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Jasmine Burnett

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**The Relationship Between Intergenerational Trauma and Vaccine
Hesitancy among Black People in the United States**

By

Jasmine Burnett

Master of Public Health

Hubert Department of Global Health

James Lavery, Ph.D., M.Sc.

Committee Chair

Abstract Cover Page

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By

Jasmine Burnett

B.S. Biomedical Sciences, B.S. Public Health

University of South Florida

2019

Thesis Committee Chair: James Lavery, Ph.D., M.Sc.

An abstract of

A thesis submitted to the Faculty of the

Rollins School of Public Health of Emory University

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Abstract

The Relationship Between Intergenerational Trauma and Vaccine Hesitancy among Black People in the United States

By Jasmine Burnett

Background & Significance. Although Black people in the United States are disproportionately more likely to be hospitalized due to COVID-19 and more likely to ultimately succumb to it, they are, aside from the American Indian / Alaska Native (AIAN) population, the least vaccinated ethnoracial demographic. While a sizable chunk of the Black American population has been reluctant to get the vaccine at all, according to a Kricorian & Turner study, twice as many Black people were reluctant to get the vaccine *first*, which may indicate that something beyond mistrust of vaccines in and of themselves is informing this vaccine hesitancy (2021). Intergenerational trauma is the process in which traumatic experiences and their behavioural consequences are transmitted down ancestral lines. If a plausible connection between intergenerational trauma and COVID-19 vaccine hesitancy can be found, the implications for improvement of Black health nationwide include and go beyond COVID-19 vaccination.

Methods. Google Scholar was the primary search engine used to find research studies on Black COVID-19 vaccine hesitancy as well as in-depth conceptualizations of intergenerational trauma. Research study bibliographies and GoodReads' book recommendation generator were both utilized to find materials for this study. Social networking sites such as Twitter and Facebook were also looked through to search for trends in keywords and concepts shared by Black people online that were vaccine hesitant. For further social commentary to inform research procedures, Black hosted podcasts rooted in academia, social commentary, racial advocacy and activism, and science were all listened to for additional perspectives and considerations of vaccine hesitancy in Black Americans.

Results. In Black communities across the United States, the most notable medium of intergenerational trauma and trauma transmission were caregivers. Parents, aunts and uncles, and adult figures in the lives of Black children showed exceptionally large influence on the upbringing of subsequent generations. These tie into justifications given today for Black COVID-19 vaccine hesitancy. Most noted were mistreatment and inaccessibility, institutional mistrust, and the weathering hypothesis was also found as a potential biological reasoning.

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Statement of Purpose

This thesis aims to explain the contributions of intergenerational trauma to COVID-19 vaccine hesitancy in Black people in the United States.

Background

The COVID-19 pandemic turned the world upside down in 2020. Lives have been lost, entire cities have been shut down, and as vaccines and boosters are being approved and administered, we as human beings are grappling with the fact that there is no returning to our previous normal. As of November 2021, the pandemic has been raging on for almost 2 years, financial assistance from the US government is fading out, mask mandates have been lifted, and this past Fall, many children returned to in-person schooling and adults to in-person working, but the COVID-19 virus is still among us.

Racial Disparities in Vaccination

As of November 24, 2021 just under 70% of the US population has had at least one dose of a vaccine to protect against the COVID-19 virus, and approximately 59% of the population is fully vaccinated (CDC, 2021a). While being over twice as likely to die from COVID-19 as white Americans and 3.5x more likely to be hospitalized due to complications with COVID-19, Black people are less vaccinated proportionally than most non-Black people except for the American Indian/Alaska Native population with a rate of approximately 79% receiving at least one vaccine compared to 96%, 80%, and 85% amongst Asian people, white people, and Hispanic people, respectively (CDC, 2021b).

Many Black people in the United States have expressed hesitancy to receive the COVID-19 vaccine, with some reluctant to take it immediately upon availability (44%

according to a Kricorian & Turner study) and others reluctant to receive it all (27.7% according to the same study) (Kricorian & Turner, 2021). Even amongst healthcare workers (HCWs), a survey completed at a large academic children's hospital and a large academic adult hospital showed Black HCWs as approximately five times more likely to be vaccine hesitant than white HCWs (Momplaisir et al., 2021). More understanding of vaccine hesitancy among Black people in the United States may likely be necessary to reach COVID-19 herd immunity (Kricorian & Turner, 2021).

