## Traumatology

# Intersectional Trauma: COVID-19, the Psychosocial Contract, and America's Racialized Public Health Lineage

Jerel M. Ezell, Samira Salari, Clinton Rooker, and Elizabeth C. Chase Online First Publication, January 21, 2021. http://dx.doi.org/10.1037/trm0000302

### CITATION

Ezell, J. M., Salari, S., Rooker, C., & Chase, E. C. (2021, January 21). Intersectional Trauma: COVID-19, the Psychosocial Contract, and America's Racialized Public Health Lineage. *Traumatology*. Advance online publication. http://dx.doi.org/10.1037/trm0000302 AMERICAN PSYCHOLOGICAL ASSOCIATION GREEN CROSS

© 2021 American Psychological Association ISSN: 1085-9373

https://doi.org/10.1037/trm0000302

## Intersectional Trauma: COVID-19, the Psychosocial Contract, and America's Racialized Public Health Lineage

Jerel M. Ezell<sup>1, 2</sup>, Samira Salari<sup>3</sup>, Clinton Rooker<sup>4</sup>, and Elizabeth C. Chase<sup>5</sup>

<sup>1</sup> Africana Studies and Research Center, Cornell University

<sup>2</sup> Cornell Center for Health Equity, Cornell University

<sup>3</sup> UI Health, University of Illinois at Chicago

<sup>4</sup> Department of Political Science, University of Wisconsin

<sup>5</sup> Department of Biostatistics, School of Public Health, University of Michigan

This comparative review explores how, during COVID-19 and recent American public health disasters, including the water crisis in Flint, Michigan, Hurricane Katrina, and Hurricane Maria, early failures in public health communications, porous epidemiologic oversight, and lax crisis management created significant gaps in outreach and treatment for historically disenfranchised racial/ethnic minorities. In consideration of each event's broader specter in terms of population health inequities, a highly salient but underresearched dynamic emerges: the development of heightened psychological sequelae including depression, anxiety, and posttraumatic stress, factors linked to civic and health care system disengagement and poorer overall health. This excess mental illness morbidity can be said to fall under the umbrella of intersectional trauma, or psychological harm and psychosocial vulnerability produced through the accumulation of cultural, political, economic, and ecologic stressors tied to salient identity markers such as race or ethnicity. During COVID-19, reports have presaged race- and class-specific disparities in infections and mortality, with evidence highlighting adverse effects on the "psychosocial contract," public trust and faith in government and health care systems which is borne from relational experiences tied to one's identity markers. We discuss how COVID-19's kinetic and fluid political dynamics may add to the burden of mental illness and trauma in racial/ethnic minority communities in the United States and further entrench said disparities, closing with potential strategies for mitigation.

Keywords: environmental justice, health disparities, mental illness, public health, trauma

At the time of this writing, COVID-19 has claimed the lives of over 350,000 individuals in the United States (Centers for Disease Control, 2020), with racial/ethnic disparities shown to be persistently embedded. Compared to Whites (on average), Latinos have 1.7 as many COVID-19 cases, 4.1 times as many hospitalizations, and 2.8 times as many deaths, whereas Blacks have 1.4 times as many cases, 3.7 times as many hospitalizations, and 2.8 times as Whites (Centers for Disease Control and Prevention, 2020). As COVID-19's transmission in America increasingly becomes a breathtaking example of public health mismanagement and dereliction in crisis governance (Rajan et al., 2020), to understand its disproportionate effects, it is helpful to consider other recent public health disasters with similar racially-forged causes and effects.

Following Hurricane Katrina in 2005, public health research on "natural" disasters began to shift away from a focus on the purely technical or technocratic aspects of crisis to one shaped around "... people's experiences with and reactions to an event" (Gill,

1

2007, p. 216). Under this new paradigm, the physical effects of a disaster—for example, bodily injury, property destruction, and so forth—are weighted in the context of their markedly social-psychological impacts. In this review, we explore the mental health disparities that COVID-19 has created and stands to further ensconce in the United States (Pfefferbaum & North, 2020; Saltz-man et al., 2020). Using contemporary public health events, including the Flint Water Crisis, Hurricane Katrina, and Hurricane Maria, as comparative case studies, we attempt to show that the physical or bodily burden of crises such as COVID-19 cannot be adequately understood apart from their vigorous mental health inequities.

Rates of certain mental illnesses, particularly serious mental illnesses such as schizophrenia and bipolar disorder, are persistently higher among racial/ethnic minorities, including Blacks, Latinos, and Native Americans, in comparison to Whites (Garrett et al., 2015; Gómez, 2015; Maura & Weisman de Mamani, 2017). Furthermore, patterns of mental illness treatment for these groups are consistently diminished in contrast to Whites (Anastasia & Bridges, 2015; Cook et al., 2017). A spectrum of factors, ranging from limited awareness of symptoms and potential remediatory resources to insurance and access barriers, contribute to this uneven landscape (Cook et al., 2017; Khan et al., 2017). Other factors such as cultural and in-group stigma against help-seeking, particularly among racial/ethnic minority *men*, and implicit biases

Correspondence concerning this article should be addressed to Jerel M. Ezell, Africana Studies and Research Center, Cornell University, 310 Triphammer Road, Ithaca, NY 14850, United States. Email: jme246@ cornell.edu

among practitioners devaluing and mistreating mental illness in these populations further stymie engagement with mental health services (Diala et al., 2001; Parent et al., 2018; Shim et al., 2009).

Illuminating fault-lines in both the U.S. health care system and the country's social safety net, COVID-19 casts America's mental health inequities into especially sharp relief. Along these lines, COVID-19 is poised to be the signature mental health crisis of this generation for two reasons: (a) its heavy shading in mortality and morbidity toward racial/ethnic minorities and low-income individuals in America (Chowkwanyun & Reed, 2020) and (b) its continued rupturing of these individuals' "psychosocial contract," or their recurrent experiences with gaslighting, discrimination and marginalization by U.S. policymaking bodies and the American health care system. To this end, indeed, racial/ethnic minorities' historically entrenched experiences of institutional erasure and attendant feelings of devaluation and betrayal have effectively telegraphed much of what COVID-19 now lays bare in terms of intersectional trauma.

