



Research Article

# Trauma over the Life Course for Black Mothers in Chicago: Understanding Conditions, Meaning Making and Resiliency

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## Abstract

**Background:** Scholars are increasingly linking Adverse Childhood Experiences (ACEs) to mental and physical health outcomes over the life course. However, the influence of ACEs and continuous traumatic stress on health outcomes is less understood, particularly in contexts with high concentrations of community and police violence.

**Methods:** This study analyzes survey and interview data from 93 low-income Black mothers living in neighborhoods with high levels of violence on the South side of Chicago to better understand the life course consequences of ACEs and continuous traumatic stress exposure.

**Results:** Our analysis demonstrates the conditions and events that give rise to trauma over the life course, participants' layered meaning making about trauma at the intersections of stress and resilience, the consequences of trauma exposures in the lives of the mothers, and their culturally-rich healing resources.

**Discussion:** The relationship between continuous traumatic stress exposure on physical and mental health outcomes are particularly relevant for physicians and other health providers serving populations dually impacted by racial health disparities and high levels of violence in their communities. Garnering deeper understandings of the impact of trauma will equip medical providers with tools to understand and support patients using a trauma and recovery informed lens.

**Conclusion:** These findings showing the impact of ACEs and continuous traumatic stress are relevant in communities with high rates of community and police violence. These findings are also relevant due to the current COVID-19 pandemic with increased rates of stress, mental health challenges, child abuse and deaths from gun violence associated with the virus.

**Keywords:** Adverse childhood experiences; Black women; Complex trauma; Continuous traumatic stress; Life course; Post-traumatic stress; Resiliency

## Introduction

According to the Centers for Disease Control and Prevention, Adverse Childhood Experiences (ACEs) are traumatic events that

are experienced between birth and a child's seventeenth birthday [1]. These traumatic events are defined as extreme stressors such as natural disasters, motor vehicle accidents, life-threatening illnesses and associated painful medical procedures, physical abuse, sexual abuse, domestic or community violence, kidnapping, or death of a parent [2]. Over the last twenty years, numerous studies regarding ACEs have had far-reaching implications for the medical field [3-

6]. However, few studies have considered the particular life course impact of ACEs for people who experience continuous traumatic stress as adults. This study examines the prevalence of ACEs in a sample of 93 Black mothers residing on the South side of Chicago and the relationships between continuous trauma exposure, and long-term health outcomes. These findings have conceptual and empirical implications for future research and may inform approaches to trauma informed care in medical settings.

## Literature Review

ACEs were first explored in a 1998 study by Felitti and colleagues that was based at Kaiser Permanente's San Diego Health Appraisal Clinic. Previous literature to this point rarely included links between adult medical issues and trauma during childhood. The researchers examined a list of traumatic childhood experiences (birth to 17 years of age) and their relationship to adult health risk factors and various leading causes of death. They sent questionnaires to nearly 13,494 adults and 9,058 responded (response rate of 70.5%) [4]. The final sample included 84% white individuals with a mean of 14 years of education an average age of 56 years [4]. The categories of adverse experiences included psychological, physical and other forms of trauma [4].

## Black Americans and Health

Although the initial ACE study sample was 84% white, it is critical for scholars to continue to examine how these findings may be similar or different in Black communities. Black Americans in the U.S. face a number of health disparities when compared with their white peers, particularly related to chronic disease and excess death. These disparities have been amplified during the COVID-19 pandemic, in which Black Americans have experienced higher incidence of infection, morbidities, mortality, and lower rates of vaccine access [7,8]. These pandemic-related disparities are attributed in part to systemic racism and the long-standing health equity gap. Specifically, many of the high-risk conditions during COVID-19, including asthma, heart conditions, severe obesity, and chronic kidney disease, are prevalent in Black communities.

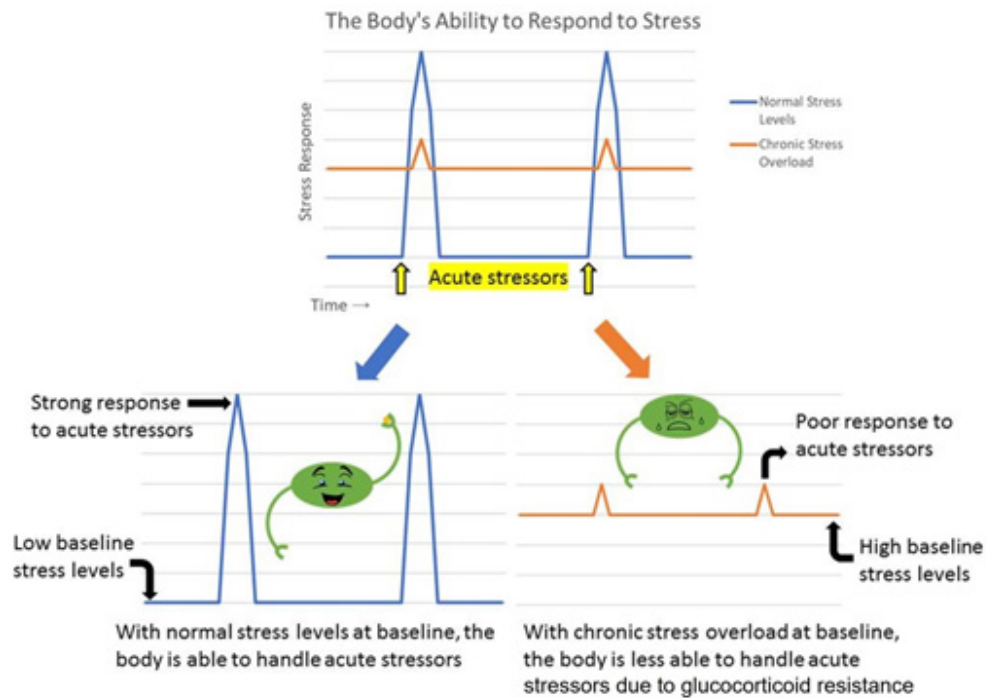
Excess death is defined as the additional deaths that occur after accounting for age and expected illnesses in a population. A 2005 study conducted by the former U.S. Surgeon General David Satcher and colleagues examined differences in national mortality rates among Blacks and whites. They found that there

were 83,570 excess Black deaths that could have been prevented by eliminating health disparities [9]. Reportedly, those excess deaths are equivalent to a plane full of Blacks dropping out of the sky every day for 365 days a year. Moreover, Rodriguez and colleagues found 2.7 million excess Black deaths when examining excess deaths of Black Americans within the timeframe of 1970-2004 [10].

