

# The Impacts of Climate Change on Black Girls' and Women's Health: Using Theory to Mitigate and Organize

Naomi Michelson\*

---

The purpose of this paper is to explore the possible health effects of climate change on Black girls' and women's health in the United States and analyze Black women-centered solutions for climate change mitigation. Anthropogenic climate change is projected to have a deleterious effect on human health, with rising heat levels, increasing levels of air pollution, and extreme weather events interacting to cause a multitude of adverse human health outcomes. At the crux of sexism and racism, Black women are projected to face a unique set of health outcomes. Racist-built environments, a legacy of hypersexualization, and a sociopolitical environment entrenched in gendered racism all create a complex set of adverse health outcomes. Furthermore, the health effects of intergenerational racialized trauma posit Black women as more susceptible to certain health conditions under climate change. Likewise, the unique positionality of Black women also means that Black women-centered methodologies lead to stronger mitigation strategies. Employing Black feminist theory, Black queer feminist theory, and Womanism to combat climate change could create more holistic, intersectional solutions. Fighting gendered racism requires a restructuring of power, thereby centering Black women as leaders in the climate movement is imperative to achieving environmental justice.

---

## Keywords

climate change • Black feminism • Black queer feminism • Womanism • mitigation • solutions • gendered racism • sustainability • intersectionality • environmental racism

---

\*George Washington University, [naomimichelson@gwmail.gwu.edu](mailto:naomimichelson@gwmail.gwu.edu)

doi: 10.3998/ujph.2314

Conflicts of interest:

The author has no conflicts of interest to disclose.



## Introduction

Climate change—the impending, indomitable, undeniable consequence of anthropogenic air pollution—is projected to cause a myriad of adverse human health consequences. Increasing levels of air pollution, rising heat levels, and extreme weather events interact to create complex environmental and human health outcomes, disproportionately affecting those made vulnerable by systems of white supremacy and colonialism. At the crux of sexism and racism, Black women are projected to face a unique set of health outcomes under climate change. Interlocking systems of oppression have created a sociopolitical environment that institutionally degrades the health of Black women (Prather et al., 2018). Structurally racist built environments have made Black women more susceptible to air pollutants and natural disasters, while the sociopolitical effects of climate change target the historical hypersexualization and exploitation of Black women (Prather et al., 2018). In light of the hold that gendered racism has over determining the effects of climate change, Black women-centered theory and methodology are key to mitigating the climate crisis. The utilization of Black queer feminism and Womanism to inform sustainability practices will improve health outcomes, center those on the margins, and garner collective action in the fight against climate change.

## Climate Change and Health

Climate change is set to be the global crisis of the century. Anthropogenic greenhouse gas emissions have generated a steep rise in global temperatures, facilitating an increase in storms, droughts, floods, sea-level rise, and other adverse weather events (Watts et al., 2021). The multifaceted health effects associated with climate change are projected to increase global rates of morbidity and mortality, inhibit economic development efforts, and lead to massive fiscal losses around the world (Watts et al., 2021). Furthermore, the polluting forces behind the climate crisis are shown to increase rates of chronic health conditions among those exposed, creating populations that are even more susceptible to the adverse health outcomes of climate change (Watts et al., 2021).

Atmospheric pollutants are projected to cause a slew of adverse respiratory health effects. Carbon dioxide, particulate matter, ozone precursors, and other greenhouse gas pollutants are emitted at drastically high levels from power plants, factories, vehicles, and industrial agriculture (Watts et al., 2021). While these pollutants heat up the atmosphere, they also damage respiratory, cardiopulmonary, and maternal health (Watts et al., 2021). Moreover, as emissions rise, the environment across a plethora of countries will become less suitable for farming. The changing atmosphere will deplete soils, dehydrate crops, and destroy freshwater resources. Without a stable source of food and water, rates of malnutrition and diarrheal diseases will increase dramatically. As environments become uninhabitable, rates of migration are set to rise (Watts et al., 2021). Thus, climate change is projected to increase levels of displacement.