Intersectional trauma refers to the psychosocial marginalization of individuals across multiple axes of identity, including race, ethnicity, gender, nativity status, religion, sexual orientation, mental health status, and so forth (Di-Capua, 2015). This comparative review for a broadening of this construct, one which is inclusive of how other fundamentally social phenomenon, such as public health disasters, formatively influence one's wellbeing, place, and identity and effectively reshape one's cultural health capital (Shim, 2010).

#### The Flint Water Crisis

Similar to COVID-19, the specter of the Flint Water Crisis, which began in April 2014, was initially downplayed, and public officials demurred and deflected as grave concerns mounted among rank-and-file employees over the city's worsening water quality (Krings et al., 2019). This was until a pediatrician in Flint, Dr. Mona Hanna-Attisha, released searing evidence indicating that blood lead (Pb) levels among Flint's predominantly Black and low-income children had significantly risen since the then-recent switch of its water source from Lake Huron to the Flint River. The switch, of note, was part of a series of austerity measures greenlit by Flint's unelected "emergency manager" (Hanna-Attisha et al., 2016). Due to intransigence of the kind witnessed in the denialism and handwringing of the Trump administration and state and local governments across the U.S. regarding COVID-19 mitigation strategies (Adolph et al., 2020; Ansell et al., 2020), official government reports on Flint's water issues did not surface until roughly a year and a half after the water source switch (Butler et al., 2016; Peplow, 2018). Thus, in the interim, many Flint residents had potentially been continuously consuming contaminated tap water wholly unaware of its likely hazardous content (Krings et al., 2019), which included not just elevated levels of lead, but other heavy metals, trihalomethanes, and the bacteria legionella which led to roughly 100 "excess" fatal cases of Legionnaires' disease in the city (Binney et al., 2019; Masten et al., 2016).

Hanna-Attisha's research further demonstrated that some of the most outsized increases of lead, an invisible, odorless neurotoxin which has consistently been shown to be associated with cognitive and developmental disability among children exposed in utero and in early age (Needleman, 2004) had occurred in Flint's most

socioeconomically deprived, predominantly Black neighborhoods (Hanna-Attisha et al., 2016). This geographic stratification mirrored those increasingly observed with COVID-19, which has aggressively struck densely populated racial minority communities and ethnic enclaves (Sun et al., 2020; Zhang & Schwartz, 2020).

Likely attributable in part to its depressed socioeconomic milieu and meso-level stressors including consistently high crime rates (Kruger et al., 2016), data from the 500 Cities project from the Centers for Disease Control and Prevention found that 18.2% of Flint residents described their mental health as "not good," compared to 11.9% of the overall United States population (Centers for Disease Control and Prevention, 2016). In view of the proposed expanded definition of intersectional trauma, the water crisis represents a likely accelerant to existing mental illness in the city (Cuthbertson et al., 2016; Kruger et al., 2017; Sneed et al., 2020), as COVID-19 is poised to exacerbate patterns of mental illness among those with preexisting mental health disorders (Purtle, 2020).

In the months after the water source switch, Flint residents took to Facebook and other digital channels to document concerns over discolored, odorous water flowing from their faucets, and began attending local town hall meetings to show public officials their brown jugs of water, their skin rashes and their balding scalps (Krings et al., 2019)-all suspected consequences of the abrasive water they were not only drinking, but cooking with, washing their hands with, and showering and bathing in (Craft-Blacksheare, 2017; Masten et al., 2016). In turn, Flint residents were intermittently ignored and belittled (Levengood, 2017; Morckel & Terzano, 2019)-as processes of psychological gaslighting (Davis & Ernst, 2019)-by state and local media and politicians and indeed their own health care providers (Hanna-Attisha, 2019). Contentious beliefs about the water being effectively "poisoned" and the water source switch being a plot for racial or class genocide in Flint have further contributed to residents' unease and civic distrust (Morckel & Terzano, 2019; Muhammad et al., 2018). Likewise, the inconsistent, often contradictory, messages regarding individual-level risk factors, and the approaches and efficacy for mask-wearing and social distancing, has presented an obstacle in terms of rallying support to mitigate COVID-19's spread (Klest et al., 2020). Collectively, such dynamics are likely to foment challenges to COVID-19 vaccine adoption, particularly among Blacks and Latinos (Jaklevic, 2020; Kreps et al., 2020).

#### Hurricane Katrina, and Hurricane Maria

Depression, anxiety, and trauma, have been observed to sharply increase in the aftermath of extreme weather or natural events, like hurricanes, tsunamis, and tornadoes (Rataj et al., 2016; Shukla, 2013), a lineage which COVID-19, as a spatially fluid, mobile phenomenon, could be said to squarely fit within. The effects of such events often disproportionately impact historically marginalized racial groups, as part of a fissioning of race, segregation, and environmental justice situating these populations in positions of heightened geographic vulnerability and network fragmentation (Shimmin et al., 2017). Such place-based traumas amplify political and institutional misgivings, stirring disillusionment about recurrence and the prospect of "future-proofing" (Conner et al., 2014; LeBouthillier et al., 2015).

Hurricane Katrina, a seismic Category 5 hurricane that made landfall in the United States in late August 2005, battered the Gulf Coast up through the early weeks of September 2005. The hurricane caused unprecedented levels of property and infrastructure destruction, paralyzing much of Louisiana (Brunkard et al., 2008; Bullard & Wright, 2009). The brunt of the hurricane's destruction, however, fell on the topographically unique city of New Orleans, which saw tremendous inland flooding and mass resident displacement after levees were breached in the city's low-lying, predominantly Black areas (Bullard & Wright, 2009). Through the end of the winter 2016, an estimated 1,600 deaths had mounted from the immediate and more latent impacts of the hurricane, with causes ranging from drowning and cardiac arrest to heat exhaustion (Brunkard et al., 2008; Stephens et al., 2007). As during COVID-19, the disaster response during Hurricane Katrina—largely led by the Federal Emergency Management Agency (FEMA)-was belatedly scaffolded at two levels: (a) primary prevention focused on attenuating the would-be disaster before it took hold and (b) secondary prevention involved in responding to the excess damage wrought from the inability to contain the initial impacts. The mental health consequences of these lapses were stark.

