

**THE LUMBEE TRIBE & NARRATIVES OF INTERGENERATIONAL
COPING WITH HAZARDS**

by

Sydney Dyck

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Arts in Sociology

Summer 2023

© 2023 Sydney Dyck
All Rights Reserved

**THE LUMBEE TRIBE & NARRATIVES OF INTERGENERATIONAL
COPING WITH HAZARDS**

by

Sydney Dyck

Approved: _____
Sarah E. DeYoung, Ph.D.,
Professor in charge of thesis on behalf of the Advisory Committee

Approved: _____
Eric Rise, Ph.D.,
Chair of the Department of Sociology and Criminal Justice

Approved: _____
John Pelesko, Ph.D.
Dean of the College of Arts and Sciences

Approved: _____
Louis F. Rossi, Ph.D.
Vice Provost for Graduate and Professional Education and
Dean of the Graduate College

ACKNOWLEDGMENTS

Firstly, I would like to thank my thesis committee chair, Dr. Sarah DeYoung, who has supported me personally and academically throughout this entire process whose wisdom and encouragement have made all the difference in my success. I am also deeply grateful to my other committee members, Dr. Tricia Wachtendorf and Dr. Jennifer Trivedi for their helpful feedback and thoughtful engagement with my work, as their passion for disaster research has helped me grow within my role as a student and researcher.

Special thanks to the Lumbee Tribe of North Carolina and every person I interacted with formally and informally throughout this process. The helpful feedback from the tribe's IRB helped shape this project, and I am very thankful for every person who took the time to share their stories and insights with me.

I would also like to thank my friends and family for supporting me and my mentors from back home in Canada. My parents and grandparents have helped shape me into who I am today and supported me throughout my educational journey, and I cannot thank them enough. I am also so grateful for the friends I have back home in Grande Prairie and Calgary, as well as those I have met here in Newark. Special thanks to Dr. Tim Haney who ignited my interest in disaster research and encouraged me to come to Newark and Dr. Zachary Cox, my fellow Canadian here at the DRC. I

am so thankful for this community that has supported me throughout the duration of my master's degree.

TABLE OF CONTENTS

ABSTRACT	vii
Chapter	
1 INTRODUCTION.....	1
Research Purpose and Goals	1
Terminology	2
2 LITERATURE REVIEW	3
Overview	3
Intergenerational Trauma	5
Indigenous Populations & General Trauma	14
Disasters and Trauma	16
Indigenous People and Disaster Resilience	20
COVID-19 and Indigenous Peoples	24
Lumbee Tribe, Disasters, and COVID-19	29
3 PROBLEM STATEMENT	34
Methods	35
Methodological and Theoretical Framework	36
Data Collection	38
Analysis and Interpretation of Results	43
4 RESULTS.....	44
Intergenerational Narratives of Disasters	44
Experiencing Matthew and Florence	48
Intergenerational Trauma and Disasters	56
Experiencing the COVID-19 pandemic	62
Community Relations and Compounding Factors	71
5 DISCUSSION.....	77
Application to Theory.....	78
Policy Implications	83
Study Limitations	84
Conclusion	85
REFERENCES	87

Appendix

A	QUALITATIVE INSTRUMENT	99
B	CODE BOOK.....	104
C	INFORMED CONSENT FORM	108
D	IRB APPROVAL	109

ABSTRACT

The Lumbee Tribe is in the state of North Carolina on the eastern coast of the United States of America. It is home to a distinct population of Indigenous people who have faced multiple disasters, mainly flooding due to hurricanes. The effects of disasters compound with adverse factors within the community, such as a lack of housing support, healthcare access, and governmental resources. Since the United States federal government does not recognize the Lumbee Tribe, the tribe is federally unsupported in times of disaster, such as during repeat flooding and throughout the COVID-19 pandemic. In this research project, I examined these aspects through the lens of intergenerational trauma. First, I gathered data on the impacts of disasters and colonialism on the prevalence of intergenerational trauma among the population through qualitative interviews with Lumbee Tribal members and community stakeholders. Amidst data collection, I conducted fieldwork mainly in the towns of Lumberton and Pembroke. I used an inductive, open-coding approach to identify themes within the data. While examining the adverse effects of these systemic challenges, I focused on the insight into the Lumbee community's capacity for self-sufficiency and resilience, specifically to their cultural connections and ability to adapt and support one another. This data represents aspects of the lived experiences of the Lumbee people regarding disasters, colonialism, and intergenerational trauma and has the potential to call attention to tangible resources and discussions of sovereignty within the community.

Keywords: disasters, intergenerational trauma, Indigenous people, and COVID-19

Chapter 1

INTRODUCTION

Compounding disasters impact communities in myriad ways, as accumulated stress, physical damage, disruption in routine, and adverse health outcomes significantly impact the lived experiences of individuals facing these challenges (García et al., 2021, p. 263). Pre-existing stressors can exacerbate unseen burdens such as trauma from experiencing a multitude of disasters, which in the case of Indigenous peoples are rooted in a legacy of colonialism and displacement (García et al., 2021, p. 263). Narratives of identity, place, belongingness, and safety are passed down through generations and affect the psychosocial outcomes of Indigenous tribes in America to this day.

Research Purpose and Goals

The project aims are as follows: to understand the conceptualization of intergenerational trauma concerning disaster outcomes, colonial displacement, identity, and connection to the land. Building upon existing research within post-colonial theory and disaster sociology, I will use qualitative data to identify how disasters shape intergenerational trauma through an Indigenous lens. Project results inform the fields of disaster management, sociology, and psychology by providing insight that will include trauma-informed recommendations for working with

Indigenous tribes to prepare for future disaster planning and assistance with mental health care.

Terminology

This paper uses various terms to refer to the Indigenous populations in the U.S.A. and beyond. Within the Canadian context in which I was raised, we refer to our First Nations, Inuit, and Métis people as Indigenous to act as an umbrella term both on a domestic and global level (Indigenous Awareness Canada, n.d.). Participants in my interviews self-described themselves as Native American, American Indian, and/or Indigenous. Other terms such as Aboriginal are used in cited materials, which are mostly utilized within Australian contexts in reference to the original peoples of mainland Australia (Working with Indigenous Australians and First Nations People, n.d.). When referring to global populations or making cross-cultural comparisons, I utilize the term Indigenous to act as a catch-all term for the populations which I am referencing. When referring to the Lumbee people specifically, I utilize the term Native American to describe them due to its use among the Lumbee people and within American-specific literature. Within this, I acknowledge that not all Native Americans in the U.S.A. would self-describe as such, but this is the commonly used term within the context of my population, and allows for specificity when addressing the vast diversity among Indigenous populations globally.

Chapter 2

LITERATURE REVIEW

Overview

Located in the state of North Carolina on the eastern coast of the United States of America is the Lumbee Tribe. Robeson, Scotland, Hoke, and Cumberland counties are home to this distinct population of Native American people (Lumbee Tribe of North Carolina, n.d.). The Lumbee Tribe's ancestors were from the Algonquian, Iroquoian, and Siouan language families, including the Hatteras, the Tuscarora, and the Cheraw (Lumbee Tribe of North Carolina, n.d.). The survivors of these tribes gathered in what is now known as their tribal lands across these four counties, and later in 1885, the state officially recognized the group (Lumbee Tribe of North Carolina, n.d.). State recognition entails the state recognizing a tribe's historical and cultural contributions to the area but does not guarantee state or federal funding (National Conference of State Legislatures, 2016). The Lumbee Tribe does receive funding from the state, though, and they are additionally able to apply for grants and support from federal agencies, but not through channels that federally recognized tribes go through (Lumbee Tribe of North Carolina, n.d.; National Conference of State Legislatures, 2016; Wilkes, 2021).

In 1956, Congress officially recognized the Lumbee people as a Native American tribe but withheld any federal benefits that are associated with recognition (Lumbee Tribe of North Carolina, n.d.). The Lumbee Act of 1956 provided this

recognition, but due to the wording of this document, full federal recognition of the Lumbee Tribe is essentially forbidden by the Lumbee Act itself, since it precludes them from seeking recognition through the Bureau of Indian Affairs' administrative process (Lumbee Tribe of North Carolina, n.d.). Enacting a congressional amendment to the wording of the Lumbee Act of 1956 would allow the tribe to proceed with the Bureau of Indian Affairs' recognition process (Lumbee Tribe of North Carolina, n.d.). It is a complex and ongoing battle to pass this special congressional legislation, and if the Lumbee Tribe can proceed, they will be the first tribe in American history to do so concerning their specific circumstances, as some other tribes and pueblos are subject to similar legislations (Lumbee Tribe of North Carolina, n.d.).

Due to this lack of federal recognition, the Lumbee Tribe is federally unsupported in times of disaster, as exemplified throughout the COVID-19 pandemic and the multiple disasters they have experienced over time (Emanuel, 2018, p. 46; Lumbee Tribe of North Carolina, n.d.). These disasters have consisted mainly of flooding due to hurricanes, which have destroyed infrastructure on numerous occasions. Disasters compound with adverse factors within the community, such as a lack of housing support, healthcare access, and governmental resources (Phillips, 2021, p. 428).

The effects of disasters and colonial influences are ever-present burdens on the Lumbee community. The research for this thesis examines these aspects through a lens of posttraumatic growth and intergenerational trauma among the Lumbee people. In this paper, I present data gathered on the impacts of disasters and colonialism on the

prevalence of posttraumatic growth and intergenerational trauma among the population. To accomplish this, I conducted qualitative interviews with Lumbee Tribal members and community stakeholders. I examine outcomes from this data to highlight the adverse effects of these systemic challenges while acknowledging the capacity for self-sufficiency and resilience within the Lumbee community. I give specific attention to the Lumbee people's cultural connections and ability to adapt and support one another. I utilize results from this data to bring light to aspects of the lived experiences of the Lumbee people regarding disasters, colonialism, and posttraumatic growth, as well as ways in which intergenerational trauma contributes to adverse outcomes. These findings have the potential to call attention to tangible resources and discussions of sovereignty within the community as they pertain to mental health resources and disaster preparedness.

Intergenerational Trauma

Research has concluded that trauma can be an individual experience as well as a collective one that can have implications across generations (Lehrner & Yehuda, 2018, p. 22). Connolly (2011) defines trauma as the concept of real events bringing about a breach in the protective shield of the psyche, disrupting the psychic structure and sense of self, which has profound effects on memory, regulation, biological stress modulation, and interpersonal relatedness (p. 607-608). The term trauma encapsulates the experience of many disruptive events that one may experience within their lifetime, which subverts the familiar and comfortable processes of daily life (Brothers,

2014, p. 3-4). Yet, Brothers (2014) notes that this linear model of trauma wherein an individual experiences an event that ruptures their psyche and sense of self in everyday life does not apply to a paradigm of trauma for individuals who were “born into it” (p. 4). There is no sense of stability and a time before a traumatic event for these individuals, instead, they exist in a world where they experience trauma of their own and that of others around them, causing ripple effects across generations.

“Intergenerational trauma” is the term used to describe this phenomenon which traverses across time, developmental stages, and individual experiences (Lehrner & Yehuda, 2018, p. 23).

Interdisciplinary research has described the effects, mechanisms, and nature of what has come to be known as intergenerational trauma; a cultural trauma that is “a tear in the social fabric, affecting a group of people that has achieved some degree of cohesion” (Lehrner & Yehuda, 2018, p. 23). The collective experience of war or a disaster can incite the dissemination of intergenerational trauma throughout a group. Causes of intergenerational trauma can also be due to an individual’s experience of a traumatic event, such as violence, conflict, loss, displacement, or other factors which affect family, friends, or community members around them (Connolly, 2011, p. 608). The defining feature of intergenerational trauma is that it passes from one generation or cohort to the next through relationships, traumatic attachments, or narratives that persist in conscious or unconscious ways (Brothers, 2014, p. 5). Attachment theory suggests that intergenerational trauma transmits through “moment-to-moment relational exchanges, largely nonverbal, that occur between parents and children,”

which can pass down characteristics of experiencing trauma to the child who may not have been maltreated (Brothers, 2014, p. 5).

Relational expectations between parents and children are necessary for the development of the infant's understanding of the world, as they are motivated to form stable relationships with their caregivers, and children are deeply affected by the confirmation or violation of expectancies within this relationship (Brothers, 2014, p. 6). Inconsistency or a lack of a caregiver's attention impacts an infant's integrated functioning, as the experience of not having one's needs met is damaging to what Brothers (2014) calls "systemically emergent certainties" (SECs). SECs encapsulate "the conditions under which we believe our relationships are subject to the orderly mutual influence necessary to sustain selfhood, and they tend to be experienced as unquestionably true" (Brothers, 2014, p. 4). The experience of intergenerational trauma brings about uncertainties that can entangle the forthcoming generations' perception of themselves and the world around them.

Some of the foundational work conducted on intergenerational trauma was studying the children of Holocaust survivors. This body of work aimed to determine if adverse effects such as "high incidence of depression, anxiety, conduct disorder, personality problems, inadequate maturity, excessive dependence, and poor coping" were due to indirect exposure to trauma or if this was due to direct effects of the parental inability to provide appropriate nurturing (Yehuda et al., 1998). Some studies argued that children of Holocaust survivors were likely to develop PTSD like that of their parents due to learned responses and behaviors exhibited by their caregivers

(Yehuda et al., 1998). But the exclusion of other biases which may impact the incidence rate of PTSD among this cohort was challenging to determine, which led Yehuda et al. (1998) to conduct the first comprehensive and structured clinical assessment of trauma exposure, PTSD, and other psychiatric disorders in a group of adult offspring of Holocaust survivors and demographically matched comparison subjects. The study found that adult children of Holocaust survivors reported experiencing a greater degree of cumulative lifetime stress than the control group and that the prevalence of current and lifetime PTSD was significantly higher in the children of Holocaust survivors than in the comparison subjects (Yehuda et al., 1998). In this study, it was found that the children of Holocaust survivors also had a higher prevalence of psychiatric disorders than the comparison group, yet they did not experience more potentially traumatic life events overall (Yehuda et al., 1998). About one-fourth of the offspring group designated Holocaust-related upbringing as the most distressing event they had experienced thus far. A Holocaust-related upbringing was described as “physical and emotional damage to the parent, the emotional and/or physical neglect of the child by the parent, the responsibility of caring for the parent from a young age, the minimizing of the offspring’s own life experiences in contrast to the Holocaust, the burden of compensating the parent for past losses, and being taught to fear the environment and react to it with inappropriate hypervigilance and distrust” (Yehuda et al., 1998). This foundational study allowed for the clinical observation of differences prevalent between groups who had experienced traumatic events vicariously from and in part due to the direct exposure to trauma in their parents’ lives

and established that this narrative played a formative role in their psychological development.

Other groups of people exposed to pertinent trauma are those experiencing war, displacement, and life as a refugee. Atallah (2017) highlights how Palestinian, Yugoslavian, and Sierra Leonian people have had to navigate traumatic war-induced circumstances with the resources available while negotiating for culturally and contextually relevant resources (p. 359). Collective processing of traumatic stress is a necessary framework to understand experiences beyond Westernized views of trauma, as interdependence and kinship are culturally relevant to these groups of people and do not rely on models of individual resilience (Atallah, 2017, p. 259). Emotional expression, a sense of belonging, religion, and cultural beliefs are necessary factors of posttraumatic growth, according to Punamäki (2010), and dictate the telling of stories to future generations (Atallah, 2017, p. 259-260). Communities exposed to violence and war are faced with healing from the trauma while still being exposed to the ongoing turmoil in many ways. Refugees who must relocate due to war or disasters face settling in a new area and seeking stability, while people enduring traumatic events and remaining in their community face unsettling realities. These disparities highlight how people facing some of the worst circumstances in society are ill-equipped to recover from traumatic events.

People who are minoritized within their home communities and face violence are also subject to similar experiences of trauma, such as interned Japanese Americans during World War Two or Indigenous peoples of Canada and the United States who

were forced into residential schools and boarding schools by the government throughout the 19th and 20th centuries (Canadian Geographic, 2021; The National Native American Boarding School Healing Coalition, 2020). The U.S. government forced Japanese Americans into internment camps in 1942, who faced sudden unemployment, relocation, fears for their safety, economic losses, and the destruction of family and community networks (Nagata, 1998, p. 125). This order by the American government was racially motivated and set the scene for discrimination and anti-Asian sentiments perpetuating throughout and long after the war ended (Nagata, 1998, p. 125). Researchers have observed that long-lasting effects have arisen among the Japanese Americans who faced traumatic environments throughout the internment, as there was a joint disruption of the Japanese Americans' livelihood, safety, and identities (Nagata, 1998, p. 126). People were kept in internment camps for up to four years at a time, with the effects of this traumatic experience leaving a lasting, but silent impact (Nagata & Takeshita, 2002, p. 42). "Decades passed before 'the silent shame of the community was replaced by righteous demands of justice,'" as President Bush finally issued a redress in 1990, acknowledging that Japanese Americans were interned based on ethnicity alone (Nagata & Takeshita, 2002, p. 42-43). The humiliation, pain, and distrust caused by the government affected interned individuals who were singled out, despite two-thirds being U.S. citizens (Nagata & Takeshita, 2002, p. 42).

This racially motivated act of violence against Japanese Americans is similar to injustices done to Indigenous people in Canada and the United States who were

targeted based on their ethnicity within their homeland. The creation of the Residential School System in Canada in 1883 by Prime Minister John A. MacDonald began a torturous legacy of over 160 years of displacement and abuse of upwards of 150,000 Indigenous children (Canadian Geographic, 2021). Indigenous children were taken from their homes across Canada, separated from their communities, and forced to live at Christian-based institutions tasked with “killing the Indian in the child” (Canadian Geographic, 2021). Children were not allowed to utilize their languages, traditions, or cultural practices, and many faced physical, emotional, and sexual abuse, with over 6,000 children dying at residential schools (Canadian Geographic, 2021; Jackson & Sadler, 2022, p. 19). These violent colonial practices of “aggressive assimilation” caused trauma to Indigenous people across Canada for multiple generations; the elders of stolen children were affected, as well as the future generations to come from those who experienced the schools themselves (Canadian Geographic, 2021).

Similarly, boarding, day, and mission schools that targeted Indigenous populations in America are thought to have been implemented as early as 1754-1860 (Locklear, 2017, p. 14). Indigenous children were removed from their homes and communities as a means of assimilation, which was federally supported by the Indian Civilization Fund Act of 1819 that allotted \$10,000 a year to support religious groups that were running these organizations (Locklear, 2017, p. 14). Families were threatened with a loss of rations, incarceration, or starvation if they refused to send their children to these schools, with some children ultimately being hunted down by police and government officials (Reyhner, 2018, p. 61). Primary goals included

introducing English language education throughout the 1970s in on and off-reservation schools, overall reducing sovereignty regarding Indigenous education, language, community, identity, and property throughout the education system (Reyhner, 2018, p. 64). Although the numbers are disputed and difficult to measure, there were an estimated 60,889 Indigenous children in some form of boarding schools by 1925 in approximately 367 schools across 29 states (The National Native American Boarding School Healing Coalition, 2020). As of 2020, 73 of these schools remain open today, with 15 of them continuing to board Indigenous children, further contributing to the lasting legacy of the schools impacting Indigenous communities across the United States to this day (The National Native American Boarding School Healing Coalition).