Disparate rates of preventable disease among Black Americans, including diabetes, hypertension, heart disease, and asthma, account for the high likelihood of excess deaths. For example, African American adults are 60 percent more likely than non-Hispanic white adults to have been diagnosed with diabetes by a physician (United States Department of Health and Human Services). Further, Black children have a 500% higher death rate from asthma compared with white children [11]. In a study conducted in Chicago schools, non-Hispanic Blacks were twice as likely to have undiagnosed asthma as non-Hispanic Whites and Hispanics. This is true for many other health disorders. According to the American Heart Association, Black Americans are disproportionately impacted by obesity. Reportedly, 63% of Black men and 82% of Black women over the age of 20 are overweight or obese [12]. During childbirth, Black women are three to four times more likely to die and a large portion of these deaths are preventable [13-15]. For almost forty years, the African American infant mortality rate has been twice those of whites [13,16,17]. Child firearm mortality rates are higher among African Americans [18]. Many of these chronic diseases are associated with long-term embodiment stress.

## Embodiment of Stress

In a 1984 study conducted by Lazarus and Folkman, they note that stress is perceived by the body when the demands of the situation threaten to exceed the resources of the individual [19]. Trauma and stress exposure have great implications on health and mental wellbeing over the life course. In order to examine the relationship between childhood trauma, continuous stress, and poor health outcomes in adulthood, it is essential to understand the fundamentals of how the body perceives and responds to stress. As the umbrella term, stress can be positive or negative, traumatic or non-traumatic. Therefore, every trauma would not precipitate a stress response. Figure 1 depicts the body's stress response via the autonomic response pathway.



**Figure 1:** Stress on the Body.

There are many links between stress, its impact one’s daily life and the ability to function under high levels of pressure. The stress process is explained by the inverted U curve developed by Yerkes and Dodson in the early twentieth century [20]. The curve reflected the relationship between arousal (stress) and performance (efficiency or coping). The Yerkes-Dodson Law suggests that increased arousal can help improve performance until an optimal point, after which, arousal becomes excessive and performance diminishes. Since stress is a part of our everyday lives, it is essential to delineate the cumulative effect of stress and how the sum of stressors over time may deteriorate a person’s ability to function. Research demonstrates that the compounding of constant stressors has a multiplying rather than additive effects [21].

Consequently, with enough time to recover, the body can withstand acute stressors. This phenomenon is illustrated during child development. Acute stressful events in childhood typically do not impose a burden on health because of the body’s innate adaptive and resilient framework. After the body perceives an acutely stressful event, there is a cascade of chemical changes that constitute the stress response. However, if the acute stress events are unremitting and long-term, they become chronic stressors. As a result, the stress can become a threat to an individual’s health, which is generally evident in adulthood. This relationship between psychosocial stressors and chronic disease is complex due to the multifactorial nature of stress from a biological, psychosocial,

and behavioral perspective. Some of the many factors that affect the degree to which a person’s health is impacted include an individual’s biological vulnerability, stressor persistence, the number of stressful events, coping mechanisms, and psychosocial resources such as a supportive individual [22].

The body naturally progresses towards balance, or equilibrium, and at a steady state. The phenomenon in which the body automatically maintains a steady state is known as homeostasis. From a biological standpoint, the body innately has feedback systems that help maintain a stable internal environment, even when the body is exposed to external environmental changes. Stress is a major disruptor of the body’s functioning at equilibrium. When the body perceives a stressor, the stress response is the body’s way of returning to internal equilibrium-homeostasis.

Once stress is perceived, stress hormones are released, which start a cascade of physiological events to create the response needed to handle the stressor. The purpose of the cascade is to make energy stores available for the body’s immediate use, which is typically termed as the body’s preparation for its “fight or flight” response. This response is mediated by the Sympathetic Nervous System (SNS), in which the SNS diverts energy to specific tissues needed to carry out the necessary response to the stressor (i.e., skeletal muscles, brain, and heart). Less critical activities, such as digestion, are mediated by the Parasympathetic Nervous System (PNS) and are suspended as the sympathetic nervous system is activated.

The purpose of the PNS is to restore and conserve energy, whereas, the function of the SNS is to mobilize the body for activity [23]. The cascade starts with the deployment of stress hormones are produced by both the SNS and the hypothalamic-pituitary-adrenocortical axis. The SNS stimulates the adrenal gland to produce catecholamines. Simultaneously, the paraventricular nucleus of the hypothalamus produces corticotropin-releasing hormone, which stimulates the pituitary gland to produce Adrenocorticotropic Hormone (ACTH). ACTH travels through the blood to the adrenal gland to stimulate the adrenal cortex to secrete “stress hormones”, epinephrine, norepinephrine, and cortisol. These hormones are released to act as messengers in the body to start the “fight or flight” response. Under normal conditions, the level of cortisol in the blood varies throughout the day; increasing in the morning and gradually declining throughout the day. Both the catecholamines and cortisol increase available sources of energy by promoting the breakdown of fats into useable sources of energy (lipolysis) and the conversion of glycogen into glucose (glycogenolysis). This energy is then distributed to the organs that need it most by increasing blood pressure levels and contracting certain blood vessels while dilating others. Once the stressor is eliminated, the parasympathetic nervous system is activated, which promotes the “rest and digest” response that calms the body down after the stressor is removed.

The acute stress response can become maladaptive if it is continuously and constantly activated, which changes the stress characterization from acute to chronic [24]. Thus, homeostasis becomes disrupted for too long, overtaxing the body’s adaptive mechanisms and resulting in poor health outcomes. Prior to the homeostatic breakdown, the body produces warning signs and symptoms of stress overload (pains, palpitations, nausea, dizziness, and headaches) to indicate degeneration of homeostatic function. In a state of chronic stress, the body will continue to produce cortisol, in which, the receptors will become less reactive, blunting the body’s response to the stress. Once the issue is ignored for too long, homeostatic dysfunction ensues, manifesting itself as poor health.