Rising global atmospheric temperatures are set to increase the frequency and severity of weather events, including heat waves and wildfires (Watts et al., 2021). Exposure to high levels of heat can result in heat exhaustion, heatstroke, cardiovascular failure, compromised medications, and death. Wildfires can cause an increased rate of dangerous air pollutants, including carbon dioxide, particulate matter, and ozone precursors (Watts et al., 2021). As a result, those exposed to wildfires can experience cardiopulmonary mortality, lower respiratory disease,

diabetes, rheumatic disease, neurodegenerative disease, asthma, preterm birth, and low birth weight (Watts et al., 2021). Furthermore, the mental health effects of experiencing a severe weather event often go underreported. Solastalgia, post-traumatic stress disorder (PTSD), anxiety, and depression are often reported at higher rates following a highly destructive storm (Watts et al., 2021).

As extreme weather events increase, pathogen ecology changes with it. Droughts can contribute to an increased rate of dust storms, increasing human exposure to diseases such as coccidioidomycosis and hantavirus (Watts et al., 2021). In the event of a rainstorm, floodwaters are often filled with human sewage, exposing populations to waterborne diseases (Watts et al., 2021). Furthermore, the increasing rates of storms and floods can increase potential habitats for mosquito populations, driving up rates of mosquito-borne diseases such as malaria, dengue, and West Nile virus (Watts et al., 2021). The compounding forces of climate change are increasing the geographic spread and incidence of infectious diseases, threatening public health systems across the globe.

## The State of Black Girls' and Women's Health Today

State-sponsored racist and sexist violence against Black girls and women in the United States has informed health outcomes for centuries. The Biopsychosocial Model of Racism states that the stress of experiencing gendered racism generates an allostatic load of cortisol within the body (Goosby & Heidbrink, 2013). High levels of cortisol are normal for sporadic experiences of stress, but chronic exposure to cortisol can take a toll on the body, increasing the risk of hypertension, diabetes, anxiety, and other ailments (Goosby & Heidbrink, 2013). Evidence has shown an epigenetic vertical transmission of allostatic load, allowing chronic stress to pass on intergenerationally (Goosby & Heidbrink, 2013). This intergenerational gendered racialized trauma experienced by Black women in the United States is a direct result of the legacy of slavery and colonialism (Barlow & Jones, 2018). Structures of white supremacy that began during slavery have lasted to this day, continuing to shape the health of Black girls and women in the United States (Gee & Ford, 2011).

The hypersexualization of Black women is directly linked to the biases created to justify slavery. Enslaved women were subject to legal rape, sexual violence, and economic exploitation (Prather et al., 2018). An estimated 58% of all enslaved Black women experienced sexual assault by white men (Prather et al., 2018). Once slavery was abolished, Jim Crow laws and lasting stereotypes reinforced the hypersexualization of Black women in order to justify rape and other forms of sexual exploitation. Today, these stereotypes have caused high levels of sexual assault within the Black community and poor mental health among Black girls.

Centuries of extraction, exploitation, white supremacy, and colonialism have created the contemporary built environment of the United States. Redlining has segregated neighborhoods by race, resulting in higher rates of food deserts, inaccessible transportation, and underfunded housing in Black communities (Gee & Ford, 2011). Former laws during slavery that once prohibited Black individuals from accessing education have since become structures that limit the educational resources available to primarily Black neighborhoods. Generational poverty has persisted, as the built environment cyclically bars Black individuals from accessing education, nutrition, and other resources necessary for economic advancement (Gee & Ford, 2011). Consequently,

rates of diabetes, malnutrition, and asthma are disproportionately high in the Black community, due to the compounding forces of food deserts, poverty, stress, and exposure to pollutants (Gee & Ford, 2011).

The state of Black girls' and women's health is linked to power. While colonial forces have spent centuries attempting to eradicate the power of Black women—through institutionalized economic and sexual exploitation, state-sponsored violence, and eugenicist reproductive health policies—the steadfast power of resiliency has created space for a variety of Black women-centered healing practices (Barlow & Johnson, 2021). Womanism, precolonial rituals, spirituality, and collective consciousness-raising all serve as sites for strength and wellness (Banks-Wallace & Parks, 2004) (Maparyan, 2018). Public health interventions must center Black women by using these methods to promote the health, leadership, and power of Black girls and women (Barlow & Johnson, 2021).