The violence structurally embedded within a society encompasses complex political, social, gendered, racial, and economic means of further disenfranchising those most affected by traumatic events (Jackson & Sadler, 2022, p. 4). These institutional and structurally created setbacks for people facing traumatic events affect people on many levels, as a lack of financial, social, and cultural resources creates an even more hostile environment that does not lend itself to healing. Sociologist Johan Galtung defines structural violence as “a phenomenon by which institutional policies and practices negatively and disproportionately impact vulnerable populations” due to an inequitable hegemonic distribution of power (1969). This denotes an active form of structural arrangements embedded in our social world's political and economic

organization; they are violent because they cause injury to people in an invisible, ever-perpetuating cycle (Jackson & Sadler, 2022, p. 2).

The disproportionate nature of resource access within the capitalist system ensures that those most affected by traumatic events never genuinely get the opportunity to process traumatic events healthily and instead sets the stage for intergenerational transmission of posttraumatic symptoms (Lehrner & Yehuda, 2018, p. 25). Lack of housing support, income equality, mental health resources, culturally competent care, paid time off, childcare support, access to nutritious and culturally relevant foods, leisure time, and stress management perpetuates an environment in which trauma responses and narratives are created and passed down through family and community lineages (Jackson & Sadler, 2022, p. 19). For example, colonization and the legacy of Canada's occupation of Indigenous land are reflected in the "cultural trauma, lack of social cohesion that translate into diminished resiliency, lessened fortitude to overcome addictions, and higher rates of family violence," which accounts for the lack of resources in the community (de Leeuw et al., 2010, p. 285). Proper understanding and support during posttraumatic times for communities and families would lead to an environment where intergenerational resilience and wisdom could be further nourished and cultivated rather than diminished and exploited through disregard and inevitable structural violence.

Indigenous Populations & General Trauma

Structural violence as a means of perpetuating cycles of trauma is particularly relevant among Indigenous populations across North America, as displacement, genocide, and systematic disenfranchisement has affected these communities for centuries. Menzies (2010) notes that public policies which have exacerbated poor social conditions for Indigenous people have had significant impacts on the disproportionate number of Indigenous people that experience mental health challenges compared to the general population. These public policies hold significant weight in terms of the cultural trauma that Indigenous people have faced since settlers arrived. Policies across America have perpetuated cycles of violence that have impacted Native American people individually and collectively, as the roots of this trauma and poor mental health is based in genocide and historical oppression (Wiechelt et al., 2012, p. 320). Western medicine and government officials attribute these adverse outcomes such as substance use, poor mental health, and violence within Native American communities to individual failings and pathologies, with little recognition of the foundational chronic issue at hand, which is colonialism and historical trauma (Duran, 1995, p. 6). Historical trauma is the result of an accumulative, devastating cycle of destruction of culture and identity aimed at creating assimilation among Native American people that began with European contact and perpetuates to this day (Wiechelt et al., 2012, p. 320).

It is important to acknowledge that much of psychology and sociology have developed from a white, Western viewpoint, often with the aim of diagnosing

pathologies among groups of non-white populations. Psychological diagnosis itself is rooted in the comparison of “normal” and “abnormal” subjects, which often takes place from a colonial lens. This perspective fails to account for the environment in which a subject may be situated, which is particularly relevant when examining the psychological well-being of Native American populations, as much of their adverse experiences are due to legacies of colonialism and historical trauma (Duran, 1995, p. 8). Cross-cultural approaches and traditional methodologies seek to remedy this, but as Duran (1995) suggests, there is an ongoing tension between empirical, scientific-based therapies put forth by Western methods and traditional approaches to medicine and healing among Native American populations (p. 9). This is not to say that traditional practices and remedies are not scientific or empirically supported, but rather that the deviation from colonial medicine and ways of thinking is often still resisted today and is a case for sovereignty over Native American people’s decisions surrounding treatment, healing, and communal grieving.

Preventative and clinical tools such as The Sweetgrass Method for addressing Intergenerational Trauma provide an Indigenous-based method of integrating the self, others, and continued healing support networks to encourage introspection and community strength (Baez et al., 2016, p. 4). Braiding sweetgrass is a traditional and sacred act for many Indigenous communities, and The Sweetgrass Method reflects the three strands within the braid in its approach to client-centered therapy as a spiritual integration into traditional psychotherapies (Baez et al., 2016, p. 10). The Sweetgrass Method seeks to honor people and their stories by implementing introspection,

collaboration, and continuity into psychotherapeutic practices, while acting as a healthy culturally informed way of promoting healing among Indigenous populations (Baez et al., 2016, p. 6-7).

Disasters and Trauma

Causal factors of trauma can be traced to various incidents throughout the lifespan, and disasters as instigators of trauma are likely to rise due to climate change (Lee et al., 2020, p. 99). Disasters can cause community-level traumatic experiences and generate direct social and economic costs, which have severe implications for individuals and nations alike. Lee et al. (2020) categorized disaster survivors into three categories based on their contingency to community trauma (p. 99). Those who were most directly affected by trauma lived in the disaster-impacted areas, and are identified as primary victims (Lee et al., 2020, p. 99). Secondary victims are community members and significant associates of primary victims and first responders who witnessed the trauma scene and experienced severe threats from community trauma (Lee et al., 2020, p. 99). Finally, tertiary victims did not live in the trauma-affected area but experienced stress reactions due to their psychological or geographical position in the trauma-affected area (Lee et al., 2020, p. 99).

Lee et al. (2020) notes that residing near a trauma-affected region is a strong predictor of PTSD following a community disaster but that some studies have indicated that psychological proximity is a more important predictor of PTSD than geographical proximity (p. 102). Therefore, Lee et al. (2020) suggests that the

meaning of a traumatic event, including having a personal connection to victims' relatives, is significantly associated with the development of PTSD following a disaster, which cannot be attributed to geographical location alone (p. 102). Tosone (2020) also notes how the dispersion of shared traumatic reality occurs on a communal level following a disaster event, as experiencing these adverse events within a community can have a chronic traumatic impact on interpersonal and communal levels (p. 55). This shared trauma can occur among community members, especially those helping in disaster times, such as first responders, mental health clinicians, and social workers. While shared trauma implies similar experiences, Tosone (2020) emphasizes that the same event variably impacts people (p. 56). An insecure attachment or more significant exposure to potentially traumatic life events can lead to more tremendous significant shared stress, depending on individual factors (Tosone, 2020, p. 56-57).

Other difficulties regarding one's mental health may arise when community networks are saturated in a disaster event and traumatic experiences (Boasso et al., 2015, p. 398). Therefore, whether social support promotes mental health may depend on the context within which it occurs. For example, vicarious re-traumatization, co-rumination, and expressed negative emotional responses could result in agitated and distressed arousal, which has a higher incidence of emotionally arousing survivors with PTS symptoms (Boasso et al., 2015, p. 398- 405). Boasso et al. (2015) note that the relationship between communicating about post-disaster trauma narratives and seeking help is a circular coping mechanism, as speaking about shared trauma can drive further support-seeking (p. 405). The nature of divulging narratives of shared

traumas about disasters may have differing implications for survivors depending on their attached meanings to the events and psychological state, as communal bonds and proximity to the event can result in varying responses.

Considering that more than a third of individuals severely exposed to disasters in the United States may develop PTSD or other disorders, action must be taken to alleviate these outcomes (North & Pfefferbaum, 2013, p. 507). North and Pfefferbaum (2013) examined how this action could occur, as the identified gaps in disaster response contingent on mental health initiatives and trauma responses pointed to a lack of care throughout the disaster response cycle (p. 508). Firstly, an accurate assessment of mental health problems and related needs among disaster-affected groups is essential, as it differs from typical disaster emergency response, which often focuses on visible harms (North & Pfefferbaum, 2013, p. 509). North and Pfefferbaum (2013) also advocate for community surveillance, as individual assessments are necessary, but general inquiries into the prevalence of communal mental health issues following disasters ensure the allocation of resources through increased services and interventions (p. 509). This is extremely relevant when considering that throughout a twenty-year period of 1981-2001, 61,396 individuals were identified as disaster survivors within disaster-related psychological research literature in an international sample (Norris et al., 2002, p. 211). Norris et al. (2002) found that mental-health-related issues, such as “chronic problems in living”, meant that disaster survivors experienced more stressful life events, which caused strain and interpersonal conflicts (p. 217). These identifiable stressors and strains contribute to what Norris et al. (2002)

identified as “psychosocial resource loss,” as disaster survivors observed a decline in stabilizing factors such as social support, social embeddedness, self-efficacy, optimism, and perceived control (p. 217). There is an identifiable link between the severity of exposure and the impact of a disaster on prolonged adverse mental health outcomes on communal and individual levels, with age and gender acting as risk or protective factors (Norris et al., 2002, p. 229, 234). Female disaster survivors and school-age youths are most adversely affected, with age specifically being observed to be positively related to resilience, acting as a protective factor (Norris et al., 2002, p. 229-234). There is a caveat to age, though, as middle-aged individuals receive considerable social support but also are one of the most significant providers, causing chronic stress and burdens to occur more frequently within this part of the population (Norris et al., 2002, p. 235).

To provide social support and treatment to the aforementioned primary and tertiary exposure groups, mental health assessments should be brief and uncomplicated for practitioners to employ following disasters without compromising accuracy or breadth (North & Pfefferbaum, 2013, p. 511). Holding focus groups, following up on case reporting, and conducting surveys are ways to analyze the immediate needs from a community perspective following a disaster, with practitioners stationed within shelters or evacuation centers as an optimal position to ensure that referrals and triage could take place (North & Pfefferbaum, 2013, p. 512). North and Pfefferbaum (2013) describe an array of wellness and resilience-based psychosocial interventions that are employed following disasters, as early interventions can “provide emotional support,

educate, and normalize emotional responses, even before new psychiatric disorders have time to develop and be diagnosable” (p. 513). Psychological first aid, psychological debriefing, crisis counseling, and early psychosocial interventions can help limit adverse psychological outcomes for disaster survivors on an individual and community level. Integrating these approaches into traditional disaster response can reduce the adverse outcomes often observed following disasters.

Indigenous People and Disaster Resilience

While a growing number of communities are at risk of exposure to disasters due to climate change, Indigenous people have used their traditional knowledge to prepare for, cope with, and survive disasters for centuries (Lambert & Scott, 2019, p. 1). Indigenous people worldwide have traditional knowledge, which is often orally passed down and describes disaster events and strategies for response. For example, during the Indian Ocean tsunami of 2004, the inhabitants of the Indonesian Simeulue Island community survived at a vastly higher rate than others within Indonesia due to a story about buffaloes running to the hills when a tsunami was coming, which alerted them of the incoming tsunami in time to prepare (Lambert & Scott, 2019, p. 1). While science may not have traditionally considered the localized and specific knowledge of Indigenous people to be of great significance, there is importance in regional knowledge within disaster response, preparation, and resilience. The ability of Indigenous people to assist in locale-specific practices that have arisen from a close relationship with the environment within a disaster-related context integrates

Indigenous knowledge within disaster risk and recovery planning in a very impactful way (Lambert & Scott, 2019, p. 2).

Indigenous people ought to be integrated into the system of disaster science, risk, and mitigation planning to avoid misconstruing or misappropriation of information, as colonialism and disenfranchisement have silenced them in many fields over time. The community-led, bottom-up organization is necessary to address the systemic issues wherein Indigenous knowledge is ignored and appropriated and will ensure that Indigenous communities which need disaster response planning are able to engage in it in a self-sufficient way. Harmonizing modern science with traditional knowledge holds great benefits for all people if cultural values and credit is upheld in a meaningful way. It is evident that Indigenous knowledge provides many benefits to disaster risk reduction (Lambert & Scott, 2019, p. 1), and there is a growing necessity for this resilience within our world. An integration of Indigenous knowledge and disaster risk reduction practices is seen in various places throughout the world, such as in Papua New Guinea where a formalized field method combining Indigenous knowledge with disaster risk reduction practices has been instituted among local villages (Kelman et al., 2012, p. 14). This led villagers to discuss their traditional knowledge surrounding housing construction and materials that resisted common hazards within the area, as well as early warning signs of volcanic eruption (Kelman et al., 2012, p. 15). This reinforced the concept of working with external organizations to prepare for disasters, while sharing their wealth of knowledge in response to the rapidly changing environmental conditions (Kelman et al., 2012, p. 15). Similarly, a

small community in the Philippines utilized a participatory three-dimensional map, which was created in consultation with Indigenous Subanon people, Cebuano migrants, local authorities, NGO staff, and scientists to reduce drought, landslides, and traffic crash risks (Kelman et al., 2012, p. 16). This allowed the community to embed disaster risk reduction practices in their daily lives while incorporating Indigenous ways of living and responding to hazards (Kelman et al., 2012, p. 16).

Disasters across the globe have had significant impacts on Indigenous communities, which have relied on a local system of knowledge to navigate adverse effects (Lambert & Scott, 2019, p. 1). In these cases, the adoption of traditional knowledge in disaster response relates to an individual's socioeconomic status, as well as the characteristics of the approaching disaster, as not all disasters can be prevented with similar resources (Mavhura et al., 2013, p. 42). Preventative measures, such as those witnessed by Mavhura et al. (2013) during floods in Zimbabwe, had much to do with the sequence of events in which people responded to the event, as well as the materials they had on hand. Mavhura et al. (2013) observed strategies for saving people's lives and household goods in relation to their past experiences with flooding, as locals elevated beds from the floor and utensils were kept on shelves high above the ground where floodwaters could not reach (p. 43). Locals used techniques to save shelters, crops, livestock, and other food, with the income level of the home having the greatest impact on how much a family could prepare and respond to a disaster (Mavhura et al., 2013, p. 45). Income, as well as education, occupational position, socioeconomic status, geographical situation to hazards, as well as the availability of

external support, were indicative of whether these traditional approaches to disaster preparedness or response could be executed efficiently (Mavhura et al., 2013, p. 46). It is evident that these disparities within Indigenous communities could have vast impacts on their ability to prepare and respond to disasters in traditional manners on a case-by-case basis and that inequalities within communities affect their capacity for resilience.

While Indigenous peoples are frequently identified as a population susceptible to the effects of environmental change, it is vital to highlight how they can respond to environmental change, such as that caused by disasters (Ford et al., 2020, p. 532). Strong connections to the land, one another, and spirituality in many Indigenous communities contribute to resilience, which Ford et al. (2020) define as the “capacity of individuals, communities, and systems to survive, adapt, and grow in the face of stress and shocks, and even transform when conditions require it” (p. 533). Resilience includes coping, adapting, and responding to environmental changes, as “place-based factors” are informed by the social context of a community’s ability to respond adequately (Ford et al., 2020, p. 533). A connection to place, the communal feeling of agency, the support of institutions, and the engagement of collective action all contribute to the resilience of Indigenous communities as they seek to manage a variety of shocks and stresses from experienced or projected environmental change (Ford et al., 2020, p. 539).

While the proficiency and uniqueness of traditional knowledge and responses to disasters by Indigenous communities ought to be upheld due to their historical

dismissal, there is great contention within the disaster research community surrounding the concept of resilience. Criticism of resiliency suggests that it is forcing Indigenous people into accepting the necessity of a future laden with disastrous events especially in the context of climate change (Reid, 2019, p. 10).

Academics herald resilience as a source of ‘learning’ for peoples, both Indigenous and non-Indigenous, everywhere (Reid, 2019, p. 10). In contrast, activities that dictate the need for resilience and disaster adaptation are occurring outside the Arctic and by non-Indigenous people engaging in unsustainable practices. Placing value on Indigenous knowledge based on its utility to external communities and a Western scientific audience is not without its faults, as this functional utility is celebrated while harmful practices continue to occur to the detriment of Indigenous populations. Reid states, “historically, colonial powers disparaged indigenous peoples for precisely the same reasons they now seem to revere them” (2019, p. 13). Disaster researchers need to approach Indigenous ways of knowing with the respect that should be afforded to them while understanding the colonial violence perpetuated in the current global capitalist market that contributes to these compounding disasters.

COVID-19 and Indigenous Peoples

The worldwide pandemic, COVID-19, began in 2020 and highlighted health inequalities concerning environmental conditions and socioeconomic status, as many marginalized groups were adversely affected. While the COVID-19 pandemic had vast effects on densely populated cities, Indigenous people in remote communities across

the world were not spared from infection, as high poverty rates and associated social risks create conditions for the spread of COVID-19 in Indigenous populations, once introduced (Goha et al., 2021, p. 207). According to a report by Elisabeth Gawthrop of the APM Research Lab, as of April 2, 2022, Indigenous people in America had the highest crude and age-adjusted mortality rate at 447 deaths per 100,000, which they recognize as likely being a low estimate due to underreporting. Goha et al. (2021) point out that while Indigenous people account for 5% of the global population, they also constitute 15% of the extreme poor, as their life expectancy is about 20 years lower than that of non-Indigenous populations globally (p. 207). If COVID-19 was introduced to isolated Indigenous communities, a lack of access to healthcare, sanitation, testing, and contact tracing led to increased susceptibility to the virus. The impacts of COVID-19 not only affect Indigenous people based on health but culturally as well, as elders are at the highest risk of dying from the virus, which leads to an unanticipated loss of knowledge and tradition (Carmen, 2020).

As people across the world had to adapt to the crisis of the COVID-19 pandemic, Indigenous people employed differing protective measures. While local norms of many Indigenous communities could incidentally contribute to the spread of COVID-19 due to the emphasis on collectivity through shared family residences, shared food, communal labor, and ceremonial gatherings, these activities had to be altered or ceased as mitigation measures to protect the community. For example, in Bolivia, the Tsimane population was identified as particularly vulnerable to COVID-19, so Kaplan et al. (2020) assisted in providing information to aid in collective

decision-making regarding the increasing dangers of the pandemic (p. 1729).

Historically, the Tsimane population has collectively isolated and sheltered themselves from the outside world when diseases and epidemics have occurred. The Tsimane people used this strategy with a reciprocal discussion between Bolivian officials and Tsimane tribal leaders (Kaplan et al., 2020, p. 1730). Village meetings established procedures for quarantining if an outbreak occurred and identifying supplies that needed to be gathered in anticipation of the collective isolation (Kaplan et al., 2020, p. 1730). Coordination of case reporting, testing, and contact tracing with the Bolivian officials took place, as well as the distribution of PPE and essential medical supplies (Kaplan et al., 2020, p. 1731). This voluntary collective isolation of the Tsimane tribe in coordination with the Bolivian government exemplified a communal effort to mitigate the effects of the burgeoning pandemic.