In one study of predominantly Black, low-income mothers, researchers found that the prevalence of probable serious mental illness doubled post-Katrina, and roughly 48% of participants exhibited probable posttraumatic stress disorder (Rhodes et al., 2010). The authors further determined that level of property damage was predictive of PTSD and the number of hurricane-related stressors was associated with having more diagnosed medical conditions (Rhodes et al., 2010). Further, in a longitudinal analysis of a sample predominantly composed of Black youth, a population often overlooked in the study of the mental health impacts of public health disaster, PTSD rates were elevated and found to persist post-Katrina, especially among girls and those whose homes remained damaged from the hurricane (Weems et al., 2010).

Mirroring perspectives in Flint, attitudes on the maligned response to Hurricane Katrina were frequently racialized, focused on beliefs that New Orleans' levees had been blown up by the government and the hurricane waters diverted to protect White property holdings and/or deliberately destroy the city's Black neighborhoods (Adams et al., 2006; Davis et al., 2018). Rather than reflecting paranoia, however, researchers have urged caution in dismissing such perspectives as these as conspiratorial and rather as manifestations of intergenerational trauma fueled by the recognition of real, historical acts of sociomedical oppression and structural violence, such as the Tuskegee syphilis trials (Davis et al., 2018; Heller, 2015). Views on COVID-19 being a tool of sociopolitcal suppression, and the forthcoming vaccines being purposefully harmful or laden with side effects, have similarly flavored public opinion on the pandemic (Earnshaw et al., 2020; Jaiswal et al., 2020).

The sociostructural blueprint of Hurricane Katrina was similarly mapped roughly a decade later in Hurricane Maria, a Category 4 hurricane that struck during mid-September 2017 in Puerto Rico. In sharp contrast to even America's most disenfranchised mainland cities, roughly 44% of Puerto Rico's residents live in poverty and around 75% have a high school degree or less (United States Census Bureau, 2019). Having been struck by Hurricane Irma just 2 weeks earlier, Puerto Rico, a U.S. territory populated with roughly 3.2 million individuals who, although American citizens, cannot vote and maintain no Congressional representation (Joseph et al., 2020), was especially ill-prepared for Maria. Due to infrastructure cleavages, choppy communication, and tepid relief efforts coordinated by FEMA, Hurricane Maria led to the deaths of roughly 3,000 Puerto Rico residents, also creating prolonged periods of power outages (up to 8 months for many parts of the territory), and food and water insecurity, while temporarily sidelining much of territory's health care system (Alcorn, 2017; Joseph et al., 2020; Kwasinski et al., 2019).

Multiple reports published in the years after and a half after Hurricane Maria pointed to heightened levels of mental illness and distress among adults and children in Puerto Rico and indeed among Puerto Ricans living in the mainland United States (Carolina Scaramutti et al., 2019; Macias et al., 2020; Orengo-Aguayo et al., 2019; Rodríguez-Díaz, 2018). Viewed as a colonial artifact, the excess vulnerability experienced by Puerto Ricans' during Hurricane Maria merely bespoke their ongoing sociopolitical marginalization and "second-class citizenship" (Joseph et al., 2020), both products of powerlessness forged through America's imperialism in Puerto Rico a century earlier. However, this vulnerability was also stirred as a consequence of more situational policy-making, namely as evoked through the *Puerto Rico Oversight, Management, and Economic Stability Act* (PROMESA).

Similar to Flint during its crisis, Puerto Rico was also under the thumb of an unelected, deliberative body that was charged with helping the island navigate and tame its soaring debt (Rodríguez-Díaz, 2018). PROMESA, codified in law by President Barack Obama, undervalued and undercut health care system and infrastructure maintenance plans and disaster preparedness capacity in Puerto Rico and thereby clipped broader recovery efforts in the territory in Hurricane Irma and Maria's wake (de Onís, 2018). Hence, policies like PROMESA that destabilize the democratic process, recalling the historical trauma of political exclusion which racial/ethnic minorities in the United States have experienced, have the dual effect of weakening community capacity to proactively deal with public health disasters-similar to COVID-19, which has ravaged Puerto Rico's population health and its alreadyfledging economy (García et al., 2020)-while also instilling feelings of insecurity, anger, and despair in the populace (Garriga-López, 2020; Moulton & Machado, 2019).

#### Civic Distrust as a Fundamental Cause of Mental Health Disparities

Seminal theory posits that there are "fundamental causes" associated with the wide and persistent gap in physical and mental health outcomes observed across race and class (Link & Phelan, 1995). As Phelan and colleagues explain, "An important reason that [socioeconomic status] is related to multiple disease outcomes through multiple pathways that change over time is that individuals and groups deploy resources to avoid risks and adopt protective strategies." (Phelan et al., 2010, p. S29). These same forces predispose certain groups to mental illness and trauma. Most salient to this dynamic—in considering how Americans with high socioeconomic status have substantially lower odds of adverse COVID-19-related impacts (both in terms of infection or relative risk of negative socioeconomic impact; Wanberg et al., 2020)—is the authors' prescient observation that, "If the problem is cholera, for example, a person with greater resources is better able to avoid areas where the disease is rampant, and highly resourced communities are better able to prohibit entry of infected persons" (Phelan et al., 2010, p. S29). In short, resources mediate risks.

Table 1 provides a contextual overview of key selected touchpoints of each public health event highlighted in this review. Similar to the Flint Water Crisis and Hurricane Katrina and Maria, COVID-19 is as much an indictment of America's fragmented public health and health care systems as it is of the country's long-abraded and unequal political system, one which frequently privileges White race and economic wellbeing over physical—and especially mental—well-being. In focusing on the precarity associated with being a racial/ethnic minority during a public health crisis like COVID-19, culturally sensitive communication is essential in facilitating mitigation (i.e., by limiting the severity of the crisis' disproportionate effects), and buffering negative experiences, such as mental illness and trauma, which amass *postcrisis*.

Along these lines, health literacy predominates among racial/ ethnic minorities as a barrier to seeking mental health care (Coles & Coleman, 2010). In view of this, improving the trustworthiness, good faith, and clarity of messaging around COVID-19 risks and its mental health sequelae is essential. Given the vast amount of disinformation and the simultaneous suppression of accurate information on COVID-19 (Jaiswal et al., 2020), it is critical that individuals, particularly those in communities of color where fatalistic views may be high (Bell & Hetterly, 2014) and social support low (Song et al., 2011), are provided precise and up-todate information on the threat posed by COVID-19. To this end, it is important these individuals be given prompting and encouragement from valued community stakeholders-faith-based organizations, nonprofit and "mom-and-pop shop" business leaders, and so on-to seek mental health care, or social network support (e.g., to preempt isolation), where appropriate.