## The Impacts of Climate Change on Black Girls' and Women's Health

Gendered racism influences chronic health outcomes, and climate change exacerbates them (Figure 1). While the human body can adapt to minor insults, repetitive injuries will quickly reach the limits of adaptation—particularly when they have been weakened through other chronic stressors, including housing insecurity, food and water insecurity, intergenerational racialized gendered trauma, sexual violence, poverty, and other determinants of health (Gee & Ford, 2011). The stress induced by climate change is set to act in a similar manner. Rather than introducing a new set of problems, it will exacerbate the health consequences of preexisting structural disparities. Figure 1 shows the synergistic health effects of climate change and structural racism, and the multitude of ways in which they intersect. The majority of research into the field of climate change and health focuses on race and gender as separate categories. Very little research has specifically explored the nuanced health outcomes that Black women will face. This article focuses on combining the gendered health effects of climate change with the preexisting structures of white supremacy that determine health in order to begin to understand the intersection between climate change and Black girls' and women's health.

The heat hypothesis states that hotter temperatures can lead to increased aggressive motives and behaviors (Anderson, 2001). With increasing levels of ambient heat under climate change, rates of violence could be projected to increase. The institutionally enforced hypersexualization of Black girls and women makes them most vulnerable to heat-related sexual violence and intimate partner violence. As sexual violence increases, the incidence of sexually transmitted diseases is bound to increase as well. Rates of HIV and other immunosuppressing diseases could increase due to climate change, increasing the population's vulnerability to other adverse effects of climate change. Research has also shown the existence of an abuse-to-prison pipeline for Black girls, with harsher sentences doled out for Black girls (Black Women and Sexual Violence, n.d.). In one study of an Oregon justice system, 76% of the incarcerated women were survivors of sexual abuse by the time they turned 13 (Black Women and Sexual Violence, n.d.). Increased ambient temperatures due to climate change could therefore increase the rate of sexual assault against Black women and girls, facilitate the spread of sexually transmitted diseases, and increase the number of incarcerated Black girls. In order to protect the safety and well-being of Black girls, further research into these trends must be a priority.

Anthropogenic emissions of carbon dioxide, particulate matter, ozone, and other harmful air pollutants are projected to increase adverse respiratory health outcomes (Watts et al., 2021). Black women, who are more likely to live in disproportionately polluted neighborhoods, are therefore most likely to experience deteriorated respiratory health (*Disparities in the Impact of Air Pollution*, 2020). Underlying chronic cardiopulmonary, cardiometabolic, and respiratory diseases make individuals far more susceptible to dying from infectious disease, and those living in over-polluted neighborhoods are therefore at the highest risk. This could be seen in the case of COVID-19. As the disease swept across the country, disproportionately high rates of morbidity and mortality were seen within the Black community (*The COVID Racial Data Tracker*, n.d.). Greenhouse gases emitted within racially segregated neighborhoods are likely to increase the incidence of infectious diseases within the Black community.