In contrast, Maudrie et al. (2021) note that 71% of American Indian and Alaska Native people live in urban environments, which does not afford them the same opportunity to seek out collective isolation. While cultural centers within cities can provide similar benefits to their sense of community and connection to their indigeneity, Indigenous people within an urban setting were adversely affected by COVID-19 “given the intersection of poor access to adequate healthcare, food insecurity, and poverty” (Maudrie et al., 2021). Mass unemployment, food insecurity, housing insecurity, limited PPE supply, and dense populations adversely affected Indigenous people living within urban settings, especially as social services faced a funding shortage with assisting them (Maudrie et al., 2021).

According to a study conducted by Faruk et al. (2021) on the effects of COVID-19 on the mental health of Indigenous Bangladeshi populations, “the pandemic has intensified mental health problems for indigenous people” (p. 4). While this is widely observed across global Indigenous communities, adhering to traditional knowledge and skills, inclination to contribute to the community, family and social bonding, culture, history, and language has also been identified as protective factors within the pandemic (Faruk et al., 2021, p. 4). Although many of these outlets that provide benefits to the mental well-being of Indigenous people may have been hampered by the nature of the virus, these cultural strengths have contributed to methods such as returning to the land. Many Canadian Indigenous people found themselves returning to the land and isolating themselves in family units on and off reserves, engaging in medicinal practices, fishing, hunting, and creating traditional regalia and crafts (CMAJ 2020, p. 788). Connecting online and using traditional skills to sew masks encouraged Canadian Indigenous people to connect in meaningful ways, boosting morale and connection to identity (CMAJ, 2020, p. 788).

While global disparities cause great affliction across the differing experiences between communally isolating tribes or Indigenous people who live in urban settings, COVID-19 carried with it harm to Indigenous communities. High mortality rates, the prevalence of comorbidities, poverty, poor mental health, and colonial violence made it challenging to navigate a global pandemic among a population that has already been exposed to so much violence and despair (Power et al., 2020, p. 2737). In a study conducted on the social vulnerability of Native American and Alaskan Native people

in the U.S. throughout COVID-19, Hathaway (2021) found that all tribal geographic regions had higher percentages of poverty, unemployment, and lower per capita income compared to national averages (p. 258). These had significant impacts on the tribal region's ability to adapt and respond to the COVID-19 pandemic, especially among the Navajo people who had poverty rates of about 40% and crowding rates of about 17% throughout the pandemic, leading to high rates of virus transmission (Hathaway, 2021, p. 258). In a forthcoming article by Goldman and Andrasfay (2022), they estimated that throughout the years 2020 and 2021, there were about 8,880 deaths of Native Americans and Alaskan Natives in the United States with COVID-19 cited as the underlying cause of death (p. 3). This research concludes that the pandemic reduced Native American life expectancy at birth from 72 years of age in 2019 to about 67 years of age in 2020, and about 65 years in 2021, resulting in a total loss of about 4.5 years overall (Goldman & Andrasfay, 2022, p. 3). This loss of life expectancy is three years greater than estimates for white populations in the U.S., and about 1.5 years larger than the life expectancy loss for both Black and Latino populations (Goldman & Andrasfay, 2022, p. 3). Now more than ever, community bonds, traditional practices, and surviving knowledge passed down through generations are integral to the survival of Indigenous communities across the globe to exist in a world wrought by a global pandemic.

Lumbee Tribe, Disasters, and COVID-19

The Lumbee Tribe of North Carolina is a particularly relevant population when examining Indigenous communities who faced difficulties during the pandemic. The Lumbee tribe mainly resides in Lumberton, North Carolina, which is one of the poorest and most racially diverse cities in North Carolina and the United States (Seong et al., 2021, p. 2). Additionally, the Lumbee Tribe has not been fully recognized by the federal government, which means that they were not eligible to receive federal funds to provide health care during the COVID-19 pandemic that their fully recognized counterparts may have received (Power et al., 2020, p. 2737). More than half of all Indigenous people in North Carolina live in rural, underserved communities where vaccination rates against COVID-19 have been lower than the state average (Locklear et al., 2021). These communities also are more likely to have disproportionate rates of infection of COVID-19 due to a lack of access to “mass testing due to poverty, access issues, inadequate information, logistics, and issues surrounding fear, stigma, and trust” (Locklear et al., 2021).

The Building Resistance and Vital Equity (BRAVE) project implemented by the North Carolina Central University Advanced Center for COVID-19 Related Disparities, the University of North Carolina at Pembroke, and the Lumbee Tribe of North Carolina sought to address these inequities by expanding COVID-19 testing sites within Lumbee tribal land and conducted follow-up surveys (Locklear et al., 2021). Statistics from this project found that only 28% of Native American respondents reported that they would “definitely get” the vaccine once it became

available for free and that 30% of Native American respondents wanted to wait to see what happened to people who got the vaccine first (Locklear et al., 2021). Indigenous respondents also wanted to see what happened to people like them who received the vaccine and also noted that for the vaccine to be available closer to them would be an essential requirement for them to receive it (Locklear et al., 2021). The Indigenous respondents in this survey expressed similar hesitancy to their Black counterparts, whereas white respondents were less likely to express these concerns (Locklear et al., 2021). This finding is not shocking, as medical racism, limited access to medical care, and distrust in authority are prevalent among Indigenous and Black communities due to a legacy of harm caused by governmental agencies and scientists (Freimuth et al., 2017; Mosby & Swidrovich, 2021; Gerretsen et al., 2021).

Distrust of federal and local agencies could be anticipated considering the tumultuous relationship the Lumbee Tribe has had with the federal government since 1888, as they have repeatedly applied for state and federal recognition for decades (Phillips, 2021, p. 428). The Lumbee Act was passed in 1956, which recognized the tribe but withheld full benefits such as access to housing through the Bureau of Indian Affairs, access to education through the Bureau of Indian Education, and health care through the Indian Health Service (Phillips, 2021, p. 428). The tribe has introduced separate acts and projects to advocate for the tribe's access to maternal and child wellness, substance use assistance and harm reduction, housing and employment services, and educational opportunities, with varying levels of success (Phillips, 2021, p. 429). Without full benefits and recognition on the federal and state

level, the Lumbee Tribe must advocate for itself and fight for assistance in many areas of dire need that relate to their well-being.

While the ongoing pandemic and continuing legal battles related to the colonial history of the land provide the Lumbee Tribe with extensive advocacy work, disasters also plague the people living there. In 2016, Hurricane Matthew made landfall in North Carolina, explicitly affecting Lumberton, where the Lumbee Tribe primarily resides (Funes, 2016). Hurricane Matthew directly impacted approximately 50,000 of the Lumbee tribe's 55,000 members, who lost homes, businesses, food, and supplies in the devastation (Funes, 2016). While a disaster plan was in place, the impact of Matthew exceeded the tribe's expectations, as record rainfall caused mass flooding from the Lumbee River (Funes, 2016). While projects such as the federally funded Hazard Mitigation Grant Program aimed to assist Lumberton residents in relocating and rebuilding their homes following Hurricane Matthew, this was not a culturally competent solution (Seong et al., 2021, p. 10). Findings show that the greater number of residents in the area who identified as African American, Native American, Hispanic, or Latino was directly related to a decrease in the likelihood that they would relocate from their homes and community, regardless of flooding risk (Seong et al., 2021, p. 10). More robust social ties, community involvement, and cultural perspectives influenced the choice to relocate following the hurricane and distrust in the government due to legacies of harm and displacement (Seong et al., 2021, p. 10). Property value, mortgaged homes, and the ability to find a new, safe house in a favorable location also affected the choices Lumberton residents had to

make in relocating, especially if they had a lower annual income or were deemed to be socially vulnerable (Seong et al., 2021, p. 12-13).

Seong et al. (2021) state that their findings “suggest a statistical association between the higher proportion of Native Americans in neighborhoods and a lower likelihood of relocation. It is possible that minority homeowners have lower risk perceptions for future disasters and less trust in government implementation than non-minority residents, and thereby are less confident that choosing relocation would be a viable option for them” (p. 13). The perception of risk, access to housing support, financial stability, and a history of government intervention vastly affect the decisions of Lumbee people to relocate following disasters, as well as the inclination to stay in a comfortable communal setting nearby other individuals akin to themselves. While this line of thought is understandable, it, unfortunately, left homeowners vulnerable to further flooding caused by Hurricane Florence in 2018, which shortly followed Hurricane Matthew. These compounding disasters affected those who were least likely to relocate and exposed them to further hardships and trauma, which was reinforced by the circumstances surrounding their geopolitical and cultural context.

The floodwaters from Hurricane Matthew in 2016 and Hurricane Florence in 2018 subsequently damaged the Lumbee Tribe’s dam and lake facilities, which not only aid in flood prevention but also serve as a recreational and cultural site (FEMA, 2020, p. 1). While the tribe is legally obligated to pay for the damages to this flood mitigation system due to erosion and unanticipated floodwaters, they applied to FEMA for additional funding support in December 2020. In November of 2021,

FEMA denied this request because “the Tribe could not demonstrate either a direct relationship between upgrades to the dam’s main structure and the eligible damages to the spillway outlet or that the costs of the upgrades were reasonable” (United States Civilian Board of Contract Appeals, 2021). This is an unfortunate loss for the tribe, considering that they will have to internally support repairs, which follows an aura of imposed self-sufficiency on the tribe due to a lack of investment on behalf of the federal government. While the Lumbee Tribe is still recovering from and fighting the impacts of a global pandemic, they are further required to stretch thin their funding and tribal money, among many pressing issues. Repairing the dam and lake in preparation for inevitable future flooding is imperative, yet inadequate access to healthcare, education, and housing services further exacerbates existing disparities within the tribe. Hurricane Floyd in 1999 closely followed Tropical Storm Dennis, which Hurricanes Matthew and Florence have echoed in their demonstration of destructive power across a short period (Decker, 2018). The consecutive disasters not only make tribal members more vulnerable to future emergencies and compounding burdens from the pandemic but also set the groundwork for adverse impacts on well-being overall. Inadequate services and responses actively disenfranchise the Lumbee Tribe. It is only a matter of time before they face further losses due to the severity of these compounding factors.

Chapter 3

PROBLEM STATEMENT

The Lumbee Tribe of North Carolina is situated near the Lumbee River, which is particularly prone to flooding in times of coastal storms and Hurricanes (Emanuel, 2018, p. 26). Hurricanes Matthew and Florence are especially salient in community members' minds, as homes, businesses, and community amenities were damaged in these storms (Decker, 2018). The ongoing COVID-19 pandemic has adversely affected the area, as the tribe's status as not being fully federally recognized limits the amount of support they can receive through governmental funding for healthcare (Phillips, 2021, p. 428; Power et al., 2020, p. 2737). The community has robust grassroots agencies and community-led programs to address these gaps. However, structural barriers rooted in colonial and divisive ideologies have caused pain and unrest in the area for decades (Phillips, 2021, p. 429). Intergenerational trauma caused by the marginalization of the tribe has led to a self-sufficient community that has had cope with grief and devastation in varying forms (Phillips, 2021, p. 429). Acknowledgment of the resilience of the Lumbee people is imperative, and further understanding the mechanisms of intergenerational narratives of strength and healing is necessary to examine how the Lumbee people can prepare, mitigate, and communally survive future disasters.

This study seeks to build upon existing literature in trauma, disasters, and indigenous resilience to answer the following research questions:

1. What are the specific health or other effects of intergenerational trauma among the Lumbee people of North Carolina?
2. Do intergenerational trauma from disasters and the COVID-19 pandemic compound with trauma caused by colonial displacement from previous years?
3. In what ways do respondents perceive and describe intergenerational trauma as a legacy or ongoing experience for members of their community?
4. What indicators of posttraumatic growth are present for affected people?

Methods

Within this study, I utilized posttraumatic growth theory due to its applicability to narrative analysis of meaning-making throughout the experience of traumatic events (Neimeyer, 2004, p. 53). Posttraumatic growth theory contains five tenets of measurement of psychological growth which are personal strength, relating to others, new possibilities, spiritual change, and appreciation of life (Splevins et al., 2010). With these aspects in mind, this study uses posttraumatic growth theory to understand the Lumbee Tribe's connection to place, land, and each other over time and following disaster events. This highlights the impacts of intergenerational trauma within the community and seeks to understand if this phenomenon has shaped and defined their experiences and interactions with one another and the land around them at times of homeostasis and disaster. The research plan, including methodology, study participants, procedures, data analysis, ethical concerns, and a proposed timeline, comprise this chapter's primary components. Within disaster and sociological

literature, Indigenous resilience is gaining more recognition, and expanding the framework of cooperation and integration of Indigenous voices within disaster response is integral to this project. Integrating Indigenous ways of knowing, healing, and perceiving one's surroundings is essential to conducting this project and centers on Indigenous perspectives. This study seeks to add valuable data that can inform the promotion of the well-being of the Lumbee people during disasters while also encouraging reflection upon structural and historical processes which have imparted burdens upon their self-organization and ability to cope.

Methodological and Theoretical Framework

This study utilized qualitative interviews to examine the Lumbee peoples' lived experiences of intergenerational trauma, disaster exposure, and community identity. Analyzing the relationship between disasters and trauma necessitates a further examination of the psychological outcomes following a disaster event, as this study asked participants to not only reflect on their past experiences but also on their current state and outlook on life. To analyze themes that emerged from the collected data, I employed posttraumatic growth theory. While this study does not quantitatively measure the five tenets of posttraumatic growth theory within the sample, I further examine how these aspects were reflected in the participant's responses in the discussion section. Posttraumatic growth theory can be interpreted as either tangible psychological improvements for an individual's well-being, or as a cognitive restructuring of an individual's life story (Jayawickreme & Blackie, 2014, p. 312).

Experiencing a traumatic event such as a disaster can influence how an individual may perceive their life and what they hold most important to them, which is why this psychological measurement tool is applicable to the narrative form of this study's qualitative methods and modality (Jayawickreme & Blackie, 2014, p. 312).

While not all disasters necessitate trauma, the absence of conditions, such as feelings of a lack of safety during disasters, can be traumatizing and have lasting effects if not treated appropriately (Levers & Hyatt-Burkhart, 2019, p. 93). Differences in exposure to a disaster may lead to varying psychological manifestations linked to the event. In many cases, intergenerational trauma caused by disasters can occur, which is further compounded by genetic susceptibility, socioeconomic factors, and social support (Racanello et al., 2019, p. 2). Patterns of trauma-related emotions, mental states, and coping strategies can be traced from a disaster survivor to their children, with collective memories and mirrored-generational cohort effects among those who were not even present for the event itself (Racanello et al., 2019, p. 2).

With these factors in mind, it is important to expand the literature on disaster-related intergenerational trauma from a posttraumatic growth perspective, while including those who may be particularly vulnerable to the negative effects of trauma transmission. The Lumbee River, as well as the Raft Swamp, Saddletree Swamp, and Burnt Swamp wetlands hold great cultural and historical significance to the Lumbee people, which is complicated by floods and droughts that have plagued the area since initial settlement (Emanuel, 2018, p. 26). Therefore, posttraumatic growth theory

provides a framework for studying these interactions through qualitative interviews with tribal members.

Data Collection

Sampling and Recruitment. This qualitative project consists of eleven semi-structured in-depth interviews with Lumbee tribal members and community partners. Nine of these participants were women, and two were men, aged 31-59 years old, and all but one person identified as Lumbee themselves. This individual was approved for an interview due to their scholarly background and regional knowledge of the area and community organizing in response to environmental changes. Interviews ranged from thirty-five minutes to one hundred minutes long and gathered autobiographical information pertaining to the participant's life, family, experiences with disasters, experiences during the COVID-19 pandemic, and opinions on the wider health of the Lumbee population. All these interviews took place virtually either on Zoom or over the phone for the convenience of participants and to bridge geographical gaps. I made these contacts mostly through cold emailing, of which I sent out approximately fifty-two requests for interviews via email. I followed up with each contact at least twice. I used snowball sampling, asking participants for names of people to look contact, who were often coworkers or neighbors.

To address my difficulties obtaining interviews, I posted a flier for my project in three different public Lumbee Facebook groups with the permission of their administrators. This yielded two legitimate responses and future interviews, but far

more fabricated profiles emailed me and requested an interview. I received approximately 150 false emails of individuals claiming to be Lumbee, some of which were easily identifiable by fake names such as “Calvin Klein” and “Elvis Presley”, and others because I found that they were using the name of a tribal member who was deceased and was identified as such through a Google search. I imagine that this was due to my \$20 incentive for completing an interview, which is a common issue that researchers are seeing, especially following the COVID-19 pandemic due to inflation and wage insecurity (Ridge et al., 2023). When it was unclear as to whether some of the participants who emailed me were legitimate, I scheduled a Zoom meeting with them and found that they were immediately unable to answer simple questions about disasters that had occurred within the area, at which point I terminated the interviews. This speaks not only to the crises of meeting basic needs for many people following the pandemic but also to difficulties in conducting qualitative research online, especially as an outsider to the community who is geographically far away from the researcher.

Despite the challenges in recruitment, I obtained one hundred and fifteen pages of transcribed and coded interviews in addition to twenty pages of handwritten field notes. To deepen my understanding of the community and their experiences, I visited North Carolina for six days wherein I saw the surrounding area and communities and attended the 18th Annual Southeast Native Studies Conference.

The conference greatly enhanced my knowledge of the tribe, as the two-day event included eleven panels. Most of these panels included Lumbee scholars,

community members, and activists. This gave me a wider breadth of appreciation for the tribe's culture and what they held as important and relevant to them within literature, agriculture, art, science, and ecology. This visit provided the opportunity to speak to presenters and attendees informally over lunch and dinners at Lumbee-owned businesses, delving further into conversations about their daily lives, food, and families.

Procedures and Data Collection. I conducted semi-structured qualitative interviews to gather abundant data about participants' relationships with their families, community, and environment (Racanello et al., 2019, p. 2). Preliminary data included six of my first interviews. After these first few interviews, I decided to plan my fieldwork to make connections for additional interviews, as well as to enhance my understanding of the physical environment in relation to my positionality within this project (Amit, 2000, p. 3). This allowed for more genuine connections with participants and increased trust and contributed to insights reflected within the data. Immersing myself in the environment allowed me to view my data beyond the one-dimensional recounting of a participant's experience and provided contextual insight into the shared lived experiences of tribal members (Amit, 2000, p. 3).