Defining Intergenerational Trauma

The Substance Abuse and Mental Health Services Administration (SAMHSA) conceptualizes individual trauma as the result of

“an *event*, series of events, or set of circumstances that [are] *experienced* by an individual as physically or emotionally harmful or life threatening and that has lasting adverse *effects* on the individual's functioning and mental, physical, social, emotional, or spiritual well-being” (Substance Abuse and Mental Health Services Administration, 2014, p. 7).

Especially if sustained in childhood, trauma may be lifelong and substantially impact coping mechanisms, “creating a . . . vulnerability to further harm and interpersonal and intrapersonal difficulties” (Isobel, Goodyear, Furness, & Foster, 2017). These difficulties include paranoia, emotional detachment, issues with creating and retaining interpersonal relationships, and general mistrust of people in one's surroundings (Isobel et al., 2017). Further, trauma may result in an enhanced physical susceptibility to stress (Sangalang & Vang, 2017).

In addition to individual trauma, the continued presence of institutional racism has cultivated a fertile landscape for *systemic trauma*, “contextual features of environments and institutions that give rise to trauma, maintain it, and impact posttraumatic responses” (Goldsmith, Martin, & Smith, 2013). From general rules set in Black households like “be home before the streetlights come on to a cultural understanding to be wary of police, doctors, and politicians, while the origin of these norms may be unknown to younger Black children today, the psychological understanding of the gravity negative outcomes from not following these rules may have is understood implicitly (Nash, 2018). The former rule likely stems from the United States’ recent history of “Sun-down towns” in which violence and cruelty toward Black people akin to a purge was allowed should they still be out of their homes by the sun down curfew (Loewen, 2009). The latter from an intrinsic awareness that the foundations of these institutions in the United States were racist: police began as slave catchers, medical fields were largely advanced due to non-consenting experimentation on Black people, and Black people were first seen as un-human and then only 3/5 human in the eyes of the government and the politicians holding power within it (Anderson, 2016; Washington, 2006; Wilkerson, 2020). Just as the trauma is systemic, so are the social and psychological effects in relation to social mechanisms many Black people utilize in interacting with the society around them (Mama et al., 2016) (Coates, 2015).

When unresolved, the emotional and psychological effects of toxic trauma may be transmitted interpersonally to those around someone. Referred to as relational trauma,

this phenomenon exists within attachment-specific relationships, most commonly familial and often caregiver-related (Isobel et al., 2017). In cases of relational trauma, the unit of transmission is a behavior or attitude. Systemic trauma and individual trauma both can be relationally transmitted and have intergenerational burdens. These behaviors and attitudes interweave themselves into the fabric of one's social mechanisms. As infants and children require the presence of a caregiver for survival and rearing, "the effects of parental neglect appear to be [especially] deleterious" and long-lasting as they model behaviors and attitudes shown by the adults caring for them (Ford & Courtois, 2013). The extent to which a trauma, experienced directly or relationally transmitted, in youth is ingrained into the social mechanisms one uses regularly makes it increasingly difficult to be aware of, let alone resolved, in adulthood. Adults with trauma from youth have a higher risk of transmitting that trauma to the children they care for than those without (Fraiberg, Adelson, & Shapiro, 1975). The continuance of a cycle of relational trauma transmittance over generations can result in *intergenerational trauma* (Isobel et al., 2017).

Rather than one specific trauma and its ramifications, intergenerational trauma is the process in which unresolved trauma is relationally transmitted between generations to the extent that the effects are felt down the ancestral line without the original experience; sometimes the original experience itself can be unknown to its descendants (Isobel et al., 2017). It is important to note that the familial transmission of trauma is

not necessarily biological; “the emphasis is on the context rather than the genetics of the relationship” (Isobel et al., 2017).

Is there a relationship between vaccine hesitancy and intergenerational trauma?

A disparity in vaccination rates between Black people and non-Black people in the United States is still of note almost 1 year into COVID-19 vaccination campaigns, and vaccine hesitancy is largely noted as a reason why (CDC, 2021b). While many note mistrust as a reason for vaccine hesitancy, it is uncertain how exactly that mistrust is perpetuated and where exactly it stems from. As the process of intergenerational trauma is also a concept in which individuals may hold social mechanisms and norms for reasons unbeknownst to them directly, this thesis aims to further explore intergenerational trauma as a contributor to vaccine hesitancy.