Continuing government and health care institutions play a key role in negotiating individuals' mental well-being by the policies they create and how they articulate the purpose of these policies and subsequently enforce them (Verhaeghe & Bracke, 2011). As the public health disasters cited here illustrate, ambiguity and inconsistency in these iterative acts contribute to increased distress, anxiety, and sense of alienation. Rumination over the ongoing uncertainty that COVID-19 poses as well as *toxic certainty*—that is, the deeply embedded, compulsive belief that something bad is likely to happen to oneself (e.g., getting COVID-19, losing one's job or home due to COVID-19, etc.)—is a hallmark of trauma (van der Kolk, 1994). A lack of clarity on risks can reproduce feelings of both collective (intergenerational) and micro-level betrayal and exclusion from vital information and health-promoting resources.

In communities of color and lower-income spaces where government and health care system distrust is functionally endemic, COVID-19's proposed acts of redress must correspond to demonstrated population health *and* community-level needs and be *tangibly* demonstrated as efficacious to be adopted in meaningful numbers. If not, these fixes, are likely to be met with deep misgivings and result in further erosion of the psychosocial contract, and, in turn, mental health disparities.

#### **Decoupling Traumatic Paradigms From Public Policy**

COVID-19, similar to the Flint Water Crisis and Hurricane Katrina and Maria before it, will soon embed itself in the annals of epidemiologic history as a landmark health disparities event, and indeed one with wholly preventable dimensions. Tending to this requires a reckoning with the fundamental causes of mental health and a concomitant focus on reorganizing systems and structures which have helped generate and sustain high levels of racial/ethnic and social inequity in America (Link & Phelan, 1995). Consideration of where this effort can begin, focusing on nuanced, culturally sensitive public health and public policy responses that can replenish the psychosocial contract, may be instructive.

As epistemological extensions of racial capitalism (Pirtle, 2020), COVID-19 has done nothing if not demonstrate that the distinction between "essential" and "non-essential" people is highly situational (Hawkins, 2020). Black, Latino, and lowerincome people disproportionately fill positions in the service industry (United States Bureau of Labor Statistics, 2020) and represent the face of the burgeoning "gig economy," individuals who, during COVID-19, have been called on via apps to chauffeur patrons to and fro and ferry takeout food, groceries and housewares directly to customers' doors. Service industry workers' inequitable exposure to health risks as part of a low-wage job often lacking health insurance benefits or hazard pay. Paradoxically, such "essential" workers frequently serve "non-essential" people who have disproportionately higher salaries and levels of social and political capital. contributing to dissociatve trauma as part of a broader "othering" process (Link & Phelan, 2001). Further workplace protections must be extended to frontline populations and gig economy workers to reduce their risk of adverse exposures. Moreover, deeper, more action-oriented policy dialogue must be had on mandatory healthcare benefits, and what constitutes a livable wage and how this is associated with risk-taking and premature morbidity and mortality.

Expanding workplace protections to low-wage, at-risk populations also necessitate the protection of worker's families, which will contribute to meso and family-level resilience against mental distress and trauma. During Hurricane Katrina and the water crisis in Flint, churches and the local public schooling system provided clean drinking water and meals, and acted as information centers and health referral hubs (Craft-Blacksheare, 2019; Rose & O'Malley, 2020). During COVID-19, these community institutions can be critical partners in local capacity-building. As an example, with the limiting of in-person learning in many K-12 schools, many racial/ethnic minority families, who rely on the public schooling more than Whites, will now confront the added stressors of providing adequate childcare with limited resources, including computing equipment and Internet access needed for online learning (National Academies of Sciences and Medicine, 2020). Parents/guardians may also be forced to work in-person and thus need to send their children to in-person classes, or need to concurrently undertake work-from-home duties and childcare, creating a potentially traumatic, Faustian bargain. Moreover, in the intermediate and long-term, children in racial/ethnic minority communities may lose the foundational education and socialization that is crucial to their intellectual, emotional, and psychological development (Singh et al., 2020). Predominantly White school systems are more likely to mediate these effects by leveraging

Table 1A Breakdown of Key Dynamic.	s and Consequences of COVIL	-19 and Other Recent Public H	tealth Disasters in the United States	
Outcomes	COVID-19, United States	Water Crisis, Flint, MI	Hurricane Katrina, New Orleans, LA	Hurricane Maria, Puerto Rico
Period of primary impacts Approximate time to widespread mitigation or recovery efforts following event initiation	2020-current 1 month	2014–2016 14 months	2005-2006 1 week	2017–2018 3 weeks
Number of people potentially exposed (per U.S. census estimates during period of primary impact; United States Census Bureau 2020) <sup>a</sup>	Approx. 328,239,523 per the Census (United States Census Bureau, 2020)	Approx. 98,565	Approx. 454,845	Approx. 3,325,286
Percent of population Black and or Latino/Hispanic at time of event (United States Census Bureau. 2020)	13.4% Black (alone), 18.5% Latino/Hispanic	57.0% Black	66.0% Black	98.9% Latino/Hispanic
Key physical health sequalae	Acute respiratory syndrome, myocarditis, renal failure	Lead poisoning, Legionnaires' disease, trihalomethanes exposure, female reproductive issues. skin rashes	Drowning, cardiovascular disease (including cardiac arrest), food and water insecurity, heat exhaustion	Drowning; cardiovascular disease (including cardiac arrest), food and water insecurity
Key mental health dynamics and consequences	Social isolation, family separation, network fragmentation, systemic betrayal; PTSD, depression, anxiety	Systemic betrayal; PTSD, depression, anxiety	Systemic betrayal, family separation, network fragmentation; PTSD, depression, anxiety	Systemic betrayal, family separation, network fragmentation; PTSD, depression, anxiety
Key drivers of mental health disparities	Physical health sequelae, Distrust in government and health-care system, Economic and employment impacts	Physical health sequelae, Distrust in government and healthcare system, City under control of a state-appointed "emergency manager," diminished tap water quality and access	Physical health sequelae, property destruction, distrust in government, property damage, displacement, economic and employment impacts	Physical health sequelae, property destruction, distrust in government, property damage, displacement, power outages, territory under the control of an unelected governing body (PROMESA), Economic and employment impacts, diminished tap water quality and access
<i>Note</i> . PTSD = posttraumatic stre	ess disorder; PROMESA = $Puerto$	Rico Oversight, Management, and	Economic Stability Act.	