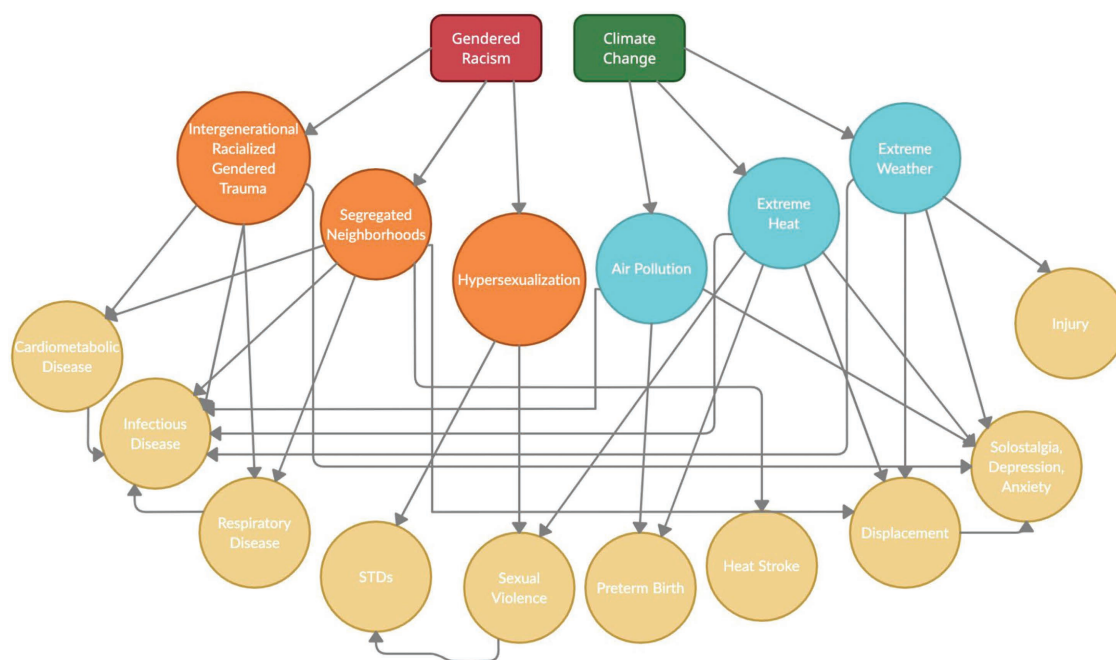
The role of the caretaker is often handed to women, and as a result, women have increased rates of contact with the sick. Consequently, they may end up contracting the illness of those they care for. Black women, who already experience intergenerational gendered racialized trauma as a major determinant of health, are therefore likely to experience the highest rates of infectious disease. Furthermore, there is a history of relegating Black women into caretaking roles. The stereotype of “the Mammy,” a role created during slavery to justify the exploitation of Black women, has continued to reinforce the idea of Black women as martyrs, jeopardizing their own health for the comfort of others (Carter & Rossi, 2019). As it exists today, this stereotype could directly result in higher rates of infectious diseases among Black women under climate change.

Black infant and maternal mortality are being exacerbated by climate change (“At the Intersection of Climate Change and Environmental and Reproductive Justice,” n.d.). A recent California study found that for every 10 degrees Fahrenheit of warming, there is an average 8.6% increase in preterm birth (Basu, Chen, Li, & Avalos, 2017). For Black women, there is an average increase of 14.9% (Basu et al., 2017). Furthermore, an association between exposure to high doses of ground-level ozone and preterm birth has also been found, noting that Black women had the highest levels of preterm birth (Bekkar, Pacheco, Basu, & DeNicola, 2020). Black women living in urban neighborhoods, often places with the highest levels of heat and ground-level ozone, are therefore at the highest risk of experiencing adverse maternal and infant health outcomes. An allostatic load as a result of intergenerational gendered racialized trauma has already led to higher rates of maternal mortality within the Black community, and an increased incidence of preterm birth from climate change could exacerbate those rates (Guidi, Lucente, Sonino, & Fava, 2021). Further research is needed to explore the causal links between heat, ground-level ozone, and Black maternal health, but the primary research that has been done suggests that climate change is a direct threat to the health of Black mothers.

In the event of a natural disaster, Black women are left disproportionately more vulnerable to disease, injury, assault, displacement, and even state-sponsored violence. The World Health Organization states that women experience higher rates of morbidity and mortality following natural disasters (*World Health Organization*, n.d.). As women are often in the caretaker role, there is a precedent for them to put the welfare of their family before their own health (*World Health Organization*, n.d.). As discussed earlier, the stereotype of “the Mammy” makes this circumstance even more critical for Black women (Carter & Rossi, 2019). Further research is needed into the intersectional analysis of natural disaster morbidity and mortality, but it is likely that compounding racial and gender stereotypes may result in increased rates of injury and illness among Black women. Furthermore, natural disasters are more likely to cause lasting devastation in predominantly poor,

Black communities. Following Hurricane Katrina, the hardest-hit areas of New Orleans (and the most underfunded) were the predominantly Black ones, in which 50% of poor families were female-headed (Ransby, 2006). Consequently, the highest rates of displacement occurred within the Black community. Shelters for those who have been displaced can be incredibly dangerous, with high rates of disease transmission, sexual violence, and malnutrition (Ransby, 2006). These problems stem from the sheer disregard for poor, Black communities by the United States. Welfare programs had been cut back, natural disaster defenses were underdeveloped, and the police only instigated more violence (Ransby, 2006). During Hurricane Katrina, Sharli'e Dominique, a Black trans woman, was arrested for using the women's bathroom in a safe shelter ("A New Orleans Trans Evacuee's Story," 2011). This blatant act of racist transphobia put the health and safety of Sharli'e Dominique at risk in the midst of a natural disaster, showing that the police cared more about arresting a Black trans woman than protecting the welfare of those displaced by Hurricane Katrina. Clearly, Black women are particularly vulnerable following extreme weather events. However, institutional solutions exist to protect the welfare of Black communities in the case of a disaster—they just need to be put in place.