Significance

Kricorian and Turner's study revealing that over twice as many vaccine-hesitant Black people were reluctant to get the vaccine *first* rather than *at all* upon availability indicates that many vaccine hesitant Black people are not necessarily suspecting of vaccines themselves, but of bigger national institutions in general (2021). Identifying how intergenerational trauma informs vaccine hesitancy among Black people in the United States may also reveal mechanisms with which it informs other health behaviors and decision-making practices.

Messaging & Health Communication

An understanding of *how* vaccine hesitant rhetoric continues and how vaccine hesitant behaviors are potentially transmitted and upheld is vital in curated messaging and health communication campaigns to address them. Health communications are much more likely to fall on deaf ears when the messaging is not relatable nor understood. Also, health communications may also fail if the recipients do not feel the communicators have a true understanding of *why* certain health behaviors and attitudes exist and persist. Intergenerational trauma as a process potentially offers a clear mechanism in which mistrust of other facets of healthcare and public health may also be understood, addressed, and ameliorated.

Racial Equity PH Frameworks

As the collective American health system works to reach herd immunity for COVID-19, health communication and promotion campaigns that strongly impact Black health decision making may be able to become racial equity education tools for public health professionals in the future. If clear mechanisms between vaccine hesitancy and intergenerational trauma can be noted, ties between intergenerational trauma and other institutions in which Black people are untrusting may be revealed. Awareness of the role intergenerational trauma plays in health behaviors and decision-making for Black people creates more room to implement *distributive justice* further into public health practices

Distributive Justice

Distributive justice is a contemporary development under the umbrella of the ethical theory of utilitarianism (Timmons, 2013). While utilitarianism is an ethical theory which suggests the goodness of an action/intervention/etc. is determined by the aggregate good done for the most people, distributive justice is a caveat that suggests net good is only truly beneficial when it is equitably spread (Timmons, 2013). In relation to this thesis, this means that distribution of “good” actively includes distribution to racial minorities, not just racial majorities, as seen in Figure 1. As utilitarianism is the ethical theory from which many public health codes of ethics are based, understanding the mechanisms of intergenerational trauma and the potential impacts they have on Black

health may be a gamechanger for public health impacts ethically as well as quantitatively.

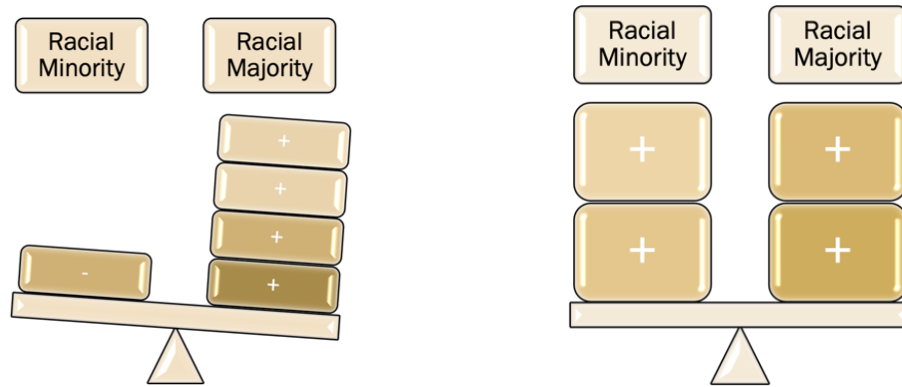


Figure 1. A Depiction of Distributive Justice's Goal as a Tool to Mitigate Lopsided Beneficence

Methods

Search Strategy

Academic Journal Resources

First, journal articles about Black COVID-19 vaccine hesitancy research studies were searched for through Google Scholar connected directly to an Emory University student account for ease of accessibility and a direct link to the university's library databases. Criteria of these studies were that they were conducted in 2020 or sooner, involved Black participants only or primarily, collected data specific to COVID-19, and were done within the scope of the United States. These studies were used as the nucleus of this research, acting as a baseline and a gateway to additional source material for further review via their bibliographies.

Google Scholar continued to be used at this stage with specific keywords. General keywords included "vaccine hesitancy," "COVID-19 vaccination," and "race." Other keywords searched were deemed necessary following discovery of certain search patterns and trends. It was noted that search results for almost identical phrases were different depending on certain word choices like "Black" vs. "African-American," "generational" and "intergenerational," and "racism" vs. "racial discrimination."