Despite the smaller sample size, the interviews were adequate due to achieved data saturation regarding intergenerational trauma and disasters as a main narrative. Data saturation refers to the depth of data collected, as well as instances where interviews do not glean new themes or conclusions based on the questions a researcher is asking (Fusch & Ness, 2015, p. 1409). While participants always had new insights

to offer, main themes regarding experiences with Hurricanes Matthew and Florence, caring for elders, community relations, and compounding factors within the tribe kept coming up and were repeated in nearly every interview conducted. Many qualitative studies successfully utilize small, case-study-like sample sizes to illustrate the experiences of participants due to the depth and richness of their data, and through data triangulation within my fieldwork and observations, there are ample conclusions that can be drawn from this pool of information (Fusch & Ness, 2015, p. 1411).

Ethical Considerations and Human Subjects. I obtained approval for this project from the Institutional Review Board (IRB) at the University of Delaware and at the Lumbee Tribe of North Carolina's discretion. It was important to me to receive feedback from the Lumbee Tribe themselves in the form of their IRB and to meet with the head of their review board for feedback and questions that they had. I implemented the suggestions that they had and edited my qualitative instrument, obtaining IRB approval from the University of Delaware again after this alteration. The formal involvement of the Lumbee Tribe in my project was not only the ethical thing to do, but it also brought about a more nuanced perspective to my project and ensured that this data will be relevant to the tribe itself.

All participants in this study voluntarily participated with an incentive of a \$20 Amazon electronic gift card per person. There were no anticipated social, legal, economic, or physical risks from participation in this study and any emotional distress caused by speaking about disaster events or intergenerational trauma was considered. I encouraged participants to only answer questions they felt comfortable discussing.

Before the interview, I briefed participants on their ethical rights and protections, provided time for them to review and sign the informed consent form, and ensured them that their data and identity would be kept secure and confidential. I de-identified data as I transcribed it, and pseudonyms were utilized in place of participants' true identities.

I have stored the recordings and transcriptions on my secured password-protected university-affiliated Google Drive account. Copies of paper forms and physical recordings are securely stored at my Newark, Delaware residence. Data from this project will be kept on my Google Drive account and at my residence in a secure location for the duration of my degree program at the University of Delaware.

Reflexivity. As an international student from northern Alberta, Canada, I am geographically and historically removed from the realities of the Lumbee Tribe of North Carolina. I grew up with many Indigenous friends, mentors, and teachers and have taken an interest in Indigenous rights, experiences with disasters, and mental health. As a white, cisgender woman from another country, there are inherent differences and barriers between me and the people of the Lumbee Tribe. But my interest in the tribe's history, displacement, experiences, and identity have driven me to further educate myself on the multitude of compounding factors that shape the lived reality of the Lumbee people. There is an incentive for me to entrench myself within this tribe's history beyond academic pursuit, as I genuinely care about their adversities and how they have adapted and survived. I truly hope to make long-lasting connections with the people of the Lumbee Tribe and assert that a goal of mine is to

share findings from my study with residents and assist in community projects which could include disaster preparedness, response, mitigation, and awareness.

Analysis and Interpretation of Results

Initial data analysis occurred after data collection, as I assessed my notes and recorded interviews. From there, I utilized an open-coding style to ensure that themes emerged from my data without relying on preconceived notions of what I may have found, which can be seen in Appendix B. (Blair, 2015, p. 17). I transcribed and coded interviews in the order in which they occurred to be able to assess any differences detected between participants, building my codes into wider concepts, and then narrowing them down and collapsing some categories into one another for brevity and conciseness. In total, I identified five major themes which emerged from my data analysis, most of which were consistent among each participant. I will discuss differences and similarities within the themes in the next section.

Chapter 4

RESULTS

In the following sections, I will be sharing the results of my data analysis of interviews and field notes. This includes quotes from participants, as well as associated literature relevant to the themes. Data fell into five main categories, with most participants having reflected upon these topics. The following sections follow my interview guide narratively, beginning with participants' reflections on intergenerational narratives of disasters and stories they heard about disasters as children. Then, to participants' own experiences with disasters, which were primarily Hurricanes Matthew and Florence. Stories of experiencing Hurricanes Matthew and Florence brought about narratives of intergenerational trauma and providing care for elders within the family throughout disasters. The following material is related to the COVID-19 pandemic and the participant's experiences throughout the last three years in isolation and emerging back into the community. Finally, as reflected in my interview guide, participants shared their thoughts on community relations and compounding factors related to the tribe's wellness, closeness, identity, and history.

Intergenerational Narratives of Disasters

I began every interview by asking the participant to describe a bit about themselves, followed by memories they may have had of hearing family members speak about their experiences with disasters. Nine out of eleven participants shared stories of disasters that their parents, grandparents, and extended family members had experienced. The most frequent disaster mentioned was Hurricane Hazel, which made

landfall in the Cape Fear region on October 15, 1954. Five participants mentioned their grandparents and parents specifically telling stories about Hazel, describing its severity as an unprecedented event in the region, as well as its association with other historical events. One participant, Jon, stated:

Oh, definitely growing up it was all about Hurricane Hazel...I mean, Hazel was sort of like a... It was a novelty just to hear elders talk about it. It was this big thing that happened, and everybody had some experience with it.

Another participant, Leslie commented on Hazel as well:

Hurricane Hazel was like this touchpoint for people of Eastern North Carolina... You know, just hearing fleeting mentions of the hurricane as a kid is all I really remember. As I got older, and I started to do oral history interviews like this, you know, people would say things like “that was the year that Thurgood Marshall came to Lumberton. He came when Hurricane Hazel came!” And you’re like ‘Wow, okay!’... and you know, it wasn’t so much my Lumbee family that remembered Thurgood Marshall coming you know, it was you know, Black residents of Lumberton that I was interviewing for a project on school desegregation... that remembered the association between Hurricane Hazel and Thurgood Marshall.. And then so then, as an older person, I started to make those sort of associations between, you know, things like Brown versus Board of Education and that case... these sorts of really otherwise huge consequential events.

An overall sense of the gravity of the event their families and fellow community members had experienced came through within participants' answers, as they spoke to the devastation they had heard of in the stories and connection to other current events from the time. Participants also spoke to family narratives of past pandemics such as the 1918 flu pandemic, describing how their experiences within the

COVID-19 pandemic brought up memories from childhood about stories they had heard. Jon also stated:

I had an elderly aunt growing up who talked frankly about being... She was a teenager and a young adult during the 1918 pandemic. About a year ago, I found an old video clip from the 1980s where my dad took a bunch of elders down to the settlement where Lumbee people had lived for a time in Georgia when they were working on turpentine plantations. And there's a clip of my great great aunt ... in that video... and she's like standing in the cemetery and pointing to all these graves and the interviewer's like, "Yeah, did you know her? Here's a name"... And he read it, he was like, "Did you know her?" My aunt's like, "Yeah, I remember her, or I remember when she died of the flu". And the guy was like, "Did you go to her funeral?" and she was like "No, I had the flu. I almost died". So to me like, there's this really strong historical connection between the pandemic and the 1918 pandemic. Then... I don't know, I don't know what to make of it yet, but I... I mark that connection in a way that I don't want to forget.

Participants recounted their experiences hearing about other disaster events such as earthquakes, tornadoes, house fires, and other hurricanes, which led into their own experiences with disasters. Throughout my interviews, I found that only one respondent expressed a direct relation between how her mother had experienced disasters affecting her own perception of them. Ashley shared the following:

Yeah, I was scared of them, when they'd talk about how bad it was... my mom does not like she don't do well with storms. So I guess that was one thing that kind of had her to react to all the storms that comes around now. We would have to sit in the area with her when a storm come up. And let's all sit together and be quiet, turn the TV off and everything until it was over with. And then we were able to get back to what we were doing before the storm. So I think because of the hurricane, and her has got her to where she is with storms. And she impacted that on... me, I know I don't like... like the hurricanes, when they say hurricane I might go in and start preparing, "Where's the

center part of my house, move to where there's no windows". Okay, I started looking for things like that and listening and I started listening. Like, okay, I turn things down and all of a sudden listen to this... "Is there a sound of a train coming, or was it just the wind, or was it actually a train that's out there?" We got train tracks around so it's that is hard too... I never heard a hurricane come through, but they all say, they all say, everybody says it sounds like a train, so I wrestle with things like that. And I do not like storms at nighttime because I can't see what's happening.

In contrast to this, stories of past storms and disaster events were viewed by Leslie as a way to teach children about storytelling and identity within their cultural context. She stated:

Our elders will just, will tell us these things, or mention these things, or we'll be overhearing as they're talking about these things. It serves to provide everyone in the family with a kind of shared experience. ... Your identity is not necessarily attached to these events, but knowing that your immediate family members, the people who are you're closest to, exercise the most influence over you, were shaped by these events gives the child, I think, a way to belong, you know. I think sometimes also, when I'm thinking a little bit more abstractly, I think about "How does this inscribe or re-inscribe forms of trauma [through] storytelling?" But then it's like I don't know that you know it... Our ancestors or our elders may or may not be aware of the physical trauma they experienced, and as a result of these things, they are most likely not aware of how sharing the information might pose a kind of threat, you know, that one might interpret as traumatic. And at the same time like if these things are not shared, how do we explain, or how do we begin to process like the other very real things that we feel or do, you know?

These stories of intergenerational narratives of disasters brought forth images of confusion, nostalgia, astonishment, fear, and ambivalence among participants in their youths as they processed this knowledge. Some people also

expressed a distinct lack of communication about disasters either due to a general disinterest in it among their family, or a specific avoidance of it due to negative emotions. Ashley who shared her story about “inheriting” her fear of storms from her mother recounted her gripping account of understanding how her own responses to storms was in part from witnessing her mother’s reactions, but also laughed as she stated that her family really did not share stories of disasters with one another. This stood out to me, as the experiences of past disasters for some Lumbee people like Ashley exist physiologically and psychologically, but perhaps are not spoken of out loud.

Experiencing Matthew and Florence

Participants resoundingly shared their encounters with Hurricanes Matthew and Florence in and around Robeson County, describing the power, shock, and adaptations to these large storms that took the area by surprise. Every person interviewed had direct experience with Matthew and Florence, often noting that due to their proximity to one another in time, some events blurred together. Participants described the physical damage within the area in various ways. Cathy stated:

I had standing water in my backyard, it looked like a river... It was just a torrential rain, like the heaviest rain I've ever experienced.

Leslie described the storm’s impact on the landscape and the significance that this held for her:

It was like feet and feet and feet of water. And so you know, seeing that also the trees like oh, God! The downed trees were hard to look at because those pine trees are so important to me, culturally, anyway, just in terms of an orientation to the landscape.

Jessica shared her reflections on her lack of preparation for the storms and her experience of traveling to a friend's place to help during Hurricane Matthew:

And I was well, I mean like everybody else. I wasn't prepared... No, nothing could have prepared me for Matthew and Florence. That was that.... That's two different animals. I don't know what other metrics are out there... but I can tell you that that has, you know, completely changed my barometer for hurricanes... Our people were completely blindsided by this...

I remember coming by her house, and she has like a modular home, and it just looked like a houseboat almost sitting on top of the water, and like, when you would come by, you would see it like, floating across, even though it wasn't moving. But there was that much water it was creating like this optical illusion.

Sherry shared how the storms altered the environment which she had become familiar with throughout her time living there:

From the bridge, beyond probably about maybe a fourth, maybe a third of a mile or so, you could see nothing but water had covered the whole roadway. And if you didn't know any better, you thought it was a river flowing, and I've never seen anything like that in my life, not where I lived, ever.

A loss of electricity, warm water, and an inability to cook meals throughout both Matthew and Florence were cited as major disruptions to everyday life. Cathy

told me about ways that this complicated her daily routine and how she was financially constrained in her options for dealing with it:

[There was a] loss of electricity for about a week, with both events, and they were pretty much back to back. Not only loss of electricity, but inability to really go anywhere... You know there was nowhere to go... to go and have a shower... We had to like, quickly cook everything that we could in the refrigerator and eat it... But we just didn't have the money to do that.

Laura similarly noted how the community began bartering with one another for items they needed and the challenges they faced acquiring necessities throughout the storms:

So I mean it was like almost going to the primitive stage, and my daughter said "Mom, I can't go get us gas"... The second year we had a generator, and it was worse than Matthew to go out there, but we were able to have electricity. It is frightening when you have to stay in a house with no electricity for a week.

Despite the environmental, emotional, and logistical challenges the Lumbee community faced during Matthew and Florence, there was a rich sense of community connections and helping that came through in the interviews. This aligns with findings that support the idea of emergent prosocial behavior during disaster events, whether that be through previous social ties, formal operations, or informal neighborhood groupings (Rodriguez et al., 2006, p. 91). Laura reflected on this:

I think it was more that the community came together, because everybody was like checking on everybody. They were like, well, "So and so needs this"... And at that time, I think the Red Cross was giving

out to my church, for example, was a place where we could get go get all this free food... and we can go put plates together and people in our community in our church, we would go because we didn't buy the food because the food was free, would pick it up, make plates and give it out and with cases of water and give them out to people like that you're really so that helped out a lot. I think the community came together. Because of that, it became not about you, it became about survival. Everybody, you know, trying to pitch in, like my neighbors down the road.

Jessica, who works in mental health, recounted how she had heard that emergency shelters in the area were calling for additional support from people with first aid training during Matthew. She arrived and utilized her skills as a helpful member of a diverse group of people who had gathered to assist the community.

Very quickly it became, "Hey, do you talk to this person over here with schizophrenia who lost their medication?"; "Can you guys sit with this lady here who is hyperventilating and we're sure she might, you know, have a cardiac episode here in a second?"; "This man right here has had night terrors ever since he come to the shelter, he wakes up screaming and hollering. Can you talk to him?"... So there were game wardens who, I imagine, picked the job that they didn't have to deal with as many people, right? And they were like, "Hey, how, what do we need to be saying, saying to people, because a lot of these people are scared!" So it's like, okay, and sort of giving like counseling first aid 101. You know, "Here's what you can say, here's what you should not say", and you know just different things like that. If it had not been for that whole shelter experience, I wouldn't have realized how really uprooted our communities had been.

Formal groups such as the American Red Cross and Salvation Army arrived and handed out food and other resources during Matthew and Florence, and other local as well as external community groups made a huge difference following the

hurricanes. One participant, Laura, shared how the North Carolina Baptist Men's group greatly assisted her in cleaning up her home following Matthew:

I live in a wooded area, so there were trees down and there was no way I could have paid someone to get all those tree limbs up. I mean they were like big tree limbs... Because of being divorced, I didn't have a man, male here. So, the Lutherans out of Raleigh, North Carolina, ... they were partnering with the Baptist Men's association put out fliers saying, "If you need assistance, call this number". And when I got home, they had called me and I had 20 people in my yard. I mean, standing in my yard, cleaning up grass in my yard, because that was the most damage I had. And it was like something out of a movie. When you come home, your car is parked outside of your house, about 10 to 15 cars, and you see people who are all waiting to be told what to do. And all of it was free.

Thomas, who works in local community housing, praised this organization as well:

Now, you do have some superstars, the North Carolina Baptist Men have been boots on the ground since day one and are still here, still providing assistance to the best of their ability. You have other religious organizations that have been here since day one, providing assistance to folks that don't have the means to do it themselves. So, from that world, we feel very blessed... It's the North Carolina Baptist Men who have shown up here and have been here and they're still here today, putting resources and dollars in our community.

While I was visiting the area for fieldwork observation, I saw the North Carolina Baptist Men's van driving around with tools through the downtown area, right over the Lumbee River. Nearly eight years later, they are still assisting the community. The community needs this assistance, especially for those who require repairs following the storm, as receiving aid through FEMA has been a tumultuous

experience. It is important to consider how FEMA acts as the representative for various other federal agencies that the tribe would be in communication with regarding disaster assistance. Due to the Lumbee people's complicated and painful history with governmental agencies, it is understandable that for some residents, feeling ignored and left behind may be amplified by these legacies.

Thomas, spoke in detail and length about Lumberton's specific lack of affordable housing, due not only to the housing stock available in the area but also because there are still repairs needed for public housing following the storms.

As a matter of fact, Hurricane Matthew was in October of 2016, and I stand here today, I still have 170 public housing units that are uninhabitable because FEMA, when they're boots on the ground, they're a wonderful organization. The moment their boots are gone, and they're supposed to supply you with assistance, they do everything in their power not to help...

Thomas expressed concern about a lack of communication, funding, and progress regarding outstanding housing-related matters with FEMA. He explains a discrepancy between offered funding and other relevant issues here:

You [FEMA] come in here and tell me that I was going to be taken care of... and you want to give me \$300,000 when I need \$7 or \$8 million dollars? Travesty... The federal government could have done far more than what they did post-tragedy. The state of North Carolina was not prepared for the size of the recovery. And still today, North Carolina has a program called NC Rebuild, and there are still people today, I know of a woman right now that has a storage unit, they've been working on her home for eight months. And her home is still not done. That's the travesty... If we appeal, we ask for a legitimate concern. And they say no, when we appeal it, they have 180 days to reply. Do

you know when they replied? On the last day. You know why? Because they feel that if they can wear you down enough, you'll go away...

We've had Florence, we've had Hazel, we've had Floyd, we've had Fran, we've had Hugo, we've had Matthew, we've had hurricane after hurricane... So do we think the hurricanes are magically gonna not happen again? Absolutely not. So, let's start being proactive. North Carolina has been reactive, North Carolina needs to be proactive. Let's look at mitigation. Let's build stuff outside the flood zone, let's find a way to get the housing that's in the flood zone out! It's typically for that group that don't have a voice, minority low-income folks. Let's find a way to get their house on higher ground. And then let's find a way to get these houses that are here raised up. You know, I mean, there's some common, I think there's starting to be some common sense thinking. But FEMA's got to be involved in that, FEMA's the one that's not at the table doing what they're supposed to be doing.

Thomas also pointed out an alarming statistic to me:

[In] the 2020 census, there was 134,000 people living in Robeson County, the 2020 census, it was 116,000. That's an 18,000 person decrease. And the number one contributing factor to that is going to be hurricanes.

This statistic echoed what I had heard from other participants regarding moving out of the area. Sherry recounted a conversation that she had with her co-worker:

You know, she said "This hurricane, and it sounds strange, but this hurricane was the best thing that happened to me because I had wanted to get out of Lumberton. But I've never really had a way to go. But due to this situation, I have been able to get some assistance and I'm moving". Even though she moved over to the next town, she said "Now I'm getting to move somewhere else". Which I can understand. I can understand, you know, it took something like this to get her out of a situation that she was really wanting to get out of, but that was something.