JUDINITY ACL UVERSIGNI, MANUGEMENI, NICU Puerto bos LUCIA virtual learning platforms and at-home extracurricular programming services (National Academies of Sciences and Medicine, 2020), thereby maintaining and in many cases likely exacerbating disparities in developmental outcomes, including mental wellness and socioemotional growth, between these populations. Therefore, special attention must be directed toward filling the void of the school as a stabilizing and informative resource in times of public health crisis.

Also, as morbidity and morrtality rates from COVID-19 rise, commensurate attention must be paid to the impact of COVID-19 on mental health in specific regard to how it is likely to diminish and fray help-seeking and health care system engagement. Given that social and environmental stressors are already high in many communities of color (Matthews & Yang, 2010), COVID-19, as it has been argued here, will likely compound not just existing mental health disparities but disparities in *mental* health care engagement. Indeed, irrespective of ostensible culpability, COVID-19's impacts will congeal and ossify in the psyches of many of those who are directly impacted and feel they or their communities were targeted or neglected by their government and health care providers. These communities will be justifiably reluctant to (re)enlist these institutions in their recovery.

In closing, COVID-19 is positioned to recontour the world order and the everyday functioning of contemporary society, shifting economic prerogatives in the United States and abroad and further winnowing the psychosocial contract and social safety net. While it is not possible to reverse the damage that COVID-19 has caused in terms of morbidity and mortality, mental health providers can forge a path moving forward in better recognizing, affirming, and responding to specific mental health needs of socially and medically vulnerable groups, both now and prior to public health calamities. Such efforts, in addition to curating clear, consistent, and actionable information, will better insulate historically disenfranchised racial/ethnic minority populations from the primary and secondary impacts of the health crises that can be expected to continue to surface, and potentially grow in intensity and frequency due to forces such as climate change and resource depletion, as we move through this new decade.

#### References

- Adams, G., O'Brien, L. T., & Nelson, J. C. (2006). Perceptions of racism in Hurricane Katrina: A liberation psychology analysis. *Analyses of Social Issues and Public Policy (ASAP)*, 6(1), 215–235. https://doi.org/ 10.1111/j.1530-2415.2006.00112.x
- Adolph, C., Amano, K., Bang-Jensen, B., Fullman, N., Magistro, B., Reinke, G., & Wilkerson, J. (2020). Governor partisanship explains the adoption of statewide mandates to wear face coverings. *MedRxiv*. Advance online publication. https://doi.org/10.1101/2020.08.31.20185371
- Alcorn, T. (2017). Puerto Rico's health system after Hurricane Maria. Lancet, 390(10103), e24. https://doi.org/10.1016/S0140-6736(17) 32591-6
- Anastasia, E. A., & Bridges, A. J. (2015). Understanding service utilization disparities and depression in Latinos: The role of fatalismo. *Journal of Immigrant and Minority Health*, 17(6), 1758–1764. https://doi.org/10 .1007/s10903-015-0196-y
- Ansell, C., Sørensen, E., & Torfing, J. (2020). The COVID-19 pandemic as a game changer for public administration and leadership? The need for robust governance responses to turbulent problems. *Public Management Review*. Advance online publication. https://doi.org/10.1080/14719037 .2020.1820272

- Bell, A. V., & Hetterly, E. (2014). "There's a higher power, but He gave us a free will": Socioeconomic status and the intersection of agency and fatalism in infertility. *Social Science and Medicine*, 114, 66–72. https:// doi.org/10.1016/j.socscimed.2014.05.036
- Binney, Z. O., Nelson, K. N., & Chamberlain, A. T. (2019). Excess pneumonia mortality during a legionnaires' disease outbreak in flint, MI. *MedRxiv*. Advance online publication. https://doi.org/10.1101/19005942
- Brunkard, J., Namulanda, G., & Ratard, R. (2008). Hurricane Katrina deaths, Louisiana, 2005. *Disaster Medicine and Public Health Preparedness*, 2(4), 215–223. https://doi.org/10.1097/DMP.0b013e31818 aaf55
- Bullard, R. D., & Wright, B. (2009). Race, place and the environment in post-Katrina New Orleans. In R. D. Bullard (Ed.), *Race, place and environmental justice after hurricane Katrina: Struggles to reclaim, rebuild and revitalize New Orleans and the gulf coast* (pp. 19–48). Routledge.
- Butler, L. J., Scammell, M. K., & Benson, E. B. (2016). The Flint, MI, water crisis: A case study in regulatory failure and environmental injustice. *Environmental Justice*, 9(4), 93–97. https://doi.org/10.1089/ env.2016.0014
- Carolina Scaramutti, M. P. A., Salas-Wright, C. P., Vos, S. R., & Schwartz, S. J. (2019). The mental health impact of hurricane Maria on Puerto Ricans in Puerto Rico and Florida. *Disaster Medicine and Public Health Preparedness*, 13(1), 24–27. https://doi.org/10.1017/dmp.2018.151
- Centers for Disease Control. (2020). United States COVID-19 cases and deaths by state. https://covid.cdc.gov/covid-data-tracker/#cases\_casesper 100klast7days
- Centers for Disease Control and Prevention. (2016). 500 Cities project. https://www.cdc.gov/500cities
- Centers for Disease Control and Prevention. (2020). COVID-19 hospitalization and death by race/ethnicity. https://www.cdc.gov/coronavirus/ 2019-ncov/covid-data/investigations-discovery/hospitalization-deathby-race-ethnicity.html
- Chowkwanyun, M., & Reed, A. L., Jr. (2020). Racial health disparities and Covid-19—Caution and context. *New England Journal of Medicine*, 383(3), 201–203. https://doi.org/10.1056/NEJMp2012910
- Coles, M. E., & Coleman, S. L. (2010). Barriers to treatment seeking for anxiety disorders: Initial data on the role of mental health literacy. *Depression and Anxiety*, 27(1), 63–71. https://doi.org/10.1002/da.20620
- Conner, K. R., Bossarte, R. M., He, H., Arora, J., Lu, N., Tu, X. M., & Katz, I. R. (2014). Posttraumatic stress disorder and suicide in 5.9 million individuals receiving care in the veterans health administration health system. *Journal of Affective Disorders*, 166, 1–5. https://doi.org/ 10.1016/j.jad.2014.04.067
- Cook, B. L., Trinh, N.-H., Li, Z., Hou, S. S.-Y., & Progovac, A. M. (2017). Trends in racial-ethnic disparities in access to mental health care, 2004– 2012. *Psychiatric Services*, 68(1), 9–16. https://doi.org/10.1176/appi.ps .201500453
- Craft-Blacksheare, M. (2019). Flint, MI: Three years after the water crisis, where are we now? *Clinical Obstetrics, Gynecology and Reproductive Medicine*, 5, 1–5. https://doi.org/10.15761/COGRM.1000245
- Craft-Blacksheare, M. G. (2017). Lessons learned from the crisis in Flint, Michigan regarding the effects of contaminated water on maternal and child health. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 46(2), 258–266.
- Cuthbertson, C. A., Newkirk, C., Ilardo, J., Loveridge, S., & Skidmore, M. (2016). Angry, scared, and unsure: Mental health consequences of contaminated water in Flint, MI. *Journal of Urban Health*, 93(6), 899– 908. https://doi.org/10.1007/s11524-016-0089-y
- Davis, A. M., & Ernst, R. (2019). Racial gaslighting. Politics, Groups and Identities, 7(4), 761–774.
- Davis, J., Wetherell, G., & Henry, P. J. (2018). Social devaluation of African Americans and race-related conspiracy theories. *European Jour*nal of Social Psychology, 48(7), 999–1010.