Print Resources

Print resources for this research were searched for based on 3 categories: history of race and racism in the United States (e.g. *Caste* by Isabel Wilkerson and *White Rage* by Carol Anderson), ethnoracial health disparities (*Race, Ethnicity, and Health* by Thomas

LaVeist & Lydia Isaac and *Medical Apartheid* by Harriet Washington), and intergenerational experiences (*all about love* by bell hooks and *Between the World and Me* by Ta-Nehisi Coates). GoodReads' book recommendation algorithm and reading group "This is Public Health Book Club" was also utilized in searching for print literature to review.

Social Media Resources

Twitter accounts of bioethicists of color were searched through for any original tweets, quote tweets, and references to COVID-19 and vaccines. The bioethicists of color searched for were from a living document shared by Dr. Melissa Creary of the University of Michigan as an intradisciplinary resource. Additionally, to find buzz words relating to Black vaccine hesitancy otherwise missed, social media searches were completed to see what hundreds of Black people were thinking personally and sharing accordingly. On Twitter, searches such as "covid vaccine," "vaccine idk," "coronavirus vaccine," and "shots" were done to find further keyword ideas. Twitter's algorithms work such that top results for searches are generated in relation to what the user interacts with most, therefore as a Black person that regularly interacts with what is deemed "Black Twitter," results appeared accordingly (Klassen, Kingsley, McCall, Weinberg, & Fielser, 2021). Facebook, Instagram, and Clubhouse were also utilized as social media platforms.

Casual social commentary podcasts with Black vaccine hesitant hosts ("The Friend Zone," *Loud Speakers Network*) and hosts that are vaccine advocates ("The Read," *Loud*

Speakers Network) were listened to for study on Spotify. Podcasts focused on activism and advocacy for Black people by Black people included “Hella Black Podcast,” (*D. Parham* and *A. Muntaqim*), Black community leaders based in Oakland, CA. Academic podcasts with public health professionals and scientists as guests and hosts were used as well, and their citation lists referenced (“Code Switch,” *NPR*, “DopeLabs,” *Spotify*, and “ScienceVs,” *Gimlet*).

Data Collection & Organization

Virtual written resources were downloaded as PDF files and saved in an iCloud folder for continued reference as well as notated for summarization in a Microsoft Excel matrix. Print resources were also notated and summarized for quick recall in Microsoft Excel. All journal articles and print resources used in this thesis were stored in an EndNote database for reference.

Data Review & Analysis

To complete an in-depth analysis of intergenerational trauma’s relationship to COVID-19 vaccine hesitancy, various peer-reviewed papers were read to see different viewpoints on intergenerational trauma and extrapolate a clear definition of the concept. From there, trends in results of research studies related to vaccine hesitancy were searched for. Trends noted were then further researched while simultaneously searching for relationships between justifications for vaccine hesitancy given and intergenerational trauma.

Results

The Nature of Black Vaccine Hesitancy

(1) *Mistreatment & Inaccessibility*

Race-based mistreatment within and beyond the scope of the COVID-19 pandemic is cited majorly as a source of vaccine hesitancy amongst Black Americans; mistreatment noted is both personal and that faced by Black elders and ancestors (Best, Fletcher, Kadono, & Warren, 2021). The Tuskegee Syphilis Study is mentioned often as an example, as well as current racial disparities in health and health outcomes like maternal mortality (in which Black women are approximately 4x more likely to die of pregnancy-related causes than white women) (Petersen et al., 2019).

Inaccessibility

While not as direct as the term may otherwise imply, limited access to healthcare is still medical mistreatment. Perceived barriers in access to COVID-19 vaccination and potential subsequent healthcare are mentioned in discussions of vaccine hesitancy (Bateman et al., 2021). Among the 17 states in which “Black residents are more likely to live \geq 10 miles to the closest” vaccination facility, Black residents are 2-5x more likely than white residents to need to drive over 10 miles to get to a facility in over half; they are also 5x more likely than white residents to need to travel over 10 miles in 8 of these states (Guo et al., 2021).

(2) *Mistrust*

Upon review of qualitative research studies on vaccine hesitancy among Black Americans, another common thread is mistrust. Justifications for mistrust of COVID-19

vaccines fall into approximately three categories: historical mistrust, vaccine development wariness, and mistrust of politicians and the federal government.

Historical Mistrust

The Tuskegee Syphilis Study has been widely mentioned as an example of institutional health mistreatment of Black Americans. Present is also an ingrained understanding that “the distrust is deeply rooted beyond a single incident and is predicated on centuries of racist exploitation (Willis et al., 2021). This historical mistrust informing vaccine hesitancy is also enforced by ongoing medical mistreatment endured by Black people, noted especially by young Black adults 18-35 (Sharma, Batra, & Batra, 2021). The importance of historical mistrust in COVID-19 vaccine decision-making is also seen through direct and narrative experiences of parents and other elders also dealing with medical mistreatment for generations (Bunch, 2021).