While Thomas' interpretation of the 2020 census does not account for an additional extreme weather event beyond Matthew and Florence which occurred two to four years prior, compounding effects from poor housing conditions, loss of income due to the COVID-19 pandemic, and anticipation of future hurricanes paints a picture of Lumberton and the surrounding area of facing multiple battles at once. Disasters occur within a pre-established cultural and social context, and factors such as economics, education, health, and crime interact with one another before, during, and after an event. Leslie described how her recollections of Hurricane Matthew are tied to the tragic deaths of women within her community:

The thing that does come to mind is a group called Shatter the Silence is based out of... they're based out of Lumberton. The woman who organized Shatter the Silence, her daughter Rhonda was killed in Lumberton after Hurricane Matthew, in the springtime after Hurricane Matthew... Rhonda, Megan, and Kristin are three women who were killed in the aftermath of Hurricane Matthew... And so, Shatter the Silence holds an annual march, also picnic, kind of reunion, in Lumberton, around the date that Rhonda's body was found... and I associate it with the with the hurricane, because Matthew laid waste to that area of East Lumberton, and it's... I actually lived there around 2003, 2004, I lived in a house that was about two blocks, two and a half blocks from where Rhonda, Megan, and Krisitn's bodies were found. And so, when the hurricane hit and I realized to what extent that area had been flooded, I thought about that house, you know. And I thought about my time there. And much later, it wasn't until much later that I learned about Rhonda... But you know now, when I attend a Shatter the Silence event, I'm always... you know... I'm... having my own level of kind of memories about that neighborhood and the place where I lived, and the ways in which it was so profoundly changed by the hurricane, you know. It's never been the most prosperous section of Lumberton, but you know, particularly after that it just became a place for people who wanted to do others harm to hang out, you know. And so, anyway, that's not exactly a commemoration of a disaster event. But

it's a commemoration, that.. of an event that was probably caused in part by the disaster.

Only weeks after Rhonda, Kristin, and Megan's deaths, two other women, Cynthia and Abby went missing from the same area, and the cases have yet to be solved (Hunt, 2021, p. 418). These tragic events and insurmountable amounts of loss within the community surrounding disaster-related events and external factors relate to what Hunt (2021) calls "blood memory", which is a "common tribal value of multigenerational remembrance [that] runs directly counter to prevailing Western traits of individual achievement, lack of transgenerational memory, and transcendence of one's genealogical fate and place of origin" (Mithlo, 2011). Historical, social, political, and cultural influences do not cease when disaster events take place, and the flood waters of Matthew and Florence only contributed to ongoing intergenerational experiences within the Lumbee tribe in addition to the environment itself.

Intergenerational Trauma and Disasters

Regarding intergenerational trauma stemming from stories told by family members, few participants expressed aspects of intergenerational trauma or fear surrounding disasters until they experienced a disaster for themselves as an adult. When stories of traumatic experiences with disasters came forth, they often revolved around caring for elders, predominantly women, as a pivotal part of their experiences throughout Hurricanes Matthew and Florence, as well as the COVID-19 pandemic. Caring for women within the family unit as a priority is not necessarily a surprising

finding given the Lumbee tribe's history of longstanding matriarchal authorities and matrilineal kinship as foundational cultural aspects (Lowery, 2016, p. 10). One participant, Jessica, stated:

We are an incredibly matriarchal society. Women do things here. If people would start talking about influential members of their family, I promise you the first two people they would talk about would be a woman.

Many participants framed their stories surrounding disaster events through the lens of caring for their mothers, aunts, grandmothers, and sisters. This included harrowing stories of rescuing elders from flooded homes, such as Kim describing her mother's experience in Hurricane Matthew:

I tried to get her to come stay with us that weekend, especially, you know, she's on oxygen, and she does dialysis, and so she was very sick during that time. "I'm gonna just come, stay with us", you know, because we knew it was gonna be kind of bad. I just, I don't think we expected it to be as bad as it was here in our area. But um, that was, it was hard, because not being able to get to her and the flooding either way, we couldn't get to her, and it just took so long, especially when the dam broke. And then the water was coming in her house and she's in there and couldn't get to her, that was just very devastating for me. But then they had to take her, FEMA finally came in and I think it was what was the National Guard if I'm not mistaken. ... So it was a tough experience, because by the time they got her, her oxygen level was really low. We had to go to the emergency room, and we were there for... all day. And it was hot, because, you know, they didn't have any electricity. They were running on generators. And so they basically said, "Hey, okay, well, it's better for you if you've got electricity, just to go home with these oxygen tanks here". And, and, you know, instead of staying here, we were able to find a better route and go to my aunt's house and take all that equipment that we needed.

Ashley had a similar experience with her aunt during Hurricane

Matthew:

My aunt had to be rescued from her house. She said that you wouldn't have thought she was on oxygen, she went to sleep and woke up to water in her house, and they had the National Guard get her out. Yeah, after trying to trying and trying and she got out they ended up having to carry her to the hospital because her oxygen got low. The power was out and everything, and they get to the hospital and then they didn't have water. And so they had these big old tanks outside, that was where they would fill water at. And you could smell the sewer... That was awful. Because we were like, we hoped she didn't have to stay there because ... the conditions that the hospital was in was terrible.

Jon was able to travel from his home outside of Robeson County to rescue his grandmother, recalling:

Like many elders, she just insisted that she was not going to leave her house right...My uncle called me... He didn't call my dad, he called me, and he said, "You need to go down there and get Mom". He's like "I can't believe you left her down there by herself!" I'm like "She wouldn't come, she wouldn't come with me!". I...I had to drive down like immediately after Hurricane Matthew and I...I knew topographically the right way to go to avoid flooding. You know I couldn't, I couldn't predict where down power lines and all that would be, but I'm... I'm on my route, and made it to her house, helped her pack some bags, and drove her back to where I live, and she she stayed with with us for quite a while after the hurricane, and we tell that story a lot, and there's a lot of like interesting and harrowing details about like trying to get around the power lines and down and stuff like that. So like, yeah, I mean in my family, we talk about the story of "so we're going to rescue grandma" and the... the funny and scary parts about that...

...It's not necessarily vulnerability that I'm thinking of. It's the, you know, "Wow!" There are... There are forces of nature and they're freak accidents, and they are all of these things that have the ability to instantly impact your family.

Stories of participants being separated from loved ones, specifically elder women within the family arose, but those that were able to provide care for family members expressed some fond memories, such as Sherry who stated:

With my mother, because at the time she had dementia. And we had to take care of her when the lights were off, so that was a challenge when it failed. Luckily, very very luckily, she was not on oxygen, she was mobile and getting around really, really well. But we made it through...

I guess, kind of, even though it was situational time, with bad weather, it helps us, you know, remember the good times, you know, at least we had them, you know, nobody went hungry. Everybody helped each other out, you know as far as keeping them safe, it was time to keep our parents safe and everything like that. So, you know, just sort of happy memories, and I think I was grateful that neither one of them were bed bound at that time, because there would have been some problems at that time, but they were both mobile.

Some participants expressed relief regarding their parents passing before major disaster events had occurred due to difficulties that may have arisen due to medical needs and the intensity of care they would have needed in dangerous and stressful times. Cathy stated that by the time Florence had occurred:

I was so glad that my mother had passed away... She had Alzheimer's, she was totally immobile, and she had a colostomy bag. And it would have been absolutely horrible to have to care for her without electricity, and there would have been nowhere to send her that would have had electricity... So I was so glad that she had already passed away before that hurricane came. And obviously we had to take care of our father. He had Parkinson's during that time, but he was never immobile and unable to get up, he did have trouble getting up from seating, from a seated position, but he could walk okay and go to the bathroom on his own. So but yeah, that was, that's why I'm so glad in my head, you know.

These stories can be interpreted as is the great amount of love and care participants expressed for their family members, as well as the recognition of the intergenerational care and role reversal they were experiencing in a caretaking position for their loved ones. For Jessica, this came full circle as she recounted her experience during Florence as a new mother and how she tied this to intergenerational trauma.

Well I feel like in a lot of ways modern science is catching up to things that my people and other minorities have been talking about for years. My people could tell you that historical trauma is a real thing... And I see... I feel like our people have talked about it, or just that we hold onto things from other generations, way way back. Like that study out of Georgia, where, you know they shock them [mice] to the sound, and then they bred them down so many generations, and they would still react to the sound, even though they had never been shocked...

My husband was working, and I had to stay home while he was at the shelter and I had to sit up with my little 22 and reload our generator with gas so our food wouldn't go bad and I had to keep a freezer full of milk for my son here. You know just so many, many things that I needed to do. It killed my husband to leave me, and they were, you know, saying "You are going to get fired if you don't come to work"... And we were up under like tornado watches for like days after that, and I just remember sitting up, in the middle of the night with my son, and with that gun, and I was like 6, 7 months pregnant and, you know, just feeling like the weight of the world on your shoulders and very paranoid about you know... "Is there somebody outside? What is that sound? Is that just the wind?"... My daughter is probably the nosiest human being. Listening to your phone call. You know "Who's there? Who's calling you? Where you going?", and you know, just little things like that... How hyper vigilant she is, even though she... I kind of went out of my way to make sure she has had a good childhood... and just so you know things like that, that you're not even aware of that you pass on, and I would hope that some of these things are gonna die with me. But then there's other things that I'm very reactive to, and I don't know why, it doesn't make sense. And I just wonder if it's those from way

way way back when, you know, just carried in my DNA. You know, like those little mice?¹

Jessica's profound story shows how her own experiences with disasters brought about a personal understanding of intergenerational trauma in reflection with how her children behave and how she has raised them. While her story is very emotional, it provides a lens for understanding how relations between generations shape our understanding of ourselves in the current and future forms, as well as where we came from. Leslie also spoke directly to intergenerational trauma as it pertained to her family and disaster experiences:

I don't know why, but I remember a little bit about the 1918 flu. And I think it's probably that my grandfather, who, I believe, was born around 1907, 1909...His father carried bodies of flu victims... [he] would travel through the community basically picking up bodies of people who had died from the flu. And so when COVID came around, you know, I think there was something again in that, the subconscious of hearing some of the some of those tidbits as a child that sort of resurfaced... And you know, having that sort of eruption or kind of resurrection in a way of something that had been buried pretty deep... Maybe because that's stuff that's carried in our bodies more than it is in our brains, you know? And so that sort of eruption of a very much buried detail is sort of historical detail... Somehow or another I hung on to that.

¹ I believe that Jessica is referring to a study done by Dias & Ressler in 2013 at Emory University in Atlanta, Georgia. This study subjected mice to odor fear conditioning prior to conception and found that subsequent generations of offspring showed increased behavioral sensitivity to said odor (Dias & Ressler, 2013, p. 89). The researchers concluded that this could be a framework for how environmental information may be inherited transgenerationally on numerous levels (Dias & Ressler, 2013, p. 89). While the details of what she is describing in this response is different, relating ideas of epigenetic carriers of trauma highlights an important experience.

But then, when my uncle died of COVID in July of 2020, you know, after maybe 14 days on the ventilator... There was this just like oh, God! You know we were so hopeful that he would make it, because we didn't have a lot of information at that point, you know. And a couple of months later I had another cousin who died of leukemia, and a friend from work, who died of leukemia the same month. And all of these, you know, being native people... just, I think... alerted me on a cellular level, or something to like, the dangers of this, and to the threat that it was that it was posing.

Similar to Jessica and Jon's previous story about the 1918 pandemic, Leslie is highlighting how her family's experiences with a past disaster event in the 1918 flu ignited a sense of understanding and intrigue within her as the COVID-19 pandemic pressed on, especially as members of her family and community passed away. Many challenges arose within the Lumbee Tribe throughout the COVID-19 pandemic, and intergenerational trauma being triggered by the events of the pandemic speaks to the ways in which they can continue to affect people across time and space.

Experiencing the COVID-19 pandemic

The COVID-19 pandemic was a disruptive force in the Lumbee community, not unlike the experiences of people across the world. But specific cultural, environmental, and social factors greatly influenced the way that the tribe navigated the events of the past three years. For example, Iris, who is not Lumbee herself but studies grassroots community organizing in the area spoke to the ways in which groups had to make sense of the pandemic:

I think there was that infrastructure there, but the difference with COVID-19, and with the quarantine in particular, is that the infrastructure had to pivot. It's like mode of employment, like the way because people, you know they used to say, "Okay, we're going to meet at two, and we're going to go through the door, and we're going to talk to this person that's for this person." And now they have to look different because of social distancing. And it had to look different because of folks just being fearful of being around each other. To be perfectly honest, I think a large part of especially the beginning of the pandemic was not knowing how to move around other people literally and figuratively, like we just didn't know... There was a reimagining of how to disperse resources, how to give out information because of just, you know, obvious health concerns and issues. So yeah, I think that was just like the huge, the biggest, the biggest shift when it came to groups working in the community.

Community organizations revolving around water quality, social justice, food security, and religious groups were all affected by COVID-19, so pressing issues related to the tribe's wellness had to be tackled through a different modality. As Iris mentioned, much of the connections to do this work were in place pre-pandemic, and just had to adjust to a new normal to operate safely. But as many participants stated, things simply weren't the same when they were unable to meet in person. Jon shared the following:

I knew going into the pandemic that like, for native people being able to be together in person, it's like super important right. That's been my entire lived experience. I didn't know how hard it would be to... to go two years or more, you know, going on three years now without that kind of interaction, and I will say last... last fall my family and I went to a powwow in Raleigh, and it was the first, I think that was the first time we've been back, really like, been back together with all these people, and it was amazing to see, you know, these people that we'd only emailed with, or seen on Zoom or things like this for what seemed like years and years. But it just made me really appreciate those interactions even more.

Many cultural events within the Lumbee tribe such as Lumbee Homecoming and powwows simply must be experienced in person. Multiple people I spoke to cited Lumbee Homecoming as their favorite event, which is a yearly week-long festival filled with pageants, food vendors, arts, crafts, and live music. Faith and religion are also very important within the tribe, with many people expressing religiosity and regular attendance at church. Church services were also halted or altered throughout the pandemic, which was another significant disruption to daily life. Simple interactions such as friendly physical touch were also made complicated by the pandemic, and participants resoundingly expressed how important hugging was to them, especially in times of grief. Kim shared these thoughts regarding how difficult it was for her family members to stop hugging one another and why they find it to be so important:

As far as my parents, my daddy did get it [COVID]. And I tried to tell him to stop hugging everyone at the church. And he's like "ahh, I'm okay", but he got it...

We're... our family is huggers. And that's one thing that everybody was talking about how we cannot hug, console anybody that we would, you know hug, and that was like, everybody we're talking about how was, just to hug, just what they knew, you know?

Natasha echoed this in her reflections upon how important hugging was in the community and how quickly it was reintroduced as things became more managed during the pandemic:

But I don't think people are ever going to stop hugging ever in our community, because we've always been big huggers, and it continues to be big huggers like even through COVID, you know... except for the time where we were definitely, we were isolated before the before vaccines came out, but the moment people started vaccinating they started hugging again, with masks on and everything. So I don't think that'll ever change.

Cathy also mentioned the cultural significance of hugging, especially within funerals for the Lumbee people:

You know it's just a whole it's just a line of hugging, and that was something that was really hard during the pandemic, is that, you know part of healing at a funeral is hugging the family, you know, and we didn't get to do that.

Thomas spoke to the impact that COVID-19 had in restricting the lack of human touch people could engage in. He said the following:

But for me, the biggest thing COVID has done is decrease our humanity, as far as, you know, a handshake, or a hug. To me, that's where it's done its damage.

As life rapidly changed throughout 2020, access to credible, culturally appropriate information about COVID-19 was imperative in educating community members about the virus, as well as mitigation efforts that should be pursued. Natasha, a woman who does research within the healthcare field, spoke to the difficulties in sharing accurate information with community members.

You know, my family members don't have a lot of access to the Internet. So, not being able to go to church and interact with each other, and you know, staying at home and not having a lot of access to

information, besides, the news right. That was, that was really challenging and and having, you know, like having conversations across generations, was difficult for me, because, like my family members being very old school, being very afraid of the virus, and you know, we were all afraid of the virus, but being afraid of the vaccines, and having to have those kinds of conversations, that was really challenging, because not only was it isolation, it was also the effect of miscommunication, and the effect that miscommunication had on trust and relationships. That was probably the hardest thing... one of the hardest.

I asked Natasha about when she realized that COVID-19 would be an event of its magnitude, and she shared the following:

I realized immediately that it was a big deal. I don't think it was in part of me that didn't realize that it was a big deal like even in March, you know, like the moment everything shut down. It was very much a big deal, but I had been having conversations with friends and family members prior to March, that this looked like it could be a big deal, and obviously at that time most people did not think that. And so when things started shutting down, and people just still refusing to think that there's anything to it, those were hard conversations. And then, when you can't get face to face with individuals and have real conversations with them, that made it even more challenging... We were kind of relegated to telephone conversations and communicating with friends on social media, on Facebook. But then you're battling everybody else's opinions and stuff on Facebook, too, and so like, then you have these Facebook wars about who knows best that, you know, like I think we all fell prey to that.

In response to this, I asked Natasha to share why she thought there was such contention within the community regarding COVID-19 and information related to it. She had a nuanced outlook on this:

I think it was just that, like, I think it was miscommunication, and being in a rural area there's definitely a sense of self-reliance and being

nervous about new vaccines, right? Because it was a new... It was not a traditional... I mean, and our Native American community doesn't really get the flu vaccine as much as we should either. But I think that that's all just part of rural communities. I don't think that we're necessarily any different culturally. I don't think that vaccines are necessarily like a cultural thing. I think that it's just the level of, it's just a level of miscommunication, and we also had positions and people in some leadership...you know, response authority... giving mixed messages. And so we came out with... and the tribal chairman came out with some videos speaking to our tribal community about the importance of vaccination. We also had some of our other tribal leadership come out and do videos, and we were sending out videos through the tribe, talking about the importance of vaccination to try to head off some of the miscommunication. But I think early on we were kind of like... We found ourselves scrambling to put this information out because of the mixed messaging from you know, from the State and from the Federal Government and from the CDC, and from the Department of Health and Human Services.

Sherry mentioned how the rural nature of the tribe's location influenced her perception of COVID as well. She described how in January of 2020 she had heard of COVID on the news and shared this information with members of her church:

I remember Sunday talking about, and nothing, nobody ever really thought anything of it, and when I did mention it, some of them had heard about it, but I thought how strange it was that I had actually spoke about it, and then here we are, you know we're actually experiencing it... but we didn't really think nothing of it. And then it was like it just kind of kept transitioning because we had heard those other things as time went on, on the news and then as far as the COVID. Then here I think it was in February, then we were being told about it here my job, yes, ma'am. So it just, I think it really mentally, it's just, like I said, you can easily, it's like a world away. It's like you never know when it'll actually pop up here, like I said, in our little rural area.