### **ACEs and Health over the Life Course**

Experiencing childhood adversity is linked to many negative health outcomes throughout the life course, such as thyroid imbalance, obesity, diabetes, high blood pressure, depression, and anxiety [5,25,26]. In the meta-analysis conducted by Baumeister, it was determined that there was a significant association between childhood trauma and increased immune activation in adulthood. Additionally, the type of childhood trauma differentially impacted the inflammatory markers profiles. Sexual and physical abuse was associated with increased TNF- $\alpha$  and IL-6, but not CRP. However, parental absence was primarily associated with CRP [25]. The elevated CRP levels puts individuals at risk for future heart attacks,

stroke, and developmental diabetes [26]. Additionally, in a state of chronic stress, due to the blunting of the endocrine system response, communication between the HPA axis and immune system can be impaired, leading to immune disorders such as diabetes mellitus type I, celiac disease, and rheumatoid arthritis.

Over 30% of the millions of children exposed to trauma each year are expected to develop Post-Traumatic Stress Disorder (PTSD) [27,28]. PTSD is a clinical syndrome, in which, individuals experience anxiety after extremely traumatic events. Typical characteristics of this diagnosis includes intrusive thoughts, flashbacks and nightmares, and avoidance of trauma reminders [29-32]. PTSD has been linked to numerous other mental health issues and chronic diseases such as cardiovascular disease [31]. PTSD is also associated with chronic pain, (e.g. fibromyalgia) [33,34]. Specifically, with childhood trauma, research shows a strong and graded relationship between ACEs and ischemic heart disease, cancer, liver disease, chronic lung disease, and skeletal fractures [35]. These findings illustrate the two-factor risk of (1) children experiencing trauma and (2) children’s development of PTSD that may lead to poor health outcomes.

A survey of 668 mostly white (95%) middle class females taken in a gynecologic practice revealed women with a history of childhood abuse (physical, sexual, and/or emotional) report a higher number of physical and psychological challenges. In addition, the women rated their overall health lower than women without a history of abuse. Close to 50% of the women who reported abuse required hospitalization at some point. As the number of reported childhood abuses increased in each woman, so did the subsequent health problems [36]. Exposure to intense and chronic stressors during the developmental years is known to have long-lasting neurobiological effects and puts children at increased risk for many physical and mental health consequences in adulthood. More specifically, a 2003 study conducted by Jon Shaw found that childhood stressors increase the risk of developing anxiety and mood disorders, aggressive dyscontrol issues, hypo-immune dysfunction, medical morbidity, structural changes in the CNS, and early death [37].

### **Continuous Traumatic Stress and Health Outcomes**

Although scholars have done substantial research on the long-term mental and physical health outcomes of ACEs, little research considers the influence of Continuous Traumatic Stress (CTS) on health, particularly in the U.S. context. The term “continuous traumatic stress” was introduced by scholars seeking to describe the impact of living in contexts of ongoing danger, including those with high community violence [38]. This concept has primarily been applied to contexts with political violence and war, such as in Gaza and South Africa. However, we engage the term to describe how Black mothers living in low-income neighborhoods with high levels of community violence experience trauma over their life course.

Physiologically, trauma and related continuous traumatic stress is shown to increase the risk of developing cardiovascular disease. When the body experiences acute stress, the heart responds by increasing heart rate and increasing the strength of muscle contractions as a result of signals from stress hormones. Blood vessels also dilate to increase blood supply to vital organs and muscles. The additional blood pumping that increases blood supply also increases blood pressure. Once the stressor is removed, the heart returns to normal state. However, if the body is under a chronic stressor, the heart will be in a constant state of increased blood pressure, dilation, and muscle strength contraction, which can lead to the heart wall thickening (hypertrophy). Ultimately, stressors on the heart can lead to hypertension, myocardial infarction, and general cardiovascular disease. A 2003 study examined the role of childhood maltreatment as a risk factor for depression and cardiovascular disease in adulthood. The results indicated that childhood maltreatment is associated with a significant increase in cardiovascular disease for women [39].

Although there are no direct links to childhood trauma and musculoskeletal disorders, chronic stress is known to have lasting effects on the musculoskeletal system. When the body experiences stress, the muscles tense and release once the stress has passed. In a state of chronic stress, the muscles are tensed for longer periods and may elicit other stress-related symptoms such as a tension headache or pain in the shoulders, neck and lower back. With constant muscle tension, the muscles can breakdown, which is a phenomenon known as muscle atrophy. Without the correct care and help from a physician, many individuals end up with a worse prognosis [40,41].

## Materials and Methods

The data used in this study is part of a larger study called the South Chicago Black Mothers' Resiliency Project. Single low-income Black women who were raising children under the age of 18 years of age in neighborhoods on the South side of Chicago with high levels of gun violence were recruited to participate in this study. Women who reported cardiac disease, cancer, respiratory conditions, auto-immune disorders, diabetes, or obesity were excluded from the study because these health conditions could possibly impact a measurement of transcriptomic patterns of immune cells.

Due to the history of exploitation and abuse and current maltreatment in the health system, Black women are often reluctant to participate in health studies, especially studies that require giving a blood sample. Research shows that women of color are more likely to participate in genomic studies if compensation is provided and the interviewers match the race/ethnicity of the participants [42]. Therefore, this study included a \$40 stipend for their time, expertise, information about their lived experiences and blood samples (5 ML). Also, all but one interviewer was a Black

female. Recruitment was successful. In fact, the study had to end earlier due to the high level of demand. The final sample included 93 mothers.

## Procedures

In-depth interviews lasted an hour, on average, and included information about their relationships, motherhood, neighborhoods, stress and health (mental and physical). Informed consent was obtained from all participants.

