey.

During the pandemic, many women in the U.S. have faced labor and motherhood with trepidation given the lack of social support due to quarantining, social distancing, and travel bans (Abbyad & Robertson, 2011). Pregnant individuals may feel isolated and this lack of support can be associated with postpartum depression and can compromise the health of both the mother and infant (Corrigan et al., 2015). The early postpartum period is considered to be an essential time to improve the overall health and survival of the newborn and mother; nevertheless, the World Health Organization announced that the postpartum period has received less surveillance from healthcare professionals than the prenatal and childbirth periods (Corrigan et al., 2015). These issues are further exacerbated with social distancing protocols as pregnant individuals are experiencing increased barriers in order to attain comprehensive care.

Psychosocial Stress

Taken together, it is clear that neighborhood factors and a lack of social support can be significant sources of psychosocial stress for Black women during the pandemic. Even prior to COVID-19, Black pregnant women were already disproportionately affected by psychosocial stressors, such as racial discrimination (Earnshaw et al., 2013). Pregnant women are particularly vulnerable to stress, as high-levels of stress are associated with negative health outcomes for mother and baby, such as low fetal weight and preterm birth (Lima et al., 2018). For pregnant women of color who are more likely to encounter persistent and severe stressors even prior to COVID-19, the heightened stress from neighborhood and social factors during the pandemic may result in widening disparities in maternal morbidities and mortality.

During the pandemic, rates of depressive symptoms have dramatically increased, potentially related to lack of control and unpredictability of the future, social isolation, and transitioning into new or unexpected roles (Ettman et al., 2020). One study demonstrated that pandemic stress is particularly severe for Black female young-adults (Kujawa et al., 2020). Additionally, nearly one-third of pregnant women reported high-levels of pandemic-related stress, with high-levels of stress more commonly reported by women of color (Preis et al., 2020).

There are of course common causes of pandemic-related stress across pregnant women that are not specific to race. In addition to concerns of staying healthy, pregnant and lactating individuals must begin to make decisions related to risks associated with transmitting COVID-19 through breastfeeding (Ahlers-Schmidt et al., 2020). Also, because there was full exclusion of pregnant and lactating individuals from clinical trials for the COVID-19 vaccine, many individuals may fear whether vaccination could be harmful to themselves or their babies (Ahlers-Schmidt et al., 2020; Farrell et al., 2020).

Black pregnant women may be especially vulnerable to pandemic stress due to the effect of cumulative stressors that their white counterparts may not encounter. One potential stressor may be distrust of the medical community to provide a safe and effective vaccine to Black individuals due to the historic mistreatment and continued racism present within medical settings (Warren et al., 2020). Another stressor that has been particularly exacerbated for Black women during the pandemic is financial strain. Black women have higher rates of job loss, unemployment, and approximately half the rates of recovered jobs compared to white women during the pandemic (Long et al., 2020; Schneider, 2020).

Conclusion

It is essential that researchers and health professionals carefully monitor data related to racial disparities in maternal morbidity and mortality throughout the pandemic. Black women were already disproportionately affected prior to the pandemic and the effects of pandemic-related psychosocial stress, including stress related to neighborhood and social support factors, may further worsen disparities. With an understanding of the deleterious effects of stress on maternal health outcomes and that Black pregnant women may be most vulnerable to pandemic-related stress, it is incumbent upon leadership structures and communities to intervene to reduce these disparities.

Declarations

Conflict of interest The author declare that they have no conflict of interest.

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