Sherry also works in health services and spoke about her role in providing information about vaccines to patients who were pregnant throughout the pandemic. She was encouraged to provide information to pre and post-natal patients about their options and scheduling their doses as they became available, and their approval from doctors to be given to pregnant patients. Sherry and Natasha both mentioned that they would like to see further studies on the implications of long COVID, as they recognized the severity of it and its potential harm to people within the community. I did not speak to anyone who had personal experiences with long COVID or knew anyone that did, though.

Jessica, who works in mental health had a nuanced perspective about COVID-19, as the pandemic greatly influenced the future trajectory of her work, and she also spoke to the divisiveness of the pandemic within the community.

Because of the political climate that we live in now, and how, somehow everything with the pandemic got politicized. It really hindered a lot of proactive measures that in any other time would not have even even been a factor. It became a political act to wear a mask to, even to even say that you, you know, believed that this was a real virus, and they wouldn't call it COVID instead of the China virus, or something crazy like, you know these very rudimentary things became politicized. And I think when our people started dying, it helped to lift the veil a little bit... When they're like, "Oh, so it'll kill you, even if you don't recognize it as a legitimate virus." It'll kill you even if you do wear your mask! It was just, I think it became the great equalizer. And you know, thank God for, like the IV therapy and all of those measures for our you know, most vulnerable populations. But yeah, I didn't think that this would be well, what I'm doing most days. But it is, you know I really like it. And again, I don't think our people would be as open to mental health if it had not been for this really like, world-shattering thing.

Participants discussed their firsthand experiences with mental health during the pandemic thoroughly in interviews. Many participants expressed that mental health held a great stigma in their community, and that combined with religiosity, they sometimes found it difficult to discuss mental health struggles with their friends, family, and peers. Contrasting this, other participants described the ways that they embraced discussions about mental health since the pandemic in an effort to destigmatize the topic in the Lumbee community. I feel as though my position as an outsider to the community may have made some participants more inclined to share their mental health and experiences, while for others, it could have made them more guarded. But I often engaged in deep, meaningful conversations about mental health with participants such as Ashley.

Ashley, who lives alone, recounted her struggles with her mental health throughout the isolation period in the following passage:

I got anxiety real bad. It was, I just couldn't take it. I really battled with depression before that, but the more I sat in his house, the worse I was getting. And so I talked to my doctor, and they referred me to someone to talk to and I have a person that I talk to every month and but my anxiety was so bad, that when I got to go out and get where, to go places, I would have a panic attack... I was hyperventilating. I was just, like scared... And I said that I needed help. Because I couldn't just do what I was doing, I was taking anti-depression medicine that was not helping. I said, "I need something, I need something, I need to talk to somebody" and I would just cry... COVID, it put me in a bad place mentally...

And I said, "I wonder if I got sick would there be anybody to come and check on me?" And so, I was doing all that I could to not get sick. And so it got me, and everybody was surprised that it got me, because I was

the one that was mask, sanitizer, wash hands. I was on it, I didn't touch nothing... But my Daddy, my family did come around and was calling me and asking was there anything they could do for me and everything. During that time my anxiety was bad because I could not interact with nobody. And it was just like, I had a craving for some chicken and rice, everything I ate was nasty... and my son saw where I had posted it on Facebook asking if any of my family was cooking some. And he had got off work at 10 o'clock, went home and cooked some and came to the house and said "open your door" and he had a mask on and handed it to me and I went to cry. And it's like the glass was between us and I just could not hug him and let him know how I appreciated it. So I did cry, and he put his hand on the door, and I put my hand on it with him, and it was just like, he had to turn around and walk away because he went and cried I was like, that was the most touching thing.

Ashley's story highlights the deep sadness that can come with isolation and how the pandemic affected her mental health, but also led to reassurance that her family would support her in times of need. Many other families experienced adverse effects of the pandemic, especially surrounding the great loss that came with people dying from the virus or other causes at that time when people were unable to gather. When I asked Cathy what she thought was the greatest challenge the tribe was facing regarding past disaster events, this is what she had to say:

Probably the number of deaths that we've had, because like, we haven't done anything as a tribe to acknowledge the number of deaths we've had during COVID. I don't know why, I mean a lot of people have suggested we need to do something, we need to memorialize or something, and I'm not sure why that hasn't happened. Maybe it's because some people, some families don't want people to know that their loved one died from COVID. I don't know, and I think people just don't know the number of people who died, even though it's been a lot and the health department has advertised by race the number of people who have died from COVID, I don't think that that has been very impactful, or I don't see people talking about that. But we really, I don't think we have addressed it as a community, the impact of

COVID, and COVID deaths are still happening.... People are still passing away from COVID, and it's just not very much at the forefront of what people are talking about engaging about.

Cathy's response illuminates how important it is for the Lumbee community to grieve together and acknowledge the significant events they have been through within the last three years. Since in-person events, religiosity, and cultural engagement are integral to the tribe, it may be beneficial for there to be a formal acknowledgment of this loss and the perseverance of the community in order to promote healing and a collective understanding of loss.

Community Relations and Compounding Factors

The social, political, and economic factors of the Lumbee tribe's history contribute to how disaster events are experienced, interpreted, and processed communally. The compounding nature of Hurricanes Matthew and Florence, as well as the COVID-19 pandemic occurring within a short four years of one another further contributes to adverse effects that tribal members face. Infrastructure had to be rebuilt following the hurricanes, as economic losses throughout both storms as well as the effects of the pandemic are encompassed by generational effects of trauma and structural violence. In relation to this, Cathy said the following:

It has changed a lot, because you know certain restaurants where Lumbee people went to eat closed permanently. They are gone and they haven't really come back in the same way, especially because we had

the pandemic after the hurricanes... And so I think because these disasters came back to back to back, it felt like there wasn't a recovery period between them, so that has made, I think that has been really hard... Gathering places that we used to have aren't there anymore, and a lot of the reason for that is because of hurricane damage and then the pandemic.

A loss of businesses and gathering places for Lumbee people was evident in the area when I did my fieldwork. Many of the people I interviewed expressed that they felt that a major challenge for the tribe overall was the economic situation the area has been in over the last few years. Iris spoke to this regarding her work with community organizations:

I'm including, like hurricanes and the COVID-19 pandemic, I think what that highlighted for a lot of people was the need to address problems holistically and really get at the root causes and antecedent conditions that lead to kind of these exacerbated negative effects...

There was the pandemic, obviously, but then there was also this like recovery from these physical storms that have happened, and that could have repeated during that [COVID-19]. That was also a threat during the pandemic for Robeson County, and then also thinking about the timing of... I guess people are calling it like the racial reckoning in the United States. And so we're at this like, really interesting nexus [of] people thinking about these unexpected things that could happen, and how race plays into our understanding or experiences of these things right?... But it was such an interesting time for Robeson County because a lot of people already knew that there were experiences that Black folks and that Indigenous folks in the county had that white folks didn't... and I think this was like a time of validation for that, because finally everyone is seeing it like the way they've been saying it is forever.

2020 was a tumultuous year worldwide, and the veil was lifted on systemic inequalities across America and within Robeson County as well. Many people I

interviewed spoke about their perception of poverty among the Lumbee people, and factors that they felt contributed to it, including education. Thomas stated the following:

The child poverty rate in Robeson County for 2020 is 40%. So we are a very distressed economic area. A lot of that has to do with the education system. The urban communities like Charlotte, Raleigh and Wilmington, they have the money to put into schools and new schools. And I've lived in a county that hasn't seen a new school since 1988... Affordable housing is an issue throughout the United States of America and everywhere. To me, it's a factor times ten when you're already in economically distressed areas to begin with.

Jessica shared similar thoughts regarding her opinions on poverty and its historical roots for the Lumbee people:

Well, I guess poverty is just the biggest thing that we're probably dealing with now, but that's nothing new. And you know, like the heaviness of capitalism on my people. I ... I can't think of a time where my people have not been exploited for their labor even going... you know through slavery, through conscription, and then, after that, the whole idea of sharecropping is how all of our people lived from the mid nineteenth century up until the fifties. That was, you know, a sizable workforce here for people to really and truly get every drop and out of workers... I feel like because of our very deep and religious morals and values... We feel like we can work ourselves out of poverty... If I work hard enough it will happen. And that is not true. There is some kind of cognitive dissonance going on with our people who see members of their family working incredibly hard and dying for nothing.

Chronic poverty and a lack of education contribute to other social disadvantages such as poor health and limited employment opportunities (Rose & Dyer, 2008). As Locklear (2017) emphasizes, the American educational system has

attempted to colonize and assimilate Indigenous people in America, and culturally relevant and uplifting education is often not available to Indigenous people in North America or in the Lumbee tribe itself (p. 13). Many Lumbee people are highly educated, and people I spoke to who had pursued higher education often expressed their passion for learning and how their family and community had influenced their career decisions (Lumbee Tribe of North Carolina, n.d.). Yet, due to historical and situational factors, not all Lumbee people are able to access education, employment, and the resources they need to lead a healthy lifestyle. Intergenerational trauma is a factor in this, and enduring challenges resulting from the War on Drugs have plagued the community regarding addiction and violence (Revels, 2018, p. 45). When I asked Laura what she felt like were the greatest challenges for the Lumbee tribe to face in the coming years due to current or historical impacts, this is what she had to say:

In the Lumbee Tribe, I would say addiction and depression, because they get addicted to stuff because they think that's the right thing to do...

They might try it. But then they get addicted... I can't see rationally why you would do that [if you were] brought up the same way... Why would you do that to your own child? Why wouldn't you want better? But people don't see it like I do. I mean... I don't understand. If you knew you had to get through it, why would you let your child go through it?

Leslie spoke about her views on addiction and trauma as well, highlighting historical events such as the murder of Lumbee activist and lawyer Julian Pierce in 1988, who was often brought up in conversations by other participants as well.

[In the 1970s and 80s] there was a social movement around criminal justice that emerged at the time, but the primary figure in that, for the Lumbee community, Julian Pierce, was murdered, you know, and he was murdered, I think, as an attempt to silence him. And, you know who was involved in that murder is something that people have speculated a lot about a lot for a long time, but I don't know that I've heard an open discussion, anyway, of the pain, the community-wide pain that resulted from that event, and from all the disappearances, and all of the unsolved murders and all of the the incarceration. You know what preceded through that time period is still with us, you know. So I think now again, my search for a historical pattern is seeing one, and fentanyl overdoses and the forms of domestic violence, in particular, that take place as a result of drug use in our community.

Leslie went on to further elaborate on this topic:

And a Lumbee friend of mine has explained in some ways that our involvement with drugs as a search for medicine... which is pretty powerful, you know. I mean there's all kinds of other socioeconomic explanations, and you know stuff that you can look at. Study after study after study that says... explains why communities like ours become victims of substance abuse. But thinking about it as a search for medicine asks you to take the story back in time, you know? And it's like, what exactly are we trying to heal from? You know? And what has been taken from us in our culturally self-determined ways of healing, what's been stolen from us, which again, I think of language, I think of medicinal plants, I think of healing rituals that are both spiritual and medicinal in nature... But that search for medicine is a powerful thing. I mean going back to the 1520s, you know. I think there's some evidence that our ancestors were meeting Europeans and the 1520s, not always with good results. But that's a long time of not really having as much control over your future as we deserve to have, you know. And so, when that control is taken away from us, when all of our property, our land literally, everything like our property is stolen from us, and the thieves are never even asked to account for it, much less like repay it, or brought to justice. I mean, they just got off scott free, and then put themselves in charge and turn around and criminalize us for every single thing we do.

Historical factors such as early contact with European settlers, conscription in the Civil War and defiance of that through dissenters such as Henry Berry Lowry, violent attacks from the Ku Klux Klan, and the murders of political activists such as Julian Pierce paint a picture of ways in which the Lumbee tribe has struggled throughout these events, and how they've fought back (Lumbee Tribe, n.d.). Jessica stated to me "I'm sick of living through unprecedented times. I'm sick of this chapter of the history textbook", which is a sentiment that many of her ancestors would likely echo; through the struggle for federal recognition from the United States Government to local pressing issues, there has always been a social and political climate wherein the Lumbee people are required to act in accordance to securing a better life for themselves. The weight of this does not come easily, and compounding factors from historical and current events, such as disasters, pandemics, violence, and poverty all build up on top of one another. But in the search for medicine Leslie spoke of, it is apparent that the medicine that is most needed is community support and resources to best acknowledge these gaps within the community and address them with the tribe's own discretion and values at the core of building a future that is just for all members of the Lumbee Tribe.

Chapter 5

DISCUSSION

In the wake of multiple disaster events over the past eight years, the Lumbee Tribe of North Carolina has shown how community support, social advocacy, and adaptation can contribute to positive outcomes following disasters. Yet, there are institutional and structural disadvantages that are ever-present forces within the community, mostly marked by their fight for federal recognition. There currently is a lack of resources available to the tribe due to their status as a state-recognized tribe, and historical and current events further contribute to adverse experiences within the community. Violence, substance use, and poor mental and physical health are factors of daily life that many tribal members face, and much of the root causes of these aspects can be attributed to intergenerational trauma and colonialism.

Within this study, I found meaningful evidence regarding intergenerational trauma within the Lumbee Tribe in connection to disasters. Few people felt significant effects from hearing their elders describe disaster events they had lived through. Rather, participants described challenging and emotional experiences when going through disaster events themselves, especially as they pertained to caring for elders. While it cannot be said that this is proof of intergenerational transmission of trauma through disaster experiences, the intergenerational *experiences* of trauma within disasters and framing of disaster experiences through care for elders within one's family unit points to this narrative theme throughout my interviews. This is specific to the Lumbee Tribe, especially by means of the emphasis on caring for women within

the family unit, as the tribe is largely matriarchal and frames much of their history and sense of belonging and matrilineal lines.

Additionally, among the study sample of young to middle-aged adults of higher educational attainment, there are various examples of how individuals may have achieved posttraumatic growth relating to one or multiple tenets of the theory. This suggests that greater educational attainment and yearly household income could contribute to the possibility of attaining posttraumatic growth. Further, a greater ability to reckon with intergenerational trauma and heal from negative circumstances surrounding one's mental health may be related to the resources and community support at one's disposal, which would invariably be related to income and education. Therefore, having tangible, spiritual, and social assets may mitigate the effects of intergenerational trauma related to disasters and contribute to the potential for posttraumatic growth.

Application to Theory

Regarding the theoretical framework of this paper, there are identifiable examples of posttraumatic growth individually and communally within the Lumbee Tribe. For the first tenet, personal growth, a few participants mentioned being stronger mentally following the disaster events they had experienced. This mainly regarded ways in which they had adapted throughout the COVID-19 pandemic, pursued new career paths, or felt more secure in their familial relationships. Many participants recounted their struggles with mental health throughout the pandemic but described

the ways that they had come to feel less shame for seeking help and that it had benefited their life overall.

For the second tenet, relating to others, every participant interviewed had a story to tell about how they came to relate to others throughout their disaster experiences in Matthew, Florence, and throughout the COVID-19 pandemic. This is a definite strength for the Lumbee Tribe, and there was a resounding expression of gratitude and assurance in the ability of tribal members to relate to others through their common experiences, even as challenges arose. Prosocial behavior emerged throughout Matthew and Florence, but there were also signs of division and dissent throughout the COVID-19 pandemic due to the politicization of the pandemic and its social context. When it came to mental health, participants who sought formal psychological assistance expressed varying amounts of openness regarding their intent to share the fact that they had pursued therapy or medications with their loved ones. For individuals that had told their friends and families about this aspect of their lives, it overall seemed to be a positive experience that allowed them to connect more deeply with others while recommending seeking treatments and destigmatizing mental health care. Relating to others is therefore a multi-faceted component of posttraumatic growth theory for the community, but participants mainly experienced it in a positive manner.

The third tenet of posttraumatic growth theory is engagement with new possibilities. The participants expressed various new possibilities for the tribe mostly regarding social issues and political changes they would like to see. Participants

commonly mentioned federal recognition, as the fight for this is an ongoing process. While participants did not explicitly connect seeking federal recognition to disasters, they often mentioned the economic state of the tribe and how the COVID-19 pandemic impacted their personal, community, and tribal finances. Although this is a long-standing issue, the social context of 2020 regarding a nationwide racial reckoning as well as financial crises caused by COVID-19 clearly contributed to the salience of federal recognition within tribal members' minds. Participants also spoke to the need for better access to healthcare and resources, with specific emphasis on mental health care as well. Addressing poverty, education, and substance use within the community was also a common theme, and many participants saw an opportunity for the tribe to address this internally in a culturally competent manner. Coming out of the social and physical isolation period of COVID-19 allows for these shortcomings to be addressed, as there seemed to be an invigoration within the community to get back to cultural events and engage with social advocacy. At the time of the conduction of my interviews, many social events had just begun to be offered in person again, with large powwows and festivals occurring for the first or second time since COVID-19 in the summer of 2022. Many Lumbee people I spoke with attached their cultural identity to these large annual events such as Lumbee Homecoming, and reinvestment in the significance of these events among my participants was evident.

Spiritual change is the fourth tenet of posttraumatic growth theory, and while the tribe is largely rooted in religious values, not many participants expressed a spiritual change following disaster events. There were a few participants who

expressed confusion or questioning of God especially as it related to loss within their family and community within a framework of “why me and why now?”. Participants highlighted the grief and frustration they experienced when they were not able to attend funeral services throughout the COVID-19 pandemic, which made them feel disconnected from loved ones and religious rituals. Participants who were religious expressed gratitude for a return to in-person religious services and the sense of community it brought them following the COVID-19 pandemic. Overall, participants did not express a clear increase or abandonment of their faith throughout these disaster events, and those who were religious held to their usual engagement with religious activities.

The final tenet of posttraumatic growth theory is an appreciation for life, which nearly all participants resonated with. Throughout the interviews, there was a resounding love for “our people”, the land they lived on, and the family and community they relied on throughout these tumultuous times. Reflection upon their experiences of Matthew, Florence, and the COVID-19 pandemic often resulted in an appreciation for the ways that the community came together within these disaster events, as well as individual achievements and experiences of overcoming challenges. While many participants shared negative feelings and aspects of their daily lives from the past seven years, the interviews often ended with an encouraging conversation about the possibilities for their own growth, as well as that of the community. Participants generally were looking forward to the future of the Lumbee Tribe, and to

cultural and spiritual gatherings wherein they would be able to gather and express joy and community together once again.