The mothers also completed four psychosocial scales: the Patient Health Questionnaire, PHQ-9 [43], Africultural Coping Systems Inventory [44], the Chronic Stress Scale [45] and the PTSD Checklist (PCL-Civilian) [46]. They completed a 15-page paper and pencil survey which included demographic and social support information, child and adult trauma, neighborhood safety, and stress and coping. Midway through data collection, several issues repeatedly came up in the interviews and were added to the survey. For instance, some of the women discussed smoking cigarettes as a coping mechanism and the mothers also mentioned knowing very large numbers of individuals who were shot and/or killed. Therefore, we added new questions about the numbers of individuals that they knew who were shot and/or killed ever. Only 27 of the mothers were asked these new questions. The 27 mothers reported knowing, on average, 22 individuals who were shot (median is 11 with a range of 0-60 individuals) and 12 individuals, on average, who were killed (median is 7 with a range of 0-102). The participants were also asked questions regarding childhood trauma and adult trauma in order to understand how specifically this sample is impacted by adverse childhood effects.

## Data Analysis

The qualitative analysis conducted for this study broadly engages in a feminist approach to data analysis. Feminist social research methods center both the voices of participants and the stories of marginalized people, particularly women and other gender minorities, in order to describe and theorize about the social conditions in which they live [47]. As such, women's stories are often a tool of feminist research because it centers women in defining their own lived experiences.

Qualitative interview transcripts were analyzed using thematic analysis particular to narrative methods, which involves the identification of themes that help to describe the narrative arc of the phenomenon being studied [48,49]. We use pseudonyms to protect the mothers' identities. First, the data were coded deductively [50] using an Adverse Childhood Experiences and trauma lens. The large diverse research team included undergraduate and graduate student, professors, and members of the community. The team of coders used descriptive coding [51]. Several codes representing broad themes relevant to understanding trauma and coping were developed. The analysis presented in

this paper is based upon the data coded as “Trauma,” “Stress and Coping,” “Parenting,” and “Mom and Child.” Upon further analysis by the team of authors of the data subsumed in these broad coding groups, it became clear that the mothers in the study were experiencing trauma over the life course, from childhood through adulthood and in their experiences as mothers. As such, these themes were refined into three analytic categories that reoriented the data in narrative format. The thematic analysis in this paper is presented in narrative form using pseudonyms.

**Results**

Table 1 presents descriptive statistics for the Black women that reside on the South side of Chicago with incomes below the poverty line. The average age of mothers is 34 years old with a range from 18 to 62 years old. Close to 30% of the sample completed high school and about 20% of participants are currently taking courses. About 20% of the women are currently employed. The women have an average of two children with a range from 0 to 7 children. Lastly, 95% of our sample indicated that they had experienced at least one adverse childhood event.

Variable	Mean	Range	SD
<b>Demographics</b>			
Age	34.03	18 to 62	5.41
Employed	0.20	0 to 1	0.50
Currently in School	0.20	0 to 1	0.50
High School Diploma	0.29	0 to 1	0.46
Number of Children	1.91	0 to 7	1.30
Adverse Childhood Experience	0.95	0 to 1	0.21

**Table 1:** Descriptive Statistics for all Variables included in the Models (N = 93).

Table 2 presents the percentages of the sample responded that they have experienced specific types of ACEs. The participants were asked specifically about their experiences with childhood trauma. More than half of the sample reported that their family struggled with money when they were children. Twenty-two percent reported being sexually abused or molested, while another 17% reported a history of child abuse and 11% reported being neglected. More than a third of the sample lost a parent as a child. Ninety-five percent of our sample had suffered at least one of these experiences while 58% of our sample reported having to endure more than one. On average, the mothers reported experiencing about 2 and a half (mean 2.4) ACEs.

ACES Variables	%	Std. Dev.	Min	Max
Family Struggled with Money in childhood	57%	0.498	0	1
Child, Other Trauma Exposure	25%	0.434	0	1
Experienced Child Abuse	17%	0.375	0	1
Experienced Neglect	11%	0.316	0	1
Sexually Abused or Molested	22%	0.417	0	1
Witnessed a Shooting as a Child	41%	0.497	0	1
Childhood Sickness	24%	0.432	0	1
Child Death of a Parent	36%	0.483	0	1
Child Death of Close Relative of Friend	47%	0.506	0	1
Child Home Fire	11%	0.318	0	1
Child Weather Related Tragedy	7%	0.256	0	1

**Table 2:** ACEs and our Sample.

**Chronic Trauma and Intergenerational Adverse Childhood Experiences: Qualitative Findings**

The Black mothers’ narratives include their experiences during childhood and as adults. They discuss mothering their children through adversities, particularly health related challenges and community violence. The mother’s narratives can be understood in three thematic domains: (1) surviving ACEs through self-reliance and transcendence, (2) living with chronic trauma exposure, and (3) mothering through intergenerational adversity.

**Surviving ACEs: Resilience as Self-Reliance and Emotional Transcendence**

As mothers discuss their ACEs, they also shared their survived strategies that included self-reliance and emotional transcendence. A key component of emotional transcendence involved releasing feelings of resentment towards those who harmed them in the past. One mother, Earnice, described how her lack of fear as an adult is related to surviving adverse experiences beginning at birth. She said that she was not afraid now,

...because when my mom had me, I really don’t know anything about my mom. I don’t know my dad at all. But when my mom had me, she left me in the hospital. My great grandma got me out, so I stayed with her till I was nine. She died of breast cancer. Then I left Arkansas. Moved with my auntie and got abused by her. She died of lung cancer. Then, I got raped by my uncle and after that I raised myself. I was fourteen.

Similarly, another mother named Harper who experienced the death of her father as a child described how it influenced her unwillingness to accept intimate partner violence. Her partner physically abused her, and she sought help from his mother to ensure that it did not happen again.

I called his mom. She had a talk with him. She stayed over my house, sat down and talked to both of us. She told him "...if I call her again, if he put his hands on me again, she's gonna cut him off."...So, he hasn't put his hands on me...I was asking him like, you know "What makes you do that? Like what have you been through to make you feel like...it's okay for you to raise your hand up and chastise me?" You know. My father, you know, like never put his hands on me because he was, you know, murdered when I was eight months. So, I don't feel comfortable letting another man [hit me], you know?