Beyond physical health, the mental health effects of climate change are incredibly pertinent. Populations who have been displaced by climate disasters experience solastalgia, or the painful loss of home (Albrecht et al., 2007). Younger generations face mounting levels of eco-anxiety as the future remains incredibly uncertain under climate change. Anxiety, depression, and PTSD spike after traumatic natural disaster events, and the stress of poverty deepens as climate change destroys the livelihoods of numerous workers (Makwana, 2019). Black women already face higher rates of depression and anxiety due to the stress of experiencing gendered racism, structural inequalities, and inequitable levels of poverty. Adding on climate change-induced stressors would only exacerbate current rates of poor mental health.



**Figure 1.** The synergistic health effects of gendered racism and climate change.

## Mitigation Strategies: A Case for Black Feminist Practices

The notion that Black women are dying at higher rates to benefit private corporations is not a new one; it is just being reiterated by the climate crisis. Just like imperialism, anthropogenic climate change is inextricably linked to a history of theft, power, and greed (*Dias, 2020*). Imperialism has been enacted through the homogenization of countries and the extraction of natural resources and labor for cheap profit. Environmental imperialism, similarly, is the extraction, commodification, and degradation of the global commons by wealthy countries at the expense of others. Fossil fuel emissions from wealthy corporations have acidified the oceans, killing the fish that many island nations rely on as their only source of protein. Powerful petrochemical plants are built in low-income, majority-Black communities in Louisiana, poisoning the surrounding landscape and exposing residents to carcinogenic toxins (*Singer, 2011*). These actions, performed by wealthy nations and corporations, have fractured and degraded environments across the globe, mirroring and building upon the destructive forces of colonialism. As such, mitigation research must “study up” to find the structural roots of the climate crisis (*Tallbear, 2014*). Critiquing larger structures allows for a broader distribution of issues to be targeted. Black women do not lead single-issue lives, and thus Black women-led mitigation campaigns will not simply address one issue. Shaping mitigation efforts through the lenses of Womanism and Black queer feminism will not only center those most affected by the climate crisis but also create space for decolonization.

Black queer feminism is integral to the design and implementation of mitigation efforts. It is the belief that the marginalized must be centered and that all feminist work must actively fight racism, sexism, and heterosexism (*Sullivan, 2019*). Through this lens, targeting colonial structures of gendered racism and heterosexism is the key to mitigating climate change. Taking steps to incorporate antiracist and antisexist activism into the sustainability movement can create campaigns that fight for environmental justice. Too often, climate mitigation campaigns focus broadly on the needs of the white and the wealthy. Solar energy sources are pushed as the prime sustainability practices, despite the fact that renters have no control over switching to renewable energy sources. Veganism is promoted as the best diet to fight climate change, and yet vegan alternatives are inaccessible in food deserts. Black queer feminist solutions would create sustainable solutions that are accessible and directly impact the corporations responsible for greenhouse gas emissions. Creating grassroots coalitions between queer Black women and indigenous organizations to lobby for progressive mitigative actions would be a step in the right direction. Beyond that, climate change-related surveillance must take an intersectional approach to data collection and organization (*Osborne, 2015*). Data is often stratified into categories of race, class, and gender, without considering the complex interactions between all three (*Osborne, 2015*). Due to this, data that centers the unique experiences of Black women is often underreported. Moreover, campaigns and interventions that rely upon such data are left without the evidence for an intersectional approach. Restructuring surveillance systems to take into account the interlocking systems of oppression would allow for the creation of evidence-based mitigation programs that specifically center Black women.