Throughout the Hurricanes and COVID-19 overall, there were ongoing communal and personal losses from the closure of businesses and restaurants frequented by the Lumbee people, as well as through the loss of the five missing and murdered women, Rhonda, Kristin, Megan, Cynthia, and Abby. These tangible losses within the community represent ways in which the absence of gathering places and the lives of loved ones is intertwined with disaster experiences, leaving a missing piece once everything has settled and a state of emergency is declared over. Efforts such as the Shatter the Silence march bring awareness to the loss of life within the community, which combats erasure of missing and murdered Indigenous women and girls, as well as other community members. This erasure is present on a structural and institutional level, as violence against Indigenous women and girls is a fundamental result of colonialism and the history of settler relations with Indigenous people overall (Hunt, 2021, p. 418). The area where police found Rhonda, Megan, and Kristin's bodies was affected by Hurricane Florence in 2018, further contributing to the erasure of their deaths and ongoing unsolved cases, for which the community is actively fighting against.

Structural issues related to poverty and residential segregation contribute to why these buildings were built in the floodplain, which applies to the cases of Lumbee restaurants and businesses shutting down and never reopening either due to damage or financial reasons. This applies to the theme of the erasure of community identity,

property, and gathering places overall, in relation to structural violence and legacies of a lack of resources contributing to an inability to ‘bounce back’ from adversities. These cases show how different fundamental experiences of disasters within a community can be due to intersectional identities that compound with relevant ongoing adversities.

Policy Implications

The greatest need expressed by the participants of this study is the availability of more resources on a community level, with the tribe’s own discretion on utilization being a pivotal factor. Therefore, federal recognition of the Lumbee Tribe would allow for many facets of the gaps in resources to be addressed as identified by tribal members. This is especially relevant as it pertains to disaster mitigation, affordable housing, healthcare access, mental health support, education, and support for those using substances. While this is an ongoing, long-standing process for the tribe, perseverance in their fight to obtain federal recognition is at the forefront of the tribe’s needs and desires. In the meantime, the tribe should further invest in community advocacy and social justice efforts, as they are robust and working hard towards bettering the conditions for the Lumbee people. Topics of interest within the community range from addressing water quality issues to destigmatizing mental health to pursuing justice for missing and murdered Indigenous women and girls.

There are many social-justice-oriented organizations as well as formal organizations at the local level that would benefit from receiving federal funding

directly so that they could utilize the money at their own discretion in a timely manner. As Thomas shared, there was a vast discrepancy between federal and local assessments of funds needed as well as how they would be implemented, and he professed great urgency as to the need for said funds to be in the hands of local stakeholders as an effective means of carrying out tasks of rebuilding and mitigation for future hurricanes and flooding. This type of federal and state collaboration with local organizations would be greatly useful in reducing the harms experienced by community members throughout disaster events and other adverse outcomes within the Lumbee tribe.

Study Limitations

This study utilized eleven in-depth interviews among community members ages 31-59. It would be useful to expand this study to tribal members ages 60 years and older, as they would be able to provide narratives of earlier disasters, and perhaps how their families supported them throughout disasters, and how in the past they had provided care for their own families as well. Since I conducted all the interviews over Zoom and over the phone, I am assuming that is why my sample's age is somewhat restricted. There also is valuable information that could be gathered from people between the ages of 18-30, as they would have experienced Matthew and Florence as well as the COVID-19 pandemic at younger ages, perhaps with their schooling being affected, which may have had further impacts on their social relationships. Youths

also are more inclined to use social media, and it would be interesting to see how they utilized social media in these disaster events.

As an outsider to this community, I think there certainly is information that I was unable to gather due to personal aspects of my identity, which I think calls into question the importance of positionality and reflexivity in my deliverance of this information. Many Lumbee people are active scholars within the disaster, health, history, and geological fields, among many others, and uplifting and citing their work to give a further voice to the community has been a priority within this. Their cultural lens and interpretation of events and stories heard will likely be very different from how I have presented things here, and I welcome further exploration into these topics from their own perspectives. Community based participatory research would also be a great avenue to explore these questions of disaster related trauma, as hiring and training community members to be co-investigators and collaborators would add a great richness and further understanding to possible qualitative research that could be conducted on similar topics.

Conclusion

The Lumbee Tribe of North Carolina has been subjected to various environmental hazards over the last eight years, and recovery is an ongoing process within the community. Because of colonization, there is another type of recovery and redefinition of the community as time has progressed, as the tribe has sought federal recognition from the United States government. An unseen recovery from

compounding factors of loss and rebuilding lies within the experiences the Lumbee people have had within this space, and how they process and understand the disaster events they have witnessed, as well as narratives that have been passed down through generations. What has resonated throughout my engagement with the tribe is a search for healing within oneself and within a community that is constantly being nurtured, uprooted, challenged, and re-established. As much as there is a possibility of trauma and negative behaviors to be passed down throughout generations, there also is a capacity for strength and community bonds to be passed on. Future disaster events and threats to community and interpersonal stability may arise, but there are foundational assets of familiarity and interconnectedness that will exist within the tribe for generations to come.

REFERENCES

- Amit, V. (Ed.). (2000). *Constructing the field*. Routledge London.
- Atallah, D. G. (2017). A community-based qualitative study of intergenerational resilience with Palestinian refugee families facing structural violence and historical trauma. *Transcultural Psychiatry*, 54(3), 357–383.
<https://doi.org/10.1177/1363461517706287>
- Baez, M. S. E., Isaac, P., & Baez, C. N. V. (2016). H.O.P.E. for Indigenous People Battling Intergenerational Trauma: The Sweetgrass Method. *Journal of Indigenous Research*, 5(2), 2. <https://doi.org/10.26077/6y5z-6w02>
- Banning, J. (2020). How Indigenous people are coping with COVID-19. *Canadian Medical Association Journal*, 192(27), E787–E788.
<https://doi.org/10.1503/cmaj.1095879>
- Bell, R. A. (2021). The Health of American Indians in North Carolina: Honoring the Past, Looking to the Future. *North Carolina Medical Journal*, 82(6), 394–397.
<https://doi.org/10.18043/ncm.82.6.394>
- Blair, E. (2015). A reflexive exploration of two qualitative data coding techniques. *Journal of Methods and Measurement in the Social Sciences* 16.(1).
<https://doi.org/10.2458/v6i1.18772>
- Boasso, A., Overstreet, S., & Ruscher, J. B. (2015). Community Disasters and Shared Trauma: Implications of Listening to Co-Survivor Narratives. *Journal of Loss and Trauma*, 20(5), 397–409. <https://doi.org/10.1080/15325024.2014.912055>

- Brothers, D. (2014). Traumatic Attachments: Intergenerational Trauma, Dissociation, and the Analytic Relationship. *International Journal of Psychoanalytic Self Psychology*, 9(1), 3–15. <https://doi.org/10.1080/15551024.2014.857746>
- Canadian Geographic. (2021). History of Residential Schools. <https://indigenouspeoplesatlasofcanada.ca/article/history-of-residential-schools/>
- Carmen, A. (2020, November 19). *COVID-19 and Indigenous Peoples in North America*. International Indian Treaty Council. <https://www.iitc.org/wp-content/uploads/COVID19-and-Indigenous-Peoples-Nov.-2020.pdf>
- CMAJ* (2020) July 6; 192:E787-8. <https://doi.org/10.1503/cmaj.1095879>
- Connolly, A. (2011). Healing the wounds of our fathers: Intergenerational trauma, memory, symbolization and narrative: Healing the wounds of our fathers. *Journal of Analytical Psychology*, 56(5), 607–626. <https://doi.org/10.1111/j.1468-5922.2011.01936.x>
- Decker, T. (2018, September 24). *Hurricanes deliver devastating blows to towns hollowed out by relentless storms*. The Columbus Dispatch. <https://stories.usatodaynetwork.com/hollowedoutbyhurricanes/>
- de Leeuw, S., Greenwood, M., & Cameron, E. (2010). Deviant Constructions: How Governments Preserve Colonial Narratives of Addictions and Poor Mental Health to Intervene into the Lives of Indigenous Children and Families in Canada. *International Journal of Mental Health and Addiction*, 8(2), 282-295. <https://doi.org/10.1007/s11469-009-9225-1>

- Dias, B. G., & Ressler, K. J. (2013). Parental olfactory experience influences behavior and neural structure in subsequent generations. *Nature Neuroscience*, 17(1), 89–96. <https://doi.org/10.1038/nn.3594>
- Duran, B. (1995). *Native American Postcolonial Psychology*. Suny. <https://doi.org/10.13140/RG.2.2.25055.25769>
- Emanuel, R. E. (2019). Water in the Lumbee World: A River and Its People in a Time of Change. *Environmental History*, 24(1), 25-51. <https://doi.org/10.1093/envhis/emy129>
- Faruk, Md. O., Ching, U., & Chowdhury, K. U. A. (2021). Mental health and well-being of indigenous people during the COVID-19 pandemic in Bangladesh. *Heliyon*, 7(7), e07582. <https://doi.org/10.1016/j.heliyon.2021.e07582>
- FEMA (2020). *Environmental Assessment: Lumbee Tribe of North Carolina Lumbee Cultural Center Dam Repairs*. https://www.fema.gov/sites/default/files/documents/fema_lumbe-cultural-center-dam-final-ea.pdf
- Ford, J. D., King, N., Galappaththi, E. K., Pearce, T., McDowell, G., & Harper, S. L. (2020). The Resilience of Indigenous Peoples to Environmental Change. *One Earth*, 2(6), 532–543. <https://doi.org/10.1016/j.oneear.2020.05.014>
- Freimuth, V. S., Jamison, A., Hancock, G., Musa, D., Hilyard, K., & Quinn, S. C. (2017). The Role of Risk Perception in Flu Vaccine Behavior among African-American and White Adults in the United States. *Risk Analysis*, 37(11), 2150–2163. <https://doi.org/10.1111/risa.12790>

Fuenes, Y. (2016, October 20). *Hurricane Matthew Brought Massive Destruction to North Carolina's Lumbee Tribe*. Color Lines.

<https://www.colorlines.com/articles/read-hurricane-matthew-brought-massive-destruction-north-carolinas-lumbee-tribe>

Fusch, P., & Ness, L. (2015). Are We There Yet? Data Saturation in Qualitative Research. *Walden Faculty and Staff Publications*. 455.

<https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=1466&context=facpubs>

García, C., Rivera, F. I., Garcia, M. A., Burgos, G., & Aranda, M. P. (2021).

Contextualizing the COVID-19 Era in Puerto Rico: Compounding Disasters and Parallel Pandemics. *The Journals of Gerontology: Series B*, 76(7), e263–e267.

<https://doi.org/10.1093/geronb/gbaa186>

Galtung, J. (1969). Violence, Peace, and Peace Research. *Journal of Peace Research*, 6(3), 167–191. <https://doi.org/10.1177/002234336900600301>

Gawthrop, E. (2022, April 2022). *The Color of Coronavirus: COVID-19 Deaths by Race and Ethnicity in the U.S.* APM Research Lab.

<https://www.apmresearchlab.org/covid/deaths-by-race>

Gerretsen, P., Kim, J., Quilty, L. C., Wells, S., Brown, E. D., Agic, B., Pollock, B. G., & Graff-Guerrero, A. (2021). Vaccine Hesitancy Is a Barrier to Achieving

Equitable Herd Immunity Among Racial Minorities. *Frontiers in Medicine*, 8.

<https://doi.org/10.3389/fmed.2021.668299>

Goha, A., Mezue, K., Edwards, P., Madu, K., Baugh, D., Tulloch, E. E., Nunura, F., Doubeni, C. A., & Madu, E. (2021). Indigenous people and the COVID-19 pandemic: the tip of an iceberg of social and economic inequities. *Journal of Epidemiol Community Health* 75, 207-208. <https://doi:10.1136/jech-2020-214755>

Goldman, N., & Andrasfay, T. (2022). Life Expectancy Loss among Native Americans During the COVID-19 Pandemic. *Forthcoming article*. <https://doi.org/10.1101/2022.03.15.22272448>

Hathaway, E. D. (2021). American Indian and Alaska Native People: Social Vulnerability and COVID-19. *The Journal of Rural Health*, 37(1), 256–259. <https://doi.org/10.1111/jrh.12505>

Hunt, B. (2021). Ain't No Sunshine When She's Gone: Missing and Murdered Indigenous Women and Girls in North Carolina. *North Carolina Medical Journal*, 82(6), 417–419. <https://doi.org/10.18043/ncm.82.6.417>

Indigenous Awareness Canada. (n.d.). *Aboriginal, Native, or Indigenous?* <https://indigenousawarenesscanada.com/indigenous-awareness/aboriginal-native-or-indigenous/#:~:text=The%20terms%20Aboriginal%2C%20Indigenous%20and,First%20Nations%2C%20M%C3%A9tis%20and%20Inuit>.

Jackson, B., & Sadler, L. S. (2022). Structural violence: An evolutionary concept analysis. *Journal of Advanced Nursing*, 00, 1-22. <https://doi.org/10.1111/jan.15341>

- Jayawickreme, E., & Blackie, L. E. R. (2014). Post-traumatic Growth as Positive Personality Change: Evidence, Controversies and Future Directions. *European Journal of Personality*, 28(4), 312–331. <https://doi.org/10.1002/per.1963>
- Kaplan, H. S., Trumble, B. C., Stieglitz, J., Mamany, R. M., Cayuba, M. G., Moye, L. M., Alami, S., Kraft, T., Gutierrez, R. Q., Adrian, J. C., Thompson, R. C., Thomas, G. S., Michalik, D. E., Rodriguez, D. E., & Gurven, M. D. (2020). Voluntary collective isolation as a best response to COVID-19 for indigenous populations? A case study and protocol from the Bolivian Amazon. *The Lancet*, 395(10238), 1727–1734. [https://doi.org/10.1016/S0140-6736\(20\)31104-1](https://doi.org/10.1016/S0140-6736(20)31104-1)
- Kelman, I., Mercer, J., & Gaillard, J. (2012). Indigenous knowledge and disaster risk reduction. *Geography*, 97(1), 12–21. <https://doi.org/10.1080/00167487.2012.12094332>
- Lambert, S., & Scott, J. (2019). International Disaster Risk Reduction Strategies and Indigenous Peoples. *International Indigenous Policy Journal*, 10(2), 1–21. <https://doi.org/10.18584/iipj.2019.10.2.2>
- Lee, J.-Y., Kim, S.-W., & Kim, J.-M. (2020). The Impact of Community Disaster Trauma: A Focus on Emerging Research of PTSD and Other Mental Health Outcomes. *Chonnam Medical Journal*, 56(2), 99. <https://doi.org/10.4068/cmj.2020.56.2.99>
- Lehrner, A., & Yehuda, R. (2018). Trauma across generations and paths to adaptation and resilience. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(1), 22–29. <https://doi.org/10.1037/tra0000302>

- Levers, L.L. & Hyatt-Burkhart. (2019). *Clinical Mental Health Counseling: Practicing in Integrated Systems of Care*. Springer. 10.1891/9780826131089
- Locklear, L. A. (2017). *Healing: The Stories of Academic Successes and Barriers Faced by Lumbee Tribal Young Adults*. [Doctoral Dissertation, University of North Carolina at Greensboro]. ProQuest.
- Locklear, T., Strickland, P., Pilkington, W. F., Hoffler, U., Billings, V., Zhang, T., Brown, L., Doherty, I., Shi, X., Jacobs, M. A., Locklear, A. K., Maynor, T., Oxendine, T., Kang, Z. (Richard), Mehng, S., Locklear, M. B., & Kumar, D. (2021). COVID-19 Testing and Barriers to Vaccine Hesitancy in the Lumbee Tribe of North Carolina. *North Carolina Medical Journal*, 82(6), 406–407. <https://doi.org/10.18043/nmc.82.6.406>
- Lowery, M. M. (2016). *American Indian Women of Proud Nations: Essays on History, Language, and Education*. (C. M. Beasley, M. A. Jacobs, & U. Wiethaus, Eds.) Peter Lang Publishing, Inc.
- Lumbee Tribe of North Carolina. (n.d.) <https://www.lumbee Tribe.com/>
- Maudrie, T. L., Lessard, K. H., Dickerson, J., Aulandez, K. M. W., Barlow, A., & O’Keefe, V. M. (2021). Our Collective Needs and Strengths: Urban AI/ANs and the COVID-19 Pandemic. *Frontiers in Sociology*, 6, 611775. <https://doi.org/10.3389/fsoc.2021.611775>
- Mavhura, E., Manyena, S. B., Collins, A. E., & Manatsa, D. (2013). Indigenous knowledge, coping strategies and resilience to floods in Muzarabani,

Zimbabwe. *International Journal of Disaster Risk Reduction*, 5, 38–48.

<https://doi.org/10.1016/j.ijdrr.2013.07.001>

Menzies, P. (2010). Intergenerational Trauma from a Mental Health Perspective.

Native Social Work Journal, 7(24).

Mithlo N. (2011). Blood memory and the arts: Indigenous genealogies and imagined truths. *American Indian Culture and Research Journal*. 35(4):103–

118. <https://doi.org/10.17953/aicr.35.4.ch5u144q02746t46>

Mosby, I., & Swidrovich, J. (2021). Medical experimentation and the roots of

COVID-19 vaccine hesitancy among Indigenous Peoples in Canada. *Canadian Medical Association Journal*, 193(11), E381–E383.

<https://doi.org/10.1503/cmaj.210112>

Nagata, D. K. (1998). Intergenerational Effects of the Japanese American Internment.

In Y. Danieli (Ed.), *International Handbook of Multigenerational Legacies of Trauma* (pp. 125–139). Springer US. [https://doi.org/10.1007/978-1-4757-](https://doi.org/10.1007/978-1-4757-5567-1_8)

[5567-1_8](https://doi.org/10.1007/978-1-4757-5567-1_8)

Nagata, D. K., & Takeshita, Y. J. (2002). Psychological reactions to redress: Diversity

among Japanese Americans interned during World War II. *Cultural Diversity and Ethnic Minority Psychology*, 8(1), 41–59. [https://doi.org/10.1037/1099-](https://doi.org/10.1037/1099-9809.8.1.41)

[9809.8.1.41](https://doi.org/10.1037/1099-9809.8.1.41)

National Conference of State Legislatures. (October 10, 2016). *State Recognition of*

American Indian Tribes. <https://www.ncsl.org/quad-caucus/state-recognition->

[of-american-indian-](#)

[tribes#:~:text=State%20tribal%20recognition%20does%20not,the%20state%2](#)

[0or%20federal%20government.](#)

The National Native American Boarding School Healing Coalition. (2020). *American Indian Boarding Schools by State. Healing Voices Volume 1: A Primer on American Indian and Alaska Native Boarding Schools in the U.S.* (2nd Ed.), 8-9. Minneapolis, MN. <http://boardingschoolhealing.org/list>

Neimeyer, R. A. (2004). Fostering Posttraumatic Growth: A Narrative Elaboration.

Psychological Inquiry, 15(1), 53-59. <https://www.jstor.org/stable/20447202>

Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K.