Harper made a connection about how losing her father made her unwilling to accept physical violence from her romantic partner because her father did not physically discipline her. At the same time, she wondered what happened to her boyfriend that made him turn to violence in their relationship, reflecting a possible awareness that early experience can be related to present behaviors. This mother's boundary setting and engaging her partner's mother is a source of strength and resilience. Another mother, Brielle, also discussed receiving help from another person, a counselor, to transcend the pain of being molested. She said stated:

I got molested in 6th grade and it just like haunted me very badly. So I had to learn to let it go. I had seen a counselor, and I just let it go. I just feel like if God want to punish him, He will. And I can just wait and hopefully He let me see it.

This mother gives credit to the counselor who helped her to release the feelings that haunted her. In addition, her belief that God will deliver justice plays a role in letting go of her early trauma. Other mothers described similar pathways that allowed them to emotionally transcend experiences of abuse and early deaths of caregivers.

### **Navigating Chronic Trauma Exposure**

For many of the mothers, trauma exposure does not end in childhood. By and large, the mothers narrate the ways in which the landscape of community and police violence in their neighborhood contributes to ongoing traumatic stress. For example, when asked to describe her neighborhood, Angiestated, "War. War zone. It's always something going on. It's always some kinda fights or... someone's in trouble. We actually have a 24 hour, around the

clock, police car that sits on our block. So, it's war. Not a good neighborhood."

Many of the mothers also described frequent gun violence and a high saturation of policing in their neighborhood. For example, Gabriella described seeing the symbols of violence throughout the neighborhood. She shared:

I would say it's a not so good [of a] neighborhood...Cause every other day, if someone [is] not in a fight, we heard about somebody got shot. And even if you don't hear about it going to the bus stop, you might find balloons on the pole.

For this mother, the landscape of her neighborhood regularly includes memorials for those lost to violence. The memorials serve as a sign of the violence, the community mourning and the love for those whose lives were taken too soon. The extreme stress of gun violence, especially when it affects children, takes a toll on the mothers. Angie describes her major source of stress as "The gun violence. All of the deaths [are stressful]. Every time I turn on the news, somebody's child is dead or shot."

The tragedies touched one of our participants, Skyler, during her interview. She received a phone call during the interview and learned that her brother had been murdered the night before. She told the interviewer to "Hold on." And then took the call.

Hello? yeah. How he die, girl? Umm, I'm gonna call and see girl, hold on. [Interviewer: I'm very sorry to hear your brother died. (*mother sniffles*). How old was he?] Umm, twenty-- he just made twenty four. [Interviewer: Wow. Wow, and he lived in [the neighborhood] too]? Naw, he stayed in my old neighborhood. Like, that's where I grew up at. We were like real close, like I could talk to him and stuff. Joke and play and stuff like that. If I needed a ride, I would call him and stuff like [that]. If I needed to borrow some money, I got... "lemme borrow this," and he would bring it. And I wouldn't bring it back to him. I don't never pay him back. He'd be like, "Man, I'm gonna stop giving you my money if you don't pay me back." I didn't even know he got killed. He got shot last night. That's crazy.

The mother listed all of the ways that her brother helped her: emotional support, economic support, and transportation. Her last statement reflects her belief that this level of death and trauma should be not be occurring. Another mother named Ella described the loss of a sibling in a shooting death very soon after her mother passed away in her arms.

My mother died in June. My sister died July 4th. She was on the phone with me. She, I felt that it was my fault, because she was talking in riddles. But I was listening to make sure the kids with the fireworks [were ok], and I was not really paying attention. Cause my grandkids is over there, and I don't want them to go by no fireworks. So, I was talking to them and talking to her. She kept me on the phone for 30 minutes. When I hung up, well she put her husband on the phone. He was talking about he needed to kill somebody. I was like "nah, bro. You don't need to kill nobody. You know, what you wanna sit in jail for?" He said, "you right sis," and I had thought I had diffused that conversation. When he hung up, five minutes later I got a phone call that he had gun downed [my sister] and turned to kill himself.

This mother is grieving two lives. In addition, she is carrying the burden of feeling that she is at fault for her sister's death because she did not decode the "riddles" while trying to protect her grandchildren from 4th of July fireworks. Even as the mothers experience trauma in adulthood, they must also parent their children who may also be experiencing extraordinary trauma.

### **Mothering to Prevent Intergenerational Adversity**

In addition to surviving ACEs and enduring exposure to interpersonal trauma and chronic community violence, these mothers have the distinct experience of raising children in what David Ford of ABC refers to as "unfathomable" conditions that includes the death of children [52]. For some mothers, their own adversities, during childhood, influences how they parent in their current neighborhood context. Emily shared how she is reluctant to expose her children to male partners, given her childhood experiences with ongoing abuse by her adopted aunt. She shared:

I want my kids to feel comfortable in their house. Cause it's our--this is our home. So, I don't want to let no outsider--cause he's an outsider... You don't, because you know, I don't want my kids being exposed to violence. I was sexually harassed when I was two. And I was physically, and mentally, and emotionally abused from when I was two til I was seventeen, eighteen... And I don't want my kids to have to, you know, go through that because, like it makes you have a lot of hate.

This mother understands how experiencing trauma as a child (16 years in her case) can create intense emotions that can negatively affect how you develop as an adult. So, she is intentional as a

mother to make sure that her children do not "go through that."

Similarly, Ella describes enduring extreme stress on the job to ensure that her children do not experience a sense of material deprivation that may cause them to sell drugs or engage in other underground activities. She describes her efforts to keep her children off "the street."

My biggest stress is job. To make for sure that I have money to support my household. People say, "oh they're kids, this and that. Put 'em out on the street." They don't got no job. I don't wanna see my kids out on the street. First thing everybody say, "well, okay I can go out here make a quick buck [often, selling drugs] like they doing." I'd rather die before I see my kids out here doin' that.

This mother is so fearful of the trauma her children may experience if they engage in the "street" life that she states that she would "rather die before" seeing that happen. Her stress level from work is amplified by the potential traumatic experiences in the "streets," and she is creating a space of protection as their mother.