Vaccine Development Wariness

Another reason stated as a contributor to vaccine hesitancy among Black Southerners, especially, was the seemingly quick nature in which COVID-19 vaccines were developed.

Confidence (Lack) & Perceived Susceptibility

In discussions of vaccine development wariness, many younger vaccine hesitant Black Americans (approximately 18 – 35 years old) mention a lack of confidence in the vaccine in tandem with a lower perceived susceptibility to the COVID-19 virus among themselves (Moore et al., 2021) (Bateman et al., 2021) (Okoro et al., 2021). Many deem the risk of getting vaccinated comparable to the risk of adverse outcomes should they get COVID-19.

Political Mistrust

Mistrust of the COVID-19 vaccine is also grounded for many in mistrust of politicians and the federal government. Participants in multiple studies consider the COVID-19 pandemic and concurrent vaccine campaigns to be politicized with two primary agendas: medical experimentation and a “political ploy by the [presidential] administration” the United States was under when the pandemic began (Okoro et al., 2021).

(3) *The Weathering Hypothesis*

Geronimus hypothesizes “that the health of African-American women may begin to deteriorate in early adulthood as a physical consequence of cumulative socioeconomic disadvantage” (1992). Coined as *The Weathering Hypothesis*, this theory

“states that chronic exposure to social and economic disadvantage leads to accelerated decline in physical health outcomes and could partially explain racial disparities in a wide array of health conditions” (Forde, Crookes, Suglia, & Demmer, 2019).

The declines in physical health outcomes noted involve premature aging associated strongly with DNA methylation, a chemical mechanism that helps control gene expression in which a methyl group is added to a carbon atom of DNA molecules (Koch & Wagner, 2011).

The Nature of Intergenerational Trauma

The Process of Intergenerational Trauma

In the United States, intergenerational trauma is seen on community and population levels in addition to individual levels for many people of color of which their ancestors with shared identities were persecuted and brutalized (Talley, 2018). For Black people, specifically, intergenerational trauma is tied largely to white supremacy and the United States' history of slavery, Jim Crow, and racism. The ramifications of these experiences is largely noted in parenthood, caregiving, and the racial socialization of young Black children into adulthood and society (Jones & Jr., 2019). The behaviors adopted from race-based traumas regarding mistrust and paranoia are largely socialized as survival mechanisms (Administration, 2014).

Discussion

Of the results mentioned regarding the natures of Black vaccine hesitancy and intergenerational trauma, this discussion will dive further into the following: the nature of intergenerational trauma in Black communities and households and plausible mechanisms between mistreatment and inaccessibility, institutional mistrust of healthcare, and the weathering hypothesis and intergenerational trauma.

The Process of Intergenerational Trauma via Child Rearing

Widely acclaimed personal narratives from Black authors such as bell hooks and Ta-Nehisi Coates were reviewed in this research for additional perspectives. Commonly noted was a widespread presence of seemingly harsh and/or strict upbringings straining the relationships between many Black people today and their elders with a simultaneous understanding that much of the behaviors exhibited and adopted were rooted in survival mechanisms (hooks, 2001). Further noted is a community culture in which survival is more important than affection and affection feels transactional (hooks, 2001).

Also, the racial socialization many Black elders and caregivers feel is necessary to employ when raising Black children is largely related to “preparing their child for bias” that they will feel outside of the home; bias that could potentially be a death sentence (Jones & Jr., 2019). The fears and reasons for mistrust given by many vaccine hesitant

Black people are rooted in this same feeling of being in “survival mode” and American institutions being lethal until proven otherwise.

Potential Linkages Between Vaccine Hesitancy and Intergenerational Trauma

1) Mistreatment & Inaccessibility

In the United States, Black people are disproportionately uninsured, residing in neighborhoods disproportionately far from hospitals and healthcare facilities, and have disproportionately low access to community ICU beds (Kanter, Segal, & Groeneveld, 2020) (Baumgartner, Collins, Radley, & Hayes, 2020). The perceived extent of the inaccessibility of healthcare may also be exacerbated if one holds a socially corroborated understanding that it is out of reach and therefore a last resort. When quality healthcare is out of reach for so many Black people, health crises may become exponentially more traumatic. Further, financial burden accrued by seeking healthcare may also have traumatic impacts long-term (Shrime, 2021). Due to the economic and geographical gatekeeping of healthcare experienced consistently throughout American history, many vaccine hesitant Black people assume COVID-19 vaccination is just as inaccessible (Sharma et al., 2021).