(2002). 60,000 Disaster Victims Speak: Part I. An Empirical Review of the Empirical Literature, 1981–2001. *Psychiatry: Interpersonal and Biological Processes*, 65(3), 207–239. <https://doi.org/10.1521/psyc.65.3.207.20173>

North, C. S., & Pfefferbaum, B. (2013). Mental Health Response to Community

Disasters: A Systematic Review. *JAMA*, 310(5), 507.

<https://doi.org/10.1001/jama.2013.107799>

Phillips, K. U. (2021). American Indian Health in North Carolina. *North Carolina*

Medical Journal, 82(6), 428–430. <https://doi.org/10.18043/ncm.82.6.428>

Power, T., Wilson, D., Best, O., Brockie, T., Bourque Bearskin, L., Millender, E., &

Lowe, J. (2020). COVID-19 and Indigenous Peoples: An imperative for action. *Journal of Clinical Nursing*, 29(15–16), 2737–2741.

<https://doi.org/10.1111/jocn.15320>

- Raccanello, D., Gobbo, C., Corona, L., De Bona, G., Hall, R., & Burro, R. (2019). Long-term intergenerational transmission of memories of the Vajont disaster. *Psychological Trauma*, <https://doi.org/10.1037/tra0000528>
- Reid, J. (2019). Narrating Indigeneity in the Arctic: Scripts of Disaster Resilience Versus the Poetics of Autonomy. In N. Sellheim, Y. V. Zaika, & I. Kelman (Eds.), *Arctic Triumph* (pp. 9–21). Springer International Publishing. https://doi.org/10.1007/978-3-030-05523-3_2
- Revels, A. A. (2018). *Investigating Drug-Related Violence in Indian Country: The Lumbee Tribe of North Carolina*. [Doctoral Dissertation, University of South Carolina]. ProQuest.
- Reyhner, J. (2018). *American Indian Boarding Schools: What Went Wrong? What Is Going Right?* *Journal of American Indian Education*, 57(1), 58-78. <https://doi.org/10.5749/jamerindieduc.57.1.0058>
- Ridge, D., Bullock, L., Causer, H., Fisher, T., Hider, S., Kingstone, T., Gray, L., Riley, R., Smyth, N., Silverwood, V., Spiers, J., & Southam, J. (2023). ‘Imposter participants’ in online qualitative research, a new and increasing threat to data integrity? *Health Expectations*, hex.13724. <https://doi.org/10.1111/hex.13724>
- Rodriguez, H., Trainor, J., & Quarantelli, E. L. (2006). Rising to the Challenges of a Catastrophe: The Emergent and Prosocial Behavior following Hurricane Katrina. *Annals of the American Academy of Political and Social Science*, 604(1), 82–101. <https://doi.org/10.1177/0002716205284677>

- Rose, P. M. & Dyer, C. (2008). Chronic Poverty and Education: A Review of Literature. *Chronic Poverty Research Centre Working Paper No. 131*, <http://dx.doi.org/10.2139/ssrn.1537105>
- Seong, K., Losey, C., & Van Zandt, S. (2021). To Rebuild or Relocate? Long-Term Mobility Decisions of Hazard Mitigation Grant Program (HMGP) Recipients. *Sustainability*, 13(16), 8754. <https://doi.org/10.3390/su13168754>
- Splevins, K., Cohen, K., Bowley, J., & Joseph, S. (2010). Theories of Posttraumatic Growth: Cross-Cultural Perspectives. *Journal of Loss & Trauma*, 15(3), 259–277. <https://doi.org/10.1080/15325020903382111>
- Tosone, C. (2020). Shared trauma and social work practice in communal disasters. In J. Duffy, J. Campbell & C. Tosone (Eds.), *International Perspectives on Social Work and Political Conflict* (pp. 50-64) Routledge.
- United States Civilian Board of Contract Appeals (2021). *CBCA 7209-FEMA: In Matter of Lumbee Tribe of North Carolina*. [https://www.cbca.gov/files/decisions/2021/SULLIVAN_11-17-21_7209-FEMA_LUMBEE_TRIBE_OF_NORTH_CAROLINA%20\(Decision\).pdf](https://www.cbca.gov/files/decisions/2021/SULLIVAN_11-17-21_7209-FEMA_LUMBEE_TRIBE_OF_NORTH_CAROLINA%20(Decision).pdf)
- Working with Indigenous Australians and First Nations People. (n.d.). *What's the appropriate term? Aboriginal and Torres Strait Islander peoples, Aborigine, Indigenous, Black, Blackfella, First Australians, First Nations People. . .* http://www.workingwithindigenoustraitislanders.info/content/Indigenous_Australians_3_Appropriate_Terms.html#:~:text=The%20word%20was%20used%20in,and%20Torres%20Strait%20Islander%20people.

Wiechelt, S. A., Gryczynski, J., Johnson, J. L., & Caldwell, D. (2012). Historical Trauma Among Urban American Indians: Impact on Substance Abuse and Family Cohesion. *Journal of Loss and Trauma, 17*(4), 319–336.

<https://doi.org/10.1080/15325024.2011.616837>

Wilkes, M. 2021. *NO RECOGNITION, NO RELIEF: LACK OF FEDERAL DESIGNATION LEAVES LUMBEE TRIBE WITHOUT FEDERAL COVID-19 FUNDS*. Unmasking America: The Lingering Toll of COVID-19.

[https://unmaskingamerica.news21.com/extras/lumbee-tribe-](https://unmaskingamerica.news21.com/extras/lumbee-tribe-funds/#:~:text=Since%20the%20Lumbee%20Tribe%20is,from%20the%20North%20Carolina%20government.)

[funds/#:~:text=Since%20the%20Lumbee%20Tribe%20is,from%20the%20North%20Carolina%20government.](https://unmaskingamerica.news21.com/extras/lumbee-tribe-funds/#:~:text=Since%20the%20Lumbee%20Tribe%20is,from%20the%20North%20Carolina%20government.)

Yehuda, R., Schmeidler, J., Wainberg, M., Binder-Brynes, K., & Duvdevani, T.

(1998). Vulnerability to Posttraumatic Stress Disorder in Adult Offspring of Holocaust Survivors. *American Journal of Psychiatry, 155*(9), 1163–1171.

<https://doi.org/10.1176/ajp.155.9.1163>

Appendix A

QUALITATIVE INSTRUMENT

Time:

Date:

Interviewer: Sydney Dyck

Participant:

Signed informed consent form?: YES or NO

Interview Script

Researcher: *Good morning/afternoon/evening [insert participant's name]. Thank you for agreeing to participate in my research project looking at the Lumbee Tribe's experience with disasters and intergenerational trauma. The interview is expected to last around 45 minutes to an hour.*

Researcher: *[Name], before we begin, I want to get your verbal consent so that I may audio-record our conversation today. Do I have your permission to do so?*

- Turn on audio-taping device following consent. Terminate interview if consent is not provided at this time.

Researcher: For future reference when listening to the audio-recording, may you state and spell out your name and your relation to the Lumbee Tribe?

Researcher: *First, I will go over the informed consent form to ensure that you know your rights as a voluntary participant in this study. You may ask questions or clarifications at any time.*

- After going through the form, have the participant sign and date the informed consent form. The form may be returned via email or mail before the interview if taking place online. Researcher must sign and date the informed consent form at this time. Describe that there will be three (four for health practitioners) sections to the interview, demographics, disaster and pandemic related questions, and questions related to trauma.

Thanks for sitting down with me! I was hoping we could start off with a bit about you and where you are from, as well as when your work began and what inspired it?

Family Narratives of Disasters

1. Do you recall your parents or grandparents describing disaster events that they have experienced? If so, what was the disaster and what would they say?
-Probe for how they felt hearing, remembering, and retelling this story, if applicable
2. What is the most memorable disaster event you have experienced?
3. Do you recall times when you have told other friends, family members, or community members about your experience with a disaster?
-Probe for how they felt sharing this experience with others and why they felt compelled to share it
4. Did your family members' experiences with disasters affect their day-to-day lives or place of residence?
-If they have relocated, probe for why and where they moved to?
5. Has your own experience with disasters affected your day-to-day life or place of residence?
-If they have relocated, probe for why and where they moved to
6. Does your family have traditions or events they partake in surrounding anniversaries of disasters or other historical events?
-If yes, probe for what these events look like and how they came to be
7. How do you feel that these traditions and stories may affect your family's closeness and understanding of one another?
8. Has your home or other properties ever been damaged in a disaster?
-Probe for the extent of damage
9. Have you ever had to evacuate your home due to a disaster event?
-Probe as to where they evacuated to in regards to location and if it was in an evacuation shelter, with family or friends, in a hotel, etc.

10. Please share with me how your employment was affected by the COVID-19 pandemic.

11. Please share with me how your family was directly affected by the COVID-19 pandemic by means of contracting the virus, having lasting effects from the virus, being hospitalized, and/or dying from the virus.

Revised Trauma related questions

1. In what ways do you feel that being exposed to a disaster event may have impacted you emotionally in positive or negative ways, over a short or long period of time? What was the particular disaster event and when did it happen?
2. Please share how you feel regarding the ways in which this event affected your family or community members' relation to one another. Did this affect your relations in a positive or negative way?
3. Please share your experience pertaining to things you have heard about past disaster events from family or community members that have occurred. Do you feel like these stories have had a lasting impact on you or have affected the ways in which you perceive disasters?
4. Please share with me what you think the biggest challenges are related to trauma that the Lumbee Tribe is facing either due to current or historical impacts.

Healthcare practitioner-specific questions

1. Please share with me a bit about your experience as a healthcare practitioner throughout the COVID-19 pandemic serving the Lumbee community.
2. The Lumbee community had relatively low vaccination rates compared to other counties in North Carolina. Could you please share why you think this may have been the case?

-Probe for historical contributions to vaccine hesitancy or narratives they may have heard within the community.

3. While the pandemic cannot be declared as “over”, what differences have you observed in the community following the most intense months of the COVID-19 outbreaks?

4. Please share some thoughts on what you feel may be the most important health-related improvements you’d like to see in the Lumbee community.

-Probe for what they may think is preventing these outcomes from being reached

5. Please share some thoughts you have on the overall wellness of the Lumbee community in regards to their physical, mental, and spiritual wellbeing.

-Probe for specifics in each category, ask what is needed to address gaps if they are identified.

Demographic questions

1. What is your age?
2. How do you racially and/or ethnically identify?
3. What is the highest level of education you have completed?
4. Approximately what is your annual income?
5. What is your marital status?
6. Do you do community related work within the Lumbee Tribe or the wider North Carolina region?
7. What is the makeup of your household? (number of people and relation to one another)
8. If applicable, how do you feel your identity as a Lumbee Tribe member affects your home life? Are traditions and cultural values incorporated into your family’s everyday lives?

Final question: Do you have any questions related to your participation within this study?

Researcher: *Thank you for agreeing to participate in an interview for this research project.*

You have access to a digital copy [or paper copy if in-person] of the informed consent form

Appendix B
CODE BOOK

Code	Quote Example
<p>Matthew and Florence</p> <p>60 total passages pulled, 11/11 participants mentioned it</p>	<p>“It was just a torrential rain like the heaviest rain I've ever experienced. During those hurricanes, I don't remember like thunder and lightning happening. It was just relentless rain, and not for half an hour, but for like a better part of a day, that that happened, and when it seems like we're having another one of those rainstorms and it doesn't dissipate fairly quickly, that's when you're reminded.”</p>
<p>Caring for elders</p> <p>22 total passages pulled, 8/11 participants mentioned it</p>	<p>“And I remember calling my granny and checking in on her. And that first day she was like “I can wash in cold water”, you know. She was like 80, and she she lived on the other side of the county on the other side of the river, and I was like, “granny, I really feel that you should come over here.” And that was asking too much of her to for her to leave her brick house and come to my trailer and all of that. But we we had no idea how much we were about to be cut off from each other...”</p>

<p>Community relations</p> <p>19 total passages pulled, 8/11 participants mentioned it</p>	<p>“So trying to organize and provide information to be... as soon as you know, a group got some information like, ‘How can we provide this to people, we can't go door to door any more. Okay, maybe we can make phone calls. I've got this list from this other event that I put on a year ago. Let's just call these numbers and see how to help’.”</p>
<p>Compounding factors/events</p> <p>22 total passages pulled, 8/11 participants mentioned it</p>	<p>“I think people because these disasters came back to back to back, it felt like there, wasn't a recovery period between them, so that has made I think that has been really hard, I think, for people, and so yeah, I don't can't point to anything specific except that, you know. Gathering places that we used to have are there anymore, And a lot of the reason for that is because of hurricane damage and then the... the pandemic.”</p>
<p>Emotions regarding disasters</p> <p>16 total passages pulled, 5/11 participants mentioned it</p>	<p>““I think the one that is more impactful for me was... were the hurricanes that were, you know, were basically shut down our communities and that I still feel like a panic when I have when we have like really hard rain.”</p>

<p>Experiences with other disasters</p> <p>8 total passages pulled, 5/11 participants mentioned it</p>	<p>““Yeah. So the... the tornado and Red Springs, I mean, I... I was young enough that I ...I just I was probably just dumbstruck by the power of nature, like to see the like a water tower which you think of as this like massive, permanent structure, just like rip down and big TV antennas torn down. And yeah, I... I don't know what long term impact that has on me.”</p>
<p>Hurricane Hazel</p> <p>8 total passages pulled, 5/11 participants mentioned it</p>	<p>“Hazel was sort of like a. It was a novelty just to hear elders talk about it. I mean. I guess they they talk about it in the same way that, like my grandparents, talked about the great depression, it was this... It was this big thing that happened, and every... everybody had some experience with it.”</p>
<p>Covid-19 related</p> <p>33 total passages pulled, 11/11 participants mentioned it</p>	<p>“Well, I had cousins who died, extended cousins who passed away. You know. Hmm. Yeah, some of them because they refuse to get vaccinated and some of them because they were older, and probably had other health conditions. Then I've had a brother and sister in law who refused to get vaccinated so, and they've had covid twice, and now the flu.”</p>

<p>Intergenerational narratives</p> <p>22 total passages pulled, 9/11 participants mentioned it</p>	<p>“So what that told me was that, like Matthew and Florence, which were approximately the same magnitude of flood, hydrologically speaking. Those like fundamentally alter the way that people think about flooding and Robeson County because there is nothing like it, and living memory, or even oral history that was passed down.”</p>
<p>Social Media</p> <p>8 total passages pulled, 5/11 people mentioned it</p>	<p>“But yeah, I think social media has really helped our people preserve a lot of those memories and we look at them a lot differently now than we did when we were in the trenches of it, you know.”</p>

Appendix C

INFORMED CONSENT FORM



CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of Study: Sydney Dyck's Master's Thesis Preliminary Data Gathering

Principal Investigator(s): Sydney Dyck

Important aspects of the study you should know about:

- **Purpose:** The purpose of the study is to understand the ways in which disaster-related trauma has impacted the Lumbee Tribe of North Carolina, as well as how their traditions and culture influence their resilience and coping.
- **Procedures:** If you choose to participate, you will be asked to engage in a semi-structured qualitative interview.
- **Duration:** This will take about 1 hour per interview.
- **Risks:** The main risk or discomfort from this research are engaging with sensitive material related to trauma and experiencing disasters, as well as cultural trauma.
- **Benefits:** The main benefit to you from this research is to share your perspective in regard to how disaster events have shaped your life, and the ways in which this study can help the community better understand its needs regarding mental health resources and disaster preparedness.
- **Costs and Compensation:** e.g., If you decide to participate there will be no additional cost to you and you will receive a \$20 Amazon gift card for your participation.
- **Participation:** Taking part or not in this research study is your decision. You can decide to participate and then change your mind at any point.

CONSENT TO PARTICIPATE IN THE RESEARCH STUDY:

I have read and understood the information in this form and I agree to participate in the study. I am 18 years of age or older. I have been given the opportunity to ask any questions I had and those questions have been answered to my satisfaction. I understand that I will be given a copy of this form for my records.

Printed Name of Participant
(PRINTED NAME)

Signature of Participant
(SIGNATURE)

Date

Person Obtaining Consent
(PRINTED NAME)

Person Obtaining Consent
(SIGNATURE)

Date

Appendix D
IRB APPROVAL



**Lumbee Tribe of North
Carolina Institutional
Review Board**

LTNC Institutional Review Board
6984 NC Hwy 711 West
Pembroke, NC 28372
910.521.7861 or 1.855.801.9738

October 4, 2022

Sydney Dyck
University of Delaware

Dear Mrs. Dyck

The Lumbee Tribe of North Carolina Institutional Review Board has reviewed your proposal, entitled Title of Project, and has made the following decision:

- Approval (please see comments below)
- Disapproval (please see recommendations below)
- Deferred (please see recommendations/comments below)

Comments: N/A

Recommendations: After the study has been completed please follow up with the Lumbee Tribe of NC Health and Human Services Committee

Note: If approved, please submit an annual report on the progress of your project and a summary of findings at the end of your project to the Health and Human Services Committee.

If you have any questions, please contact Name, IRB Administrator, at name@lumbeetribe.com.

Sincerely,

Jody Bullard, MPA
Chair, LTNC Institutional Review Board

LTNC Institutional Review Board 6984 NC Hwy 711 West, Pembroke, NC 28372 910.521.7861 | 1.855.801.9738



Institutional Review Board
210H Hullen Hall
Newark, DE 19716
Phone: 302-831-2137
Fax: 302-831-2828

DATE: July 7, 2022
TO: Sydney Dyck
FROM: University of Delaware IRB
STUDY TITLE: [1922525-1] Sydney Dyck Masters Thesis Preliminary Data Gathering
SUBMISSION TYPE: New Project
ACTION: DETERMINATION OF EXEMPT STATUS
EFFECTIVE DATE: July 7, 2022
REVIEW CATEGORY: Exemption category # (2ii)

Thank you for your New Project submission to the University of Delaware Institutional Review Board (UD IRB). According to the pertinent regulations, the UD IRB has determined this project is EXEMPT from most federal policy requirements for the protection of human subjects. The privacy of subjects and the confidentiality of participants must be safeguarded as prescribed in the reviewed protocol form.

This exempt determination is valid for the research study as described by the documents in this submission. Proposed revisions to previously approved procedures and documents that may affect this exempt determination must be reviewed and approved by this office prior to initiation. The UD amendment form must be used to request the review of changes that may substantially change the study design or data collected.

Unanticipated problems and serious adverse events involving risk to participants must be reported to this office in a timely fashion according with the UD requirements for reportable events.

A copy of this correspondence will be kept on file by our office. If you have any questions, please contact the UD IRB Office at (302) 831-2137 or via email at hsrb-research@udel.edu. Please include the study title and reference number in all correspondence with this office.

INSTITUTIONAL REVIEW BOARD

www.udel.edu