Many of the mothers attempt to create a space of protection for their children, but it is difficult if they live in communities with high levels of violence. In many cases, their mothering strategies may have to shift from protecting their children from gun violence to supporting them after being traumatized by gun fire and death. When Rosanelle was asked whether she and her family had ever been caught in the crosswire of neighborhood violence, she said yes and told this story.

A bunch of times. It [gun violence] happens in every neighborhood. My kids have seen people shot. My kids' friends have been shot. My kids' friends have died. It's just not only stress for adults, it's a lot on the kids. Kids ask you a lot of questions... Like my son['s] friend got shot in the eye at the gas station on his way to school and died. This was last year in [another neighborhood]. He was on his way to school 8 am in the morning, and he was on the wrong side of the tracks. [Interviewer: So how did they respond?] They [children] were scared for a long time. Crying a lot for a long time, and they didn't want to go nowhere. [Interviewer: As a mom what did you try to do to help because that's hard to see your kids suffering like that?] All you can do is talk to them and pray for them that's it. [Interviewer: Does the school have counseling like Sandy Hook?] No. [Rosanelle puts up air quotes to say that the school is supposed to



have counseling but it is not accessible.] She's [counselor] never there. [The counselor says] "Oh, call back in the morning. We're busy right now" [I tried] three times. After the third time, I quit.

Rosanelle provides much needed insight into the dual traumatic burden of gun violence in Chicago on adults and children who lose friends, including other children. Rosanelle must incorporate into her parenting methods strategies to help their children survive and cope with a substantial level of terror. The terror was so intense for Rosanelle's children that they did not want to leave their home.

Other mothers living on the South side of Chicago shared similar stories of their children witness gun violence and even being killed. One mother described her three-year-old daughter being shot by a stray bullet, and surviving, shortly after her children's father died due to a drug overdose. A mother lost a very young child due to gun violence and the intense and debilitating grief that followed affected the entire family and the community.

Another mother named Beverly described leaving the neighborhood after her son was killed, reportedly, by the police.

Yes. I used to stay in [in a South side neighborhood] and my son got killed, and I moved from there...You got some good ones [police] and you got some bad ones...I hate to go back to court because it brings back the memories and the past...And, and, and it just bring back up, you know you gotta see this [where he was shot].

This mother had to uproot her life after her son was killed. For her, the neighborhood can no longer be home and the institution meant to serve justice for her son's death is a place of trauma. The experience of seeking justice in the criminal legal system is a source of re-traumatization, particularly as she hears her son being blamed for his killing. Mothers' parenting strategies must include keeping children safe from gun violence in the streets and police violence. Families of color across the country attempt to prevent the death of their children when they engage with the police by giving them "the talk."

Fortunately, Beverly was able to leave her neighborhood after the death of her son. About 67 percent of the mothers in our study also wanted to leave their neighborhoods due to gun violence but report not being able to leave because they could not afford to live elsewhere.

Although many of the mothers report high levels of traumatization in their neighborhoods, they all want a safe, low stress place to raise her children. They personally and collectively know the high cost of trauma and do not want their children to pay

the price Jamillah shares her vision.

Peace. Peace, peace. I want a front and a back yard. I'm in a place where I don't have a front or a back yard. And just a couple, a month or so ago, they come shoot[ing] the court way up. That's not, that's crazy! What's, what's going on?

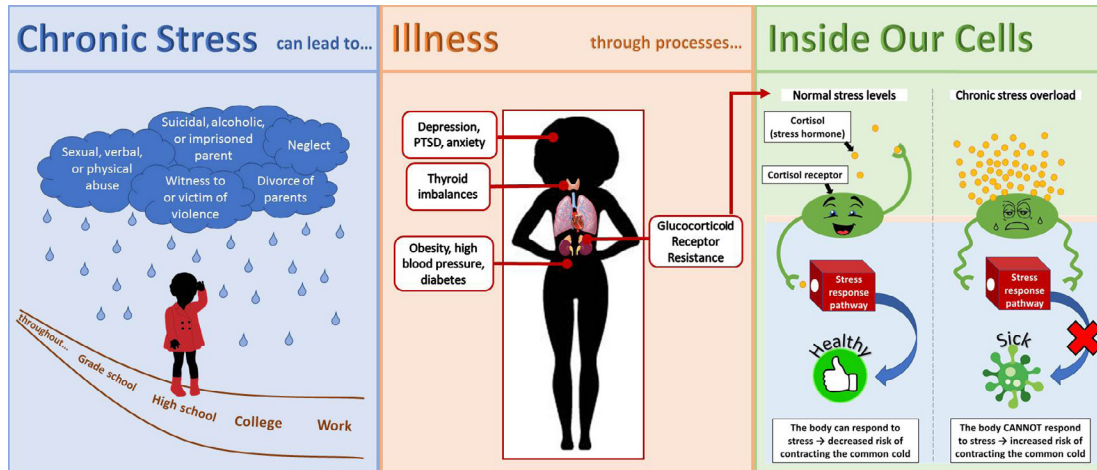
The mothers in this study shared their lived experiences with trauma, terror and efforts to be resilient. Their stories show us the implications of ACEs across the life course, within generations and between generations. The multiple ways that trauma is present in their communities exposes the way we have structured society to marginalize groups [42]. These systems are devastating to the most vulnerable, the children. These stories about mothers and their mothering are compelling for researchers, policy makers and medical providers who care for children and adults.

## Discussion

A substantial body of research addresses the relationship between having several Adverse Childhood Experiences (ACEs) and health outcomes. However, few studies have considered how Continuous Trauma Exposure (CTE) may compound the impact of ACEs on lifelong health, particularly for Black mothers parenting in neighborhoods with high levels of resource deprivation, and community and police violence. This paper adds to the literature by making the conceptual and empirical links between ACEs and how Black mothers living and raising children on the South Side of Chicago make meaning from and attempt to transcend: 1) childhood trauma, 2) continuous trauma exposure, and 3) mothering children through gun violence exposure and victimization. Mothers' narratives of self-reliance while enduring childhood trauma and the importance of professional and social resources to support their emotionally transcending traumatic experiences speaks to the dire need for intensive interventions to prevent potential long-term health impacts of childhood trauma. Further, physicians and other health care providers should extend Trauma Informed Care (TIC) models to consider how continuous trauma exposure may influence their patient's physical and mental health, as well as the health of their children [53]. Researchers should continue to make conceptual and empirical connections between the influence of a history of ACEs and continuous trauma exposure on long-term health outcomes, including morbidities and mortality.