- de Onís, C. M. (2018). Energy colonialism powers the ongoing unnatural disaster in Puerto Rico. *Frontiers in Communication*, 3, 2. https://doi .org/10.3389/fcomm.2018.00002
- Diala, C. C., Muntaner, C., Walrath, C., Nickerson, K., LaVeist, T., & Leaf, P. (2001). Racial/ethnic differences in attitudes toward seeking professional mental health services. *American Journal of Public Health*, 91(5), 805–807. https://doi.org/10.2105/ajph.91.5.805
- Di-Capua, Y. (2015). Trauma and other historians. *Historical Reflections Reflexions Historiques*, 41(3), 1–13. https://doi.org/10.3167/hrrh.2015 .410301
- Earnshaw, V. A., Eaton, L. A., Kalichman, S. C., Brousseau, N. M., Hill, E. C., & Fox, A. B. (2020). COVID-19 conspiracy beliefs, health behaviors, and policy support. *Translational Behavioral Medicine*, 10(4), 850–856. https://doi.org/10.1093/tbm/ibaa090
- García, C., Rivera, F. I., Garcia, M. A., Burgos, G., & Aranda, M. P. (2020). Contextualizing the COVID-19 era in Puerto Rico: Compounding disasters and parallel pandemics. *The Journals of Gerontology: Series B.* Advance online publication. https://doi.org/10.1093/geronb/ gbaa186
- Garrett, M. D., Baldridge, D., Benson, W., Crowder, J., & Aldrich, N. (2015). Mental health disorders among an invisible minority: Depression and dementia among American Indian and Alaska Native elders. *The Gerontologist*, 55(2), 227–236. https://doi.org/10.1093/geront/gnu181
- Garriga-López, A. M. (2020). Compounded disasters: Puerto Rico confronts COVID-19 under U.S. colonialism. *Social Anthropology*, 28(2), 269–270. https://doi.org/10.1111/1469-8676.12821
- Gill, D. A. (2007). Secondary trauma or secondary disaster? Insights from Hurricane Katrina. *Sociological Spectrum*, 27(6), 613–632. https://doi .org/10.1080/02732170701574941
- Gómez, J. M. (2015). Microaggressions and the enduring mental health disparity: Black Americans at risk for institutional betrayal. *The Journal* of Black Psychology, 41(2), 121–143. https://doi.org/10.1177/ 0095798413514608
- Hanna-Attisha, M. (2019). What the eyes don't see: A story of crisis, resistance, and hope in an American city. One World.
- Hanna-Attisha, M., LaChance, J., Sadler, R. C., & Champney Schnepp, A. (2016). Elevated blood lead levels in children associated with the Flint drinking water crisis: A spatial analysis of risk and public health response. *American Journal of Public Health*, 106(2), 283–290. https:// doi.org/10.2105/AJPH.2015.303003
- Hawkins, D. (2020). Differential occupational risk for COVID-19 and other infection exposure according to race and ethnicity. *American Journal of Industrial Medicine*, 63(9), 817–820. https://doi.org/10.1002/ ajim.23145
- Heller, J. (2015). Rumors and realities: Making sense of HIV/AIDS conspiracy narratives and contemporary legends. *American Journal of Public Health*, 105(1), e43–e50. https://doi.org/10.2105/AJPH.2014.302284
- Jaiswal, J., LoSchiavo, C., & Perlman, D. C. (2020). Disinformation, Misinformation and Inequality-Driven Mistrust in the Time of COVID-19: Lessons Unlearned from AIDS Denialism. *AIDS and Behavior*, 24, 277–2780. https://doi.org/10.1007/s10461-020-02925-y
- Jaklevic, M. C. (2020). Researchers strive to recruit hard-hit minorities into COVID-19 vaccine trials. *Journal of the American Medical Association*, *324*(9), 826–828. https://doi.org/10.1001/jama.2020.11244
- Joseph, S. R., Voyles, C., Williams, K. D., Smith, E., & Chilton, M. (2020). Colonial neglect and the right to health in Puerto Rico after hurricane Maria. *American Journal of Public Health*, 110(10), 1512–1518. https:// doi.org/10.2105/AJPH.2020.305814
- Khan, M., Ilcisin, M., & Saxton, K. (2017). Multifactorial discrimination as a fundamental cause of mental health inequities. *International Journal for Equity in Health*, 16(1), 43. https://doi.org/10.1186/s12939-017-0532-z
- Klest, B., Smith, C. P., May, C., McCall-Hosenfeld, J., & Tamaian, A. (2020). COVID-19 has united patients and providers against institutional

betrayal in health care: A battle to be heard, believed, and protected. *Psychological Trauma: Theory, Research, Practice, and Policy, 12*(S1), S159–S161. https://doi.org/10.1037/tra0000855