Structural-level mitigation campaigns also consistently fail to center historically Black communities. The DC Department of Transportation has been implementing a tree planting program to increase urban greening within the city. However, the majority of the program has been clustered in wealthier, white wards (*Interactive Map, 2018*). Despite the fact that wards 7 and 8,

historically Black neighborhoods, need urban greening the most to increase shade and combat ground-level ozone pollution, they have received the least attention from the program. Using Black queer feminism to center those who have been on the margins of sustainability campaigns is key to creating a collective sense of self-efficacy in the fight against climate change. Thus, allocating funds to create university programs and political coalitions on environmental racism would begin training a new generation of changemakers. Beyond additive change within the political system, policies that create racist built environments *must* be abolished and replaced with ones that funnel money into Black communities. The money exists; we just need to ensure it is used for the right resources.

Using Womanism to inform sustainability practices and heal Black women can create a two-pronged campaign to mitigate climate change and reverse the adverse health effects of gendered racism (Harris & Crawford, 2021). Womanism is social change rooted in the everyday experiences and problem-solving skills of Black women with the goal of ending all oppression, restoring the balance between human and nature, and embracing the spiritual dimension (Harris & Crawford, 2021). This spiritual connection between Black women and nature is key to creating collective action to fight the environmental degradation of climate change. Similar to indigenous environmental activism, Black women's spirituality can be used to inform activism, lobbying, and sustainable practices. Using spiritual community centers as sites of environmental activism would allow for trusted community leaders to become key informants and for a wider array of generations to join the fight.

The everyday experiences and rituals of Black women can be used to create lasting mitigation campaigns. Plasticity is not innate to human nature, and many mainstream sustainable practices are difficult to maintain. To create flexible and sustainable solutions, womanist strategies that use Black women's everyday experiences would be adaptable, resilient, and centered upon wellness. These Womanist spiritual practices can also improve mental health outcomes (Heath, 2006). As climate change poses a serious risk to the mental health of the global population, solutions for healing are as pertinent as they have ever been. Connecting sustainability practices to spiritual health would allow for healing within the environment, the body, the mind, and the soul.

There are two bills working their way through congress right now that have the potential to address the adverse health effects Black women specifically face under climate change. The Social Determinants for Moms Act of 2020 would create a task force for grants and studies concerned with the social determinants of maternal health, with a focus on maternal morbidity, mortality, and racial disparities (McBath, 2020). The grants used from this program could create further research opportunities to explore the intersection between climate change and Black maternal health outcomes, with a particular focus on the effects of heat and ground-level ozone. Using this bill to specifically fund Black women-led research teams would not only approach research from a critical intersectional point of view but also help diversify the academic establishment. Similarly, the Black Maternal Health Momnibus Act of 2020 is a powerhouse of a bill. It covers everything from funding community-based organizations that improve maternal health and promote equity, to diversifying the perinatal workforce, to promoting payment models that provide access to high-quality and non-clinical perinatal care, and even investing in community-based initiatives to reduce levels of climate change-related risks for pregnant women (Underwood, 2020). This bill clearly promotes grassroots, diverse, and non-clinical efforts to protect maternal health—even denoting a specific focus on the role of climate change. Passing the Black Maternal Health Momnibus Act would garner the collective action needed by community-based organizations to mitigate climate change



and protect Black maternal health. Centering the health of Black women at the structural level is the first step in undoing centuries of institutional violence. Both of these bills were introduced in the house in early 2020 and must continue to receive enough support to work their way through the legislative process.

## Conclusions: A Call for Research and Action

The anthropogenic climate crisis is set to deteriorate the health of humans and the environment, with a disproportionately large impact on those made vulnerable by sociopolitical systems of white supremacy. Gendered racism is a major determinant of health, and thus Black girls and women are made particularly vulnerable to the health effects of climate change. However, limited research into the field of climate change and health has specifically focused on the health of Black women. The research that does exist focuses on Black maternal mortality, once again relegating the field of Black women's health to just one cause. All aspects of health under climate change must be researched, including mental health, sexual health, respiratory health, and spiritual health. Centering Black women in the fight against climate change is imperative to garnering collective action, promoting wellness, and abolishing structures of inequity. An immediate allocation of resources is necessary to promote research into the field of gendered racism and climate change—and Black women must be at the helm of the projects. Furthermore, additional research using tenets of community-based participatory research to uplift local communities would be of particular use to this field, especially when developing lasting sustainability practices. Unless immediate drastic action is taken by every governing body across the globe, climate change is going to be the future. Public health practitioners need to ensure that the future will be safe, healing, and joyful for Black women and girls.