Mistreatment of Black people in multiple capacities at the hands of racist healthcare institutions results in systemic trauma. As the institution one would otherwise interact with to heal is the very institution responsible for said trauma, the natural vulnerabilities grown as a result of systemic traumas endured (such as institutional

mistrust/paranoia) are compounded as the likelihood the trauma will be resolved is dwindled (Isobel et al., 2017). Trauma that remains unresolved is substantially more likely to be relationally transmitted to subsequent generations. Intergenerationally transmitted trauma effects germane to vaccine hesitancy, such as institutional mistrust, is a major ramification of race-based medical mistreatment.

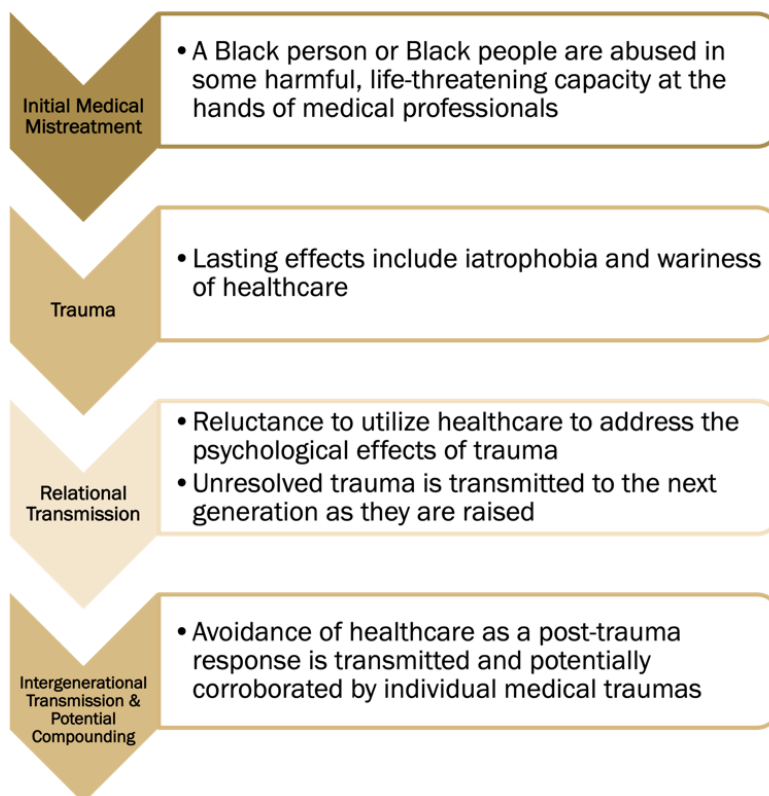


Figure 2. A Plausible Process for Mistreatment Informing Intergenerational Trauma

2) *Mistrust*

The mistrust cultivated from an extensive national history of medical experimentation and mistreatment emphasizes what Warren et al. call the need for “trustworthiness

before trust” when identifying and addressing COVID-19 vaccine hesitancy (Warren, Forrow, Hodge, & Truog, 2020). The United States has effectively cultivated “a legacy of fear” of American healthcare for Black people (Stenson, van Rooij, Carter, Powers, & Jovanovic, 2021). Current disparities in medical treatment of Black people with COVID-19 are noted, and enforce the existing iatrophobia fostered from the United States’ extensive history of mistreatment, experimentation, and exploitation in health (Washington, 2006). Intergenerational trauma from medical experimentation and unethical, racist health practices are contributors to risky health behaviors by many Black Americans including vaccine hesitancy (Simons et al., 2021).

Phrases such as “guinea pig” are mentioned repeatedly when discussing the United States’ history of unethical medical experimentation on Black people as a reason to be wary of receiving the vaccine (Bateman et al., 2021). In the Bateman et al. study, one participant said, due to their wariness in the development of COVID-19 vaccines, they would “let thousands of Americans get it. . . to see their reaction before” they got it themselves (2021). This coincides with the data presented in the vaccine hesitancy study mentioned in the Background section in which twice as many Black people surveyed were hesitant to receive the vaccine *first* than those that were hesitant to receive it at all (Kricorian & Turner, 2021). The logic is that if people of socioeconomic privilege in this country, be they white, wealthy, white *and* wealthy, are okay post-vaccination then they will be as well (Bateman et al., 2021). Further, the logic is that wealthy white people would never be exploited for data in any capacity such as Henrietta Lacks, whose HeLa

cells are still sold to this day, was (Truog, Kesselheim, & Joffe, 2012). The multimillion dollar product her cells have become while her family did not have enough money to give her a proper funeral was also mentioned by many Black people wary of being pieces in experiments without their consent in the case of COVID-19 vaccination (Truog et al., 2012).