- Kreps, S., Prasad, S., Brownstein, J. S., Hswen, Y., Garibaldi, B. T., Zhang, B., & Kriner, D. L. (2020). Factors associated with U.S. adults' likelihood of accepting COVID-19 vaccination. *Journal of the American Medical Association Network Open*, 3(10), e2025594. https://doi.org/10 .1001/jamanetworkopen.2020.25594
- Krings, A., Kornberg, D., & Lane, E. (2019). Organizing under austerity: How residents' concerns became the Flint water crisis. *Critical Sociology*, 45(4–5), 583–597. https://doi.org/10.1177/0896920518757053
- Kruger, D. J., Crichlow, V. J., McGarrell, E., Hollis, M., Jefferson, B. M., Reischl, T. M., & Zimmerman, M. A. (2016). Perceptions of procedural justice mediate the relationship between local violent crime density and crime reporting intentions. *Journal of Community Psychology*, 44(6), 807–812. https://doi.org/10.1002/jcop.21797
- Kruger, D. J., Cupal, S., Franzen, S. P., Kodjebacheva, G., Bailey, E. S., Key, K. D., & Kaufman, M. M. (2017). Toxic trauma: Household water quality experiences predict posttraumatic stress disorder symptoms during the Flint, MI, water crisis. *Journal of Community Psychology*, 45(7), 957–962. https://doi.org/10.1002/jcop.21898
- Kwasinski, A., Andrade, F., Castro-Sitiriche, M. J., & O'Neill-Carrillo, E. (2019). Hurricane maria effects on Puerto Rico electric power infrastructure. *IEEE Power and Energy Technology Systems Journal*, 6(1), 85–94. https://doi.org/10.1109/JPETS.2019.2900293
- LeBouthillier, D. M., McMillan, K. A., Thibodeau, M. A., & Asmundson, G. J. G. (2015). Types and number of traumas associated with suicidal ideation and suicide attempts in PTSD: Findings from a U.S. nationally representative sample. *Journal of Traumatic Stress*, 28(3), 183–190. https://doi.org/10.1002/jts.22010
- Levengood, V. (2017). Michigan Civil Rights Commission Report: Race and racism played roles in causing the Flint Water Crisis, and both blacks and whites are victims. https://www.michigan.gov/mdcr/ 0,4613,7-138-405318-a,00.html
- Link, B. G., & Phelan, J. C. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior*, 35, 80–94. https://doi.org/10.2307/2626958
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. Annual Review of Sociology, 27(1), 363–385. https://doi.org/10.1146/annurev .soc.27.1.363
- Macias, R. L., LeBrón, A., Taylor, K., & Silva, M. (2020). Después de la Tormenta: Collective trauma following Hurricane Maria in a northeastern Puerto Rican community in the United States. *Journal of Community Psychology*, 49(1), 118–132. https://doi.org/10.1002/jcop.22442
- Masten, S. J., Davies, S. H., & Mcelmurry, S. P. (2016). Flint water crisis: What happened and why? *Journal of American Water Works Association*, 108(12), 22–34. https://doi.org/10.5942/jawwa.2016.108.0195
- Matthews, S. A., & Yang, T.-C. (2010). Exploring the role of the built and social neighborhood environment in moderating stress and health. *Annals of Behavioral Medicine*, 39(2), 170–183. https://doi.org/10.1007/ s12160-010-9175-7
- Maura, J., & Weisman de Mamani, A. (2017). Mental health disparities, treatment engagement, and attrition among racial/ethnic minorities with severe mental illness: A review. *Journal of Clinical Psychology in Medical Settings*, 24(2–3), 187–210. https://doi.org/10.1007/s10880-017-9510-2
- Morckel, V., & Terzano, K. (2019). Legacy city residents' lack of trust in their governments: An examination of Flint, MI residents' trust at the height of the water crisis. *Journal of Urban Affairs*, 41(5), 585–601. https://doi.org/10.1080/07352166.2018.1499415
- Moulton, A. A., & Machado, M. R. (2019). Bouncing forward after Irma and Maria: Acknowledging colonialism, problematizing resilience and thinking climate justice. *Journal of Extreme Events*, 6(1), Article 1940003. https://doi.org/10.1142/S2345737619400037

- Muhammad, M., De Loney, E. H., Brooks, C. L., Assari, S., Robinson, D., & Caldwell, C. H. (2018). "I think that's all a lie ... I think It's genocide": Applying a critical race praxis to youth perceptions of flint water contamination. *Ethnicity and Disease*, 28(Suppl 1), 241–246. https://doi.org/10.18865/ed.28.S1.241
- National Academies of Sciences and Medicine. (2020). *Reopening K-12* schools during the COVID-19 pandemic: Prioritizing health, equity, and communities. National Academies Press.
- Needleman, H. (2004). Lead poisoning. *Annual Review of Medicine*, 55, 209–222. https://doi.org/10.1146/annurev.med.55.091902.103653
- Orengo-Aguayo, R., Stewart, R. W., de Arellano, M. A., Suárez-Kindy, J. L., & Young, J. (2019). Disaster exposure and mental health among Puerto Rican youths after Hurricane Maria. *Journal of the American Medical Association Network Open*, 2(4), e192619. https://doi.org/10 .1001/jamanetworkopen.2019.2619
- Parent, M. C., Hammer, J. H., Bradstreet, T. C., Schwartz, E. N., & Jobe, T. (2018). Men's mental health help-seeking behaviors: An intersectional analysis. *American Journal of Men's Health*, 12(1), 64–73. https://doi.org/10.1177/1557988315625776
- Peplow, M. (2018). The Flint water crisis: How citizen scientists exposed poisonous politics. *Nature*, 559(7713), 180–181. https://doi.org/10 .1038/d41586-018-05651-7
- Pfefferbaum, B., & North, C. S. (2020). Mental health and the COVID-19 pandemic. *The New England Journal of Medicine*. Advance online publication. https://doi.org/10.1056/NEJMp2008017
- Phelan, J. C., Link, B. G., & Tehranifar, P. (2010). Social conditions as fundamental causes of health inequalities: Theory, evidence, and policy implications. *Journal of Health and Social Behavior*, 51(1\_suppl), S28– S40. https://doi.org/10.1177/0022146510383498
- Pirtle, W. N. L. (2020). Racial capitalism: A fundamental cause of novel coronavirus (COVID-19) pandemic inequities in the United States Health Education and Behavior, 47(4), 504–508. https://doi.org/10 .1177/1090198120922942
- Purtle, J. (2020). COVID-19 and mental health equity in the United States. Social Psychiatry and Psychiatric Epidemiology, 55(8), 969–971. https://doi.org/10.1007/s00127-020-01896-8
- Rajan, D., Koch, K., Rohrer, K., Bajnoczki, C., Socha, A., Voss, M., Nicod, M., Ridde, V., & Koonin, J. (2020). Governance of the Covid-19 response: A call for more inclusive and transparent decision-making. *British Medical Journal Global Health*, 5(5), e002655. https://doi.org/ 10.1136/bmjgh-2020-002655
- Rataj, E., Kunzweiler, K., & Garthus-Niegel, S. (2016). Extreme weather events in developing countries and related injuries and mental health disorders-a systematic review. *BMC Public Health*, 16(1), 1020. https:// doi.org/10.1186/s12889-016-3692-7
- Rhodes, J., Chan, C., Paxson, C., Rouse, C. E., Waters, M., & Fussell, E. (2010). The impact of Hurricane Katrina on the mental and physical health of low-income parents in New Orleans. *American Journal of Orthopsychiatry*, 80(2), 237–247. https://doi.org/10.1111/j.1939-0025 .2010.01027.x
- Rodríguez-Díaz, C. E. (2018). Maria in Puerto Rico: Natural disaster in a colonial archipelago. American Public Health Association.
- Rose, D., & O'Malley, K. (2020). Food Access 3.0: Insights from Post-Katrina New Orleans on an evolving approach to food inequities. American Public Health Association.
- Saltzman, L. Y., Hansel, T. C., & Bordnick, P. S. (2020). Loneliness, isolation, and social support factors in post-COVID-19 mental health. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(S1), S55–S57. https://doi.org/10.1037/tra0000703
- Shim, J. K. (2010). Cultural health capital: A theoretical approach to understanding health care interactions and the dynamics of unequal treatment. *Journal of Health and Social Behavior*, 51(1), 1–15. https:// doi.org/10.1177/0022146509361185