## References

- Albrecht, G., Sartore, G.-M., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., Stain, H., Tonna, A., & Pollard, G. (2007). Solastalgia: The distress caused by environmental change. *Australasian Psychiatry: Bulletin of Royal Australian and New Zealand College of Psychiatrists*, 15(Suppl 1), S95–S98. <https://doi.org/10.1080/10398560701701288>
- A New Orleans Trans Evacuee's Story. (2011, August 29). *TransAdvocate*. [https://www.transadvocate.com/a-new-orleans-trans-evacuees-story\\_n\\_4266.htm](https://www.transadvocate.com/a-new-orleans-trans-evacuees-story_n_4266.htm)
- Anderson, C. A. (2001). Heat and violence. *Current Directions in Psychological Science*, 10(1), 33–38. <https://doi.org/10.1111/1467-8721.00109>
- At the Intersection of Climate Change and Environmental and Reproductive Justice. (n.d.). *New Security Beat*. Retrieved May 2, 2021, from <https://www.newsecuritybeat.org/2020/07/intersection-climate-change-environmental-reproductive-justice/>
- Banks-Wallace, J., & Parks, L. (2004). It's all sacred: African American women's perspectives on spirituality. *Issues in Mental Health Nursing*, 25(1), 25–45. <https://doi.org/10.1080/01612840490249028-22>
- Barlow, J. N., & Johnson, B. M. (2021). Listen to black women: Do black feminist and womanist health policy analyses. *Women's Health Issues*, 31(2), 91–95. <https://doi.org/10.1016/j.whi.2020.11.001>

- Barlow J. N. & Jones T. C., (2018). Reclaiming health for black women and girls: A conversation with Dr. Jameta Nicole Barlow. *Journal of Critical Thought and Praxis* 7(2), 64–65.
- Basu, R., Chen, Hong., Li, D.-K., & Avalos, L. A. (2017). The impact of maternal factors on the association between temperature and preterm delivery. *Environmental Research*, 154, 109–114. <https://doi.org/10.1016/j.envres.2016.12.017>
- Bekkar, B., Pacheco, S., Basu, R., & DeNicola, N. (2020). Association of air pollution and heat exposure with preterm birth, low birth weight, and stillbirth in the US. *JAMA Network Open*, 3(6). <https://doi.org/10.1001/jamanetworkopen.2020.8243>
- Black Women and Sexual Violence*. (n.d.). Retrieved May 5, 2021, from <https://now.org/wp-content/uploads/2018/02/Black-Women-and-Sexual-Violence-6.pdf>
- Carter, L., & Rossi, A. (2019). Embodying strength: The origin, representations, and socialization of the strong black woman ideal and its effect on black women's mental health. *Women & Therapy*, 42(3–4), 289–300. <https://doi.org/10.1080/02703149.2019.1622911>
- Dias, K. M. (2020). *Environmentalism and the legacy of colonialism*. Human Rights Pulse. Retrieved December 13, 2021, from <https://www.humanrightspulse.com/mastercontentblog/environmentalism-and-the-legacy-of-colonialism>
- Disparities in the Impact of Air Pollution*. (2020). Retrieved December 13, 2021, from <https://www.lung.org/clean-air/outdoors/who-is-at-risk/disparities>
- Gee, G. C., & Ford, C. L. (2011). Structural racism and health inequities. *Du Bois Review : Social Science Research on Race*, 8(1), 115–132. <https://doi.org/10.1017/S1742058X11000130>
- Goosby, B. J., & Heidbrink, C. (2013). Transgenerational consequences of racial discrimination for African American health. *Sociology Compass*, 7(8), 630–643. <https://doi.org/10.1111/soc4.12054>
- Guidi, J., Lucente, M., Sonino, N., & Fava, G. A. (2021). Allostatic load and its impact on health: A systematic review. *Psychotherapy and Psychosomatics*, 90(1), 11–27. <https://doi.org/10.1159/000510696>
- Harris, F. B., & Crawford, K. C. (2021). A womanist and interfaith response to climate change. In S. E. Silvern & E. H. Davis (Eds.), *Religion, Sustainability, and Place: Moral Geographies of the Anthropocene* (pp. 355–381). Springer. [https://doi.org/10.1007/978-981-15-7646-1\\_15](https://doi.org/10.1007/978-981-15-7646-1_15)
- Heath, C. D. (2006). A womanist approach to understanding and assessing the relationship between spirituality and mental health. *Mental Health, Religion & Culture*, 9(2), 155–170. <https://doi.org/10.1080/13694670500116938>
- Interactive Map: DC Is Planting Thousands of Trees, But Inequity Remains. (2018). *NBC4 Washington*. Retrieved May 5, 2021, from <https://www.nbcwashington.com/news/local/dc-is-planting-thousands-of-trees-but-inequity-remains/54358/>
- Makwana, N. (2019). Disaster and its impact on mental health: A narrative review. *Journal of Family Medicine and Primary Care*, 8(10), 3090–3095. [https://doi.org/10.4103/jfmpc.jfmpc\\_893\\_19](https://doi.org/10.4103/jfmpc.jfmpc_893_19)
- Maparyan, L. (2018). Womanism and black women's health. *Meridians: Feminism, Race, Transnationalism*, 16(2), 329–332.
- McBath, L. (2020, March 10). *H.R.6132–116th Congress (2019–2020): Social Determinants for Moms Act of 2020 (2019/2020)* [Legislation]. <https://www.congress.gov/bill/116th-congress/house-bill/6132>