Many vaccine hesitant Black people also expressed disinterest in being used as chess pieces in the bipartisan pull for power (Okoro et al., 2021) (Sharma et al., 2021).

Especially with the administration in office at the start of the COVID-19 pandemic, many Black people note feeling considered and spoken of/for only when seen as a monolithic voting bloc by political standards and felt coverage of COVID-19 in relation to Black people employed largely empty identity politics of which they wanted no parts (Okoro et al., 2021).

Reasons offered as to why Black people in the United States do not trust the COVID-19 vaccine are rooted in the same thing: mistrust in American institutions. A common thread offered is the fear of being used medically for powers that be beyond their control to create positive outcomes for other people, not including them (Okoro et al., 2021).

The extended systemic traumatization of Black people at the hands of medical mistreatment leaves mistrust and wariness of American health institutions as a lasting effect, which is relationally transmitted as a trauma in and of itself. The intergenerational transmission of this trauma persists because reasons for continued

medical mistrust have not necessarily been alleviated substantially enough for the mistrust to dissipate (Mama et al., 2016).

3) The Weathering Hypothesis

DNA methylation noted in the weathering hypothesis occurs at an accelerated rate when met with chronic stress such as the sociocultural stress many Black people face (Geronimus, 2013). These stressors include social adversity, discrimination, and isolation (Simons et al., 2021). The chronic stress which weathers the DNA may have generational impact in “that these phenomena are potentially related to epigenetic inheritance” (the trauma caused by chronic race-related stress people face may be biologically passed down to their children) (Fleur, Damus, & Jack, 2016). Systematic reviews of the weathering hypothesis such as that conducted by Forde et al. conclude additional, longitudinal evaluations are needed to examine the weathering hypothesis further across health outcomes (2019). Still, most studies evaluated find evidence in support of the hypothesis and suggest a likely valid link between weathering and poor health (Forde et al., 2019). The presence of “physiological response[s] to the structural barriers, material hardships, and identity threats that comprise the Black experience” suggests that intergenerational trauma is not only a social and institutional phenomenon, but also biological (Simons et al., 2021).

These stressors, which are traumas in and of themselves, are also contributors to the genetic wear and tear of Black people in the United States, a physical trauma

(Geronimus, 2013). The intergenerational transmission of this trauma is a physical representation of the systemic trauma endured by Black people in the United States from all angles. As a major effect of trauma is a physical susceptibility to stress, not only may the physical ramifications of weathering exacerbate the psychological ramifications of intergenerational trauma, the opposite may also be true. As shown in Figure 3, the connection between intergenerational trauma and weathering may very well be cyclical.