While it is well known that ACEs can contribute to the development of mental health disorders, there is increasing evidence that also implicates ACEs in physical health disorders [5,6]. We attempt to show this relationship between ACEs and physical health in Figure 2 which highlights chronic conditions such as thyroid disorders, diabetes, and a decreased response to stress hormones. During these unprecedented times due to

COVID-19, the world is paying more attention to social determinants of health because they have played a key role in access death among various groups of color. Health disparities both illuminate and exacerbate inequities in which Black Americans, and other groups on the margins of society, have experienced for centuries. This complex understanding of ACEs shines a spotlight on how both childhood and continuous trauma exposure during all life stages affect adult wellbeing and creates excess death. As more research on this area is disseminated, there will be additional opportunities to develop interventions to ameliorate the harsh impacts of health inequality at the intersections of race, class, and gender and to support communities most impacted.



**Figure 2:** How Chronic Stress can make us Sick.

We recommend that physicians, especially in primary care, have conversations with patients to provide education on ACEs, their impact, and how to be resilient and heal from past traumas. In order to prevent poor health outcomes associated with ACEs, education and training around trauma-informed communities must be incorporated into their care plans. We provide an image for physicians to circulate in the community to educate the public on the impact of trauma and chronic stress (Figure 2). We also recommend that physicians utilize ACEs and/or Protective Childhood Experiences (PCEs) surveys for all new patients and annually survey children until the age of 21 to screen and identify patients with a history of trauma.

By conducting these surveys on all new patients (children and adults), physicians gain an understanding of the trauma they have endured and insight on how to proceed with their plan of care going forward. For returning patients, these surveys could be performed annually and/or when stress-related cues are noticed by the provider. It can also be used when patients mention increased stress in their everyday life. The specific questionnaire used can be tailored to align with the goals and workflow of the practice, but should include most if not all of the ACEs listed in the extended ACEs version of screenings [53].

Additionally, any changes in ACEs scores for children allow the physician to uncover early traumas and work with an interdisciplinary team to develop preventions, interventions or recommendations to help decrease the risk of poor health outcomes in adulthood. Knowledge of patients’ ACEs status enables

physicians’ early intervention to mitigate or reduce the impact on health and provide treatment to prevent or reduce those outcomes. In addition, these surveys can help drive medical referrals for psychiatry and counseling. These service providers can help to teach children new coping skills that foster resiliency. Lastly, we recommend that physicians draw upon patients’ culturally embedded coping strategies and systems of support to help guide traumatic healing [42].

Although this paper focuses on ACEs and continuous traumatic stress, recent research on Protective Childhood Experiences (PCEs) measures the extent to which positive parenting, community belonging, and nurturing school experiences buffer the impact of childhood adversity over time [54]. Future research should explore PCEs among Black families living in contexts of resource deprivation and community and police violence to provide a robust, strengths-based perspective to medical providers.

## References

1. Center of Disease Control and Prevention (2021) Preventing Adverse Childhood Experiences. Violence Prevention | Injury Center.
2. Mulvihill D (2005) The Health Impact of Childhood Trauma: An Interdisciplinary Review, 1997-2003. *Issues in Comprehensive Pediatric Nursing* 28: 115-136.
3. Anda RF (1999) Adverse childhood experiences and smoking during adolescence and adulthood. *JAMA* 282: 1652.

4. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, et al. (1998) Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med* 14: 245-258.
5. Struck S, Stewart-Tufescu A, Asmundson AJN, Asmundson GGJ, Afifi TO (2021) Adverse childhood experiences (ACEs) research: a bibliometric analysis of publication trends over the first 20 years. *Child Abuse & Neglect* 112: 104895.
6. Ye D, Reyes-Salvail F (2014) Adverse childhood experiences among Hawai'i adults: Findings from the 2010 Behavioral Risk Factor Survey. *Hawaii J Med Public Health* 73: 181-190.
7. Garcia MA, Homan PA, Garcia C, Brown TH (2021) The Color of COVID-19: Structural Racism and the Disproportionate Impact of the Pandemic on Older Black and Latinx Adults. *J Gerontol B Psychol Sci Soc Sci* 76: e75-e80.
8. Louis-Jean J, Cenat K, Njoku CV, Angelo J, Sanon D (2020) Coronavirus (COVID-19) and Racial Disparities: A Perspective Analysis. *J Racial Ethn Health Disparities* 7: 1039-1045.
9. Satcher D, Fryer GE, McCann J, Troutman A, Woolf SH, et al. (2005) What if we were equal? A comparison of the black-white mortality gap in 1960 and 2000. *Health Aff (Millwood)* 24: 459-464.
10. Rodriguez JM, Geronimus AT, Bound J, Dorling D (2015) Black lives matter: Differential mortality and the racial composition of the U.S. electorate, 1970–2004. *Social Science & Medicine* 136: 193-199.
11. Gruchalla RS (2011) Inner-city asthma: Control can be achieved! *Journal of Allergy and Clinical Immunology* 128: 64-65.
12. American Heart Association (2015) African Americans and Heart Disease, Stroke.
13. Chinn JJ, Martin IK, Redmond N (2021) Health Equity among Black Women in the United States. *Journal of Women's Health* 30: 212-219.
14. Martin N, Montagne R (2017) Nothing Protects Black Women from Dying in Pregnancy and Childbirth. ProPublica.
15. Oparah J, Bonaparte A (2015) *Birthing Justice: Black Women, Pregnancy, and Childbirth*. Routledge.
16. Berger CS (2001) Infant mortality: a reflection of the quality of health. *Health Soc Work* 26: 277-282.
17. Lorenz JM, Ananth CV, Polin RA, D'Alton ME (2016) Infant mortality in the United States. *J Perinatol* 36: 797-801.
18. Dawson B (2020) *The State of America's Children 2020-Gun Violence*. The Children's Defense Fund.
19. Lazarus RS, Folkman S (1984) *Stress, Appraisal, and Coping*. Springer Publishing Company.
20. Yerkes RM, Dodson JD (1908) The relation of strength of stimulus to rapidity of habit-formation. *J Comp Neurol Psychol* 18: 459-482.
21. Rosenthal TL, Rosenthal RH (1985) *Clinical Stress Management*. In: *Clinical Handbook of Psychological Disorders: A Step-by-Step Treatment Manual*. 145-202. New York, NY, US: The Guilford Press.
22. Schneiderman N, Ironson G, Siegel SD (2005) Stress and Health: Psychological, Behavioral, and Biological Determinants. *Annual Review of Clinical Psychology* 1: 607-628.
23. Costanzo LS (2012) *Physiology: Cases and Problems*. 4<sup>th</sup> Edition. Baltimore, MD: Lippincott, Williams & Wilkins.
24. Selye H (1956) *The stress of life*. McGraw-Hill.
25. Baumeister D, Akhtar R, Ciufolini S, Pariante CM, Mondelli V (2016) Childhood trauma and adulthood inflammation: a meta-analysis of peripheral C-reactive protein, interleukin-6 and tumour necrosis factor- $\alpha$ . *Mol Psychiatry* 21: 642-649.
26. Ridker PM (2003) Cardiology Patient Page. C-reactive protein: a simple test to help predict risk of heart attack and stroke. *Circulation* 108: e81-e85.
27. Daane DM (2003) Child and adolescent violence. *Orthop Nurs* 22: 23-29.
28. Lipschitz DS, Rasmusson AM, Yehuda R, Wang S, Anyan W, et al. (2003) Salivary cortisol responses to dexamethasone in adolescents with posttraumatic stress disorder. *J Am Acad Child Adolesc Psychiatry* 42: 1310-1317.
29. Kessler RC (2000) Posttraumatic stress disorder: the burden to the individual and to society. *J Clin Psychiatry* 61: 4-12.
30. Mayo Clinic Staff (2014) Post-Traumatic Stress Disorder (PTSD).
31. Pacella ML, Hruska B, Delahanty DL (2013) The Physical health consequences of PTSD and PTSD symptoms: a meta-analytic review. *J Anxiety Disord* 27: 33-46.
32. Wilson JP (2004) PTSD and Complex PTSD: Symptoms, Syndromes, and Diagnoses. In: *Assessing psychological trauma and PTSD* Wilson JP, Keane TM (Eds.), (pp: 7-44). The Guilford Press.
33. Conversano C, Carmassi C, Bertelloni CA, Marchi L, Micheloni T, et al. (2019) Potentially traumatic events, post-traumatic stress disorder and post-traumatic stress spectrum in patients with fibromyalgia. *Clin Exp Rheumatol* 37: 39-43.
34. Sherman JJ, Turk DC, Okifuji A (2000) Prevalence and impact of posttraumatic stress disorder-like symptoms on patients with fibromyalgia syndrome. *Clin J Pain* 16: 127-134.
35. Perry BD, Azad I (1999) Posttraumatic stress disorders in children and adolescents. *Curr Opin Pediatr* 11: 310-316.
36. Moeller TP, Bachmann GA, Moeller JR (1993) The combined effects of physical, sexual, and emotional abuse during childhood: long-term health consequences for women. *Child Abuse Negl* 17: 623-640.
37. Shaw JA (2003) Children exposed to war/terrorism. *Clin Child Fam Psychol Rev* 6: 237-246.
38. Eagle G, Debra K (2013) Continuous traumatic stress: Expanding the lexicon of traumatic stress. *Peace and Conflict: Journal of Peace Psychology* 19: 85-99.
39. Batten SV, Aslan M, Maciejewski PK, Mazure CM (2004) Childhood maltreatment as a risk factor for adult cardiovascular disease and depression. *J Clin Psychiatry* 65: 249-254.
40. Leino P (1989) Symptoms of stress predict musculoskeletal disorders. *J Epidemiol Community Health* 43: 293-300.
41. McFarlane AC (2007) Stress-related musculoskeletal pain. *Best Pract Res Clin Rheumatol* 21: 549-565.
42. Mendenhall R, Henderson L, Scott BM (2017) African American mothers' parenting in the midst of violence and fear: Finding meaning and transcendence. In: *Black Women's Mental Health: Balancing Strength and Vulnerability* 183-197. State University of New York Press.
43. Kroenke K, Spitzer RL (2002) The PHQ-9: A New Depression Diagnostic and Severity Measure. *Psychiatric Annals* 32: 509-515.

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44. Utsey SO, Adams EP, Bolden M (2000) Development and Initial Validation of the Africultural Coping Systems Inventory. *Journal of Black Psychology* 26: 194-215.
45. Phenx Toolkit (2011) Consensus Measures for Phenotypes and Exposures. 2011. Psychosocial Measures for PhenX Toolkit.
46. National Center for PTSD (2015) PTSD Checklist for DSM-5 (PCL-5). U.S. Department of Veterans Affairs.
47. Hesse-Biber SN (2013) *Feminist Research Practice: A Primer*. Sage Publications.
48. Connelly FM, Clandinin DJ (1990) Stories of Experience and Narrative Inquiry. *Educational Researcher* 19: 2-14.
49. Riessman CK (2008) *Narrative Methods for the Human Sciences*. Sage Publishing.
50. Fereday J, Muir-Cochrane E (2006) Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods* 5: 80-92.
51. Saldana J (2014) Coding and Analysis Strategies. In: *The Oxford Handbook of Qualitative Research*.
52. Ford D (2012) Diane Sawyer Reports 'Hidden America: Don't Shoot, I Want to Grow Up.' ABC News.
53. Karatekin C, Hill M (2019) Expanding the Original Definition of Adverse Childhood Experiences (ACEs). *J Child Adolesc Trauma* 12: 289-306.
54. Bethell C, Jones J, Gombojav N, Linkenbach J, Sege R (2019) Positive Childhood Experiences and Adult Mental and Relational Health in a Statewide Sample: Associations Across Adverse Childhood Experiences Levels. *JAMA Pediatr* 173: e193007.