- Osborne, N. (2015). Intersectionality and kyriarchy: A framework for approaching power and social justice in planning and climate change adaptation. *Planning Theory*, 14(2), 130–151. <https://doi.org/10.1177/1473095213516443>
- Prather, C., Fuller, T. R., Jeffries, W. L., Marshall, K. J., Howell, A. V., Belyue-Umole, A., & King, W. (2018). Racism, African American women, and their sexual and reproductive health: A review of historical and contemporary evidence and implications for health equity. *Health Equity*, 2(1), 249–259. <https://doi.org/10.1089/heq.2017.0045>
- Ransby, B. (2006). Katrina, black women, and the deadly discourse on black poverty in America. *Du Bois Review: Social Science Research on Race*, 3(1), 215–222. <https://doi.org/10.1017/S1742058X06060140>
- Singer, M. (2011). Down cancer alley: The lived experience of health and environmental suffering in Louisiana's chemical corridor. *Medical Anthropology Quarterly*, 25(2), 141–163. <https://doi.org/10.1111/j.1548-1387.2011.01154.x>
- Sullivan, M. J. (2019). Black queer feminism. In M. J. Sullivan, *African American studies center*. Oxford University Press. <https://doi.org/10.1093/acref/9780195301731.013.78530>
- Tallbear, K. (2014). *View of Standing With and Speaking as Faith: A Feminist-Indigenous Approach to Inquiry* | *Journal of Research Practice*. Retrieved May 5, 2021, from <http://jrp.icaap.org/index.php/jrp/article/view/405/407>
- The COVID Racial Data Tracker*. (n.d.). The COVID Tracking Project. Retrieved May 5, 2021, from <https://covidtracking.com/race>
- Underwood, L. (2020, July 13). *H.R. 6142–116th Congress (2019–2020): Black Maternal Health Omnibus Act of 2020* (2019/2020) [Legislation]. <https://www.congress.gov/bill/116th-congress/house-bill/6142>
- Watts, N., Amann, M., Arnell, N., Ayeb-Karlsson, S., Beagley, J., Belesova, K., . . . Costello, A. (2021). The 2020 report of The Lancet Countdown on health and climate change: Responding to converging crises. *The Lancet*, 397(10269), 129–170. [https://doi.org/10.1016/S0140-6736\(20\)32290-X](https://doi.org/10.1016/S0140-6736(20)32290-X)
- World Health Organization*. (n.d.). *Gender Climate Change and Health*. Public Health and Environment Department. Retrieved May 1, 2021, from [https://www.who.int/globalchange/publications/reports/gender\\_climate\\_change/en/](https://www.who.int/globalchange/publications/reports/gender_climate_change/en/)