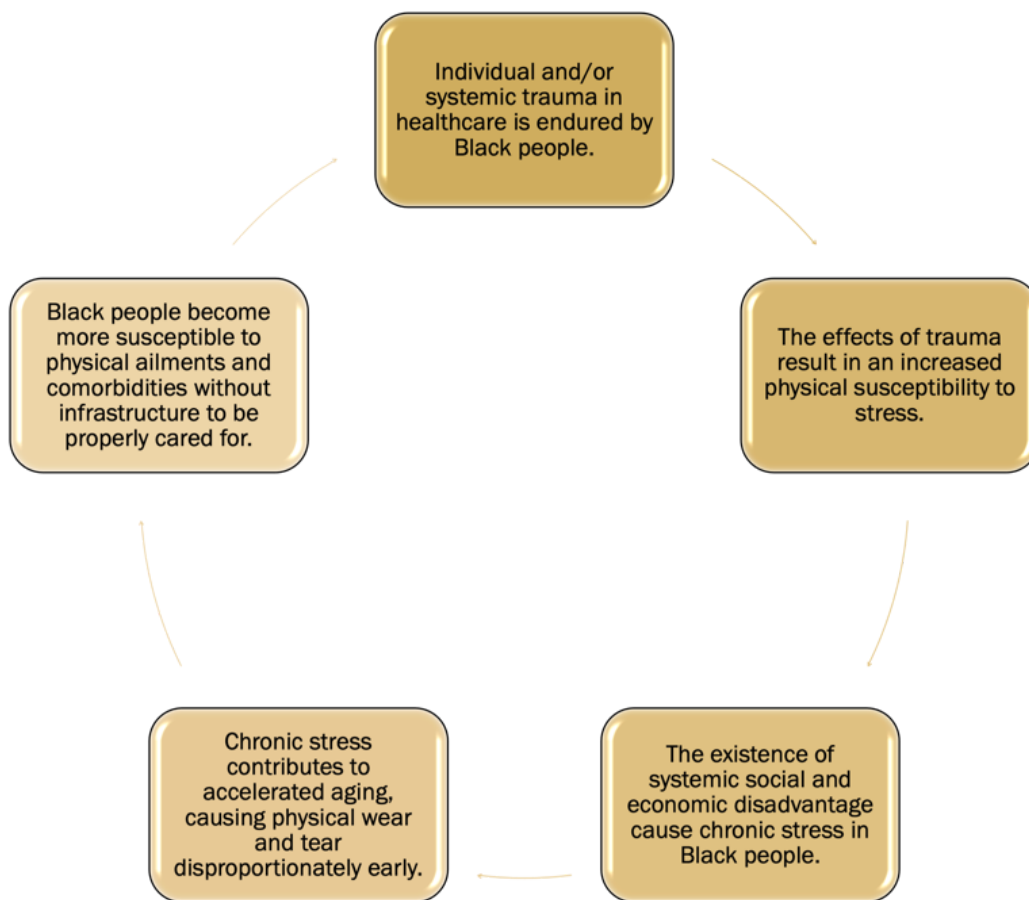


Figure 3. The Weathering Hypothesis and Intergenerational Trauma Cycle

Geronimus' weathering hypothesis and subsequent studies attempt to explain accelerated aging and presence of chronic stress related comorbidities such as hypertension exhibited disproportionately in Black Americans (Simons et al., 2016). A noted effect of trauma is an individual's increased physical susceptibility to stress (Sangalang & Vang, 2017). It is also noted that, when unresolved, the effects of trauma are long-lasting and potentially relationally transmitted. Black people's traumas, endured either personally or relationally transmitted, have lasting impacts on stress accumulation. Stressors for Black people in the United States related to health, specifically, include higher-than-expected frequencies of medical mistreatment, medical mistrust that garners general wariness upon interactions with healthcare professionals, and systemic inaccessibility of quality healthcare.

Limitations

As this thesis was completed, some of the limitations are as follows:

1.) Limited Research Data Available

Racial disparities in COVID-19 vaccine hesitancy have raised discussions about the impact intergenerational trauma has on health decision making, but there was not as much research published in which the relationship between intergenerational trauma, Black American identity, and decisions to vaccinate were discussed. Prior to 2019, much of the research around intergenerational trauma was defining it as a concept of indigenous peoples in Western countries like the United States, Canada, and Australia.

2.) Research Design

As this project solely utilized published and emerging literature, as the researcher I did not personally complete any qualitative or quantitative research in which participants were recruited and interviewed; no new data was gathered on my part.

3.) Researcher Bias

I as the researcher am a Black woman and share the racial identity of those centered in this research. This may have introduced conflicts of interest at some points in which my personal experiences, opinions, and biases may have inadvertently entered the text.

4.) Content Access

Literature for this research was accessed via the Emory University Library Database, the Fulton County Public Library System, and personal purchasing of published materials for reference. While extensive, some literature that may have been useful in this

research was omitted due to the limitations of the researcher's bank account and Emory University library's network.

Conclusion

The depth with which intergenerational trauma must be felt amongst millions of Black people in the United States is unfathomable. If intergenerational trauma is the mechanism through which a significant amount of Black COVID-19 vaccine hesitancy is perpetuated, then the depth of hesitancy is extensive as well. As the COVID-19 pandemic has occurred largely in tandem with the #BlackLivesMatter demonstrations of 2020 and the subsequent under-sentencing of those that were protested against, the depth of these traumas may be being felt more extensively than before for many Black people of Generations X, Y, and Z specifically (Quinn & Andrasik, 2021). If we see COVID-19 vaccine hesitancy in Black people as less of a refusal to listen to science and more of a justifiable response to trauma created, transmitted, and built upon for centuries, this same frame of thought may be applicable across an array of racial disparities in health behaviors that can potentially be addressed.

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