- Shim, R. S., Compton, M. T., Rust, G., Druss, B. G., & Kaslow, N. J. (2009). Race-ethnicity as a predictor of attitudes toward mental health treatment seeking. *Psychiatric Services*, 60(10), 1336–1341. https://doi .org/10.1176/ps.2009.60.10.1336
- Shimmin, C., Wittmeier, K. D. M., Lavoie, J. G., Wicklund, E. D., & Sibley, K. M. (2017). Moving towards a more inclusive patient and public involvement in health research paradigm: The incorporation of a trauma-informed intersectional analysis. *BMC Health Services Research*, 17(1), 539. https://doi.org/10.1186/s12913-017-2463-1
- Shukla, J. (2013). Extreme weather events and mental health: Tackling the psychosocial challenge. *International Scholarly Research Notices*. Advance online publication. https://doi.org/10.1155/2013/127365
- Singh, S., Roy, M. D., Sinha, C. P. T. M. K., Parveen, C. P. T. M. S., Sharma, C. P. T. G., & Joshi, C. P. T. G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry Research*. Advance online publication. https://doi.org/10.1016/j.psychres.2020.113429
- Sneed, R. S., Dotson, K., Brewer, A., Pugh, P., & Johnson-Lawrence, V. (2020). Behavioral health concerns during the flint water crisis, 2016– 2018. *Community Mental Health Journal*, 56(5), 793–803. https://doi .org/10.1007/s10597-019-00520-7
- Song, L., Son, J., & Lin, N. (2011). Social support. In J. Scott & P. J. Carrington (Eds.), *The SAGE handbook of social network analysis* (Vol. 9, pp. 116–128). Sage.
- Stephens, K. U., Grew, D., Chin, K., Kadetz, P., Greenough, P. G., Burkle, F. M., Robinson, S. L., & Franklin, E. R. (2007). Excess mortality in the aftermath of Hurricane Katrina: A preliminary report. *Disaster Medicine* and Public Health Preparedness, 1(1), 15–20. https://doi.org/10.1097/ DMP.0b013e3180691856
- Sun, F., Matthews, S. A., Yang, T.-C., & Hu, M.-H. (2020). A spatial analysis of the COVID-19 period prevalence in U.S. counties through June 28, 2020: Where geography matters? *Annals of Epidemiology*, 52, 54–59.e1. https://doi.org/10.1016/j.annepidem.2020.07.014
- United States Census Bureau. (2019). *QuickFacts: Puerto Rico.* https://www.census.gov/quickfacts/PR
- United States Census Bureau. (2020). QuickFacts: United States. https:// www.census.gov/quickfacts/fact/table/U.S./PST045219
- United States Bureau of Labor Statistics. (2020). Labor force statistics from the current population survey. https://www.bls.gov/cps/
- van der Kolk, B. A. (1994). The body keeps the score: Memory and the emerging psychobiology of post traumatic stress. *Harvard Review of Psychiatry*, 1(5), 253–265. http://www.ncbi.nlm.nih.gov/pubmed/ 9384857
- Verhaeghe, M., & Bracke, P. (2011). Stigma and trust among mental health service users. Archives of Psychiatric Nursing, 25(4), 294–302. https:// doi.org/10.1016/j.apnu.2011.02.001
- Wanberg, C. R., Csillag, B., Douglass, R. P., Zhou, L., & Pollard, M. S. (2020). Socioeconomic status and well-being during COVID-19: A resource-based examination. *Journal of Applied Psychology*, 105(12), 1382–1396. https://doi.org/10.1037/apl0000831
- Weems, C. F., Taylor, L. K., Cannon, M. F., Marino, R. C., Romano, D. M., Scott, B. G., Perry, A. M., & Triplett, V. (2010). Post traumatic stress, context, and the lingering effects of the hurricane Katrina disaster among ethnic minority youth. *Journal of Abnormal Child Psychology*, 38(1), 49–56. https://doi.org/10.1007/s10802-009–9352-y
- Zhang, C. H., & Schwartz, G. G. (2020). Spatial disparities in coronavirus incidence and mortality in the United States: An ecological analysis as of May 2020. *The Journal of Rural Health*, 36(3), 433–445. https://doi .org/10.1111/jrh.12476

Received September 2, 2020

Revision received December 6, 2020

Accepted December 8, 2020