

## Disaster Trauma and Place Attachment Among Hurricane Katrina Survivors

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### Abstract

Natural disasters are devastating events that impact entire communities, and often result in psychological distress and disorder for survivors. This article summarizes a phenomenological study exploring the impact of disaster trauma on place attachment among Hurricane Katrina survivors. The study utilized data from in-depth interviews with 12 participants, supplemented with photographs and journals. The study's findings support that while traumatic, the disaster experience resulted in psychological growth for participants, as well as strengthened attachment to people and place. Most participants were able to glean positive meaning from the disaster experience that eased their recovery and ultimately strengthened their resilience. This research study points to the need for timely and effective community-based interventions focused on loss processing and meaning making, attachment styles, and sense of place issues. Directions for future research on these and related issues are also explored.

*Keywords: Disaster; trauma; loss; attachment; growth*

### **Disaster Trauma and Place Attachment Among Hurricane Katrina Survivors**

Disasters—catastrophic events like hurricanes or terrorism—have significant impact on individuals and entire communities, and the families and neighborhoods within them. The random and violent nature of disasters magnifies the destruction, loss, injury, and death that often result from such events. The impact of disasters is experienced throughout the full spectrum of human experience, a fact that has attracted the interest of researchers and professionals in fields as diverse as economics, architecture, sociology, and psychology. Experts fear that climate change may create more powerful future hurricanes. The risk is especially great for the Gulf Coast area, where global warming, shrinking wetlands, and overdevelopment have made coastal areas increasingly vulnerable to the effects of hurricanes. As of 2013, about 123 million people (approximately 39% of the total United States population) lived in shoreline communities. This statistic underscores future risk to human life and property during intense hurricanes (Vergano, 2013).

### **Problem Background and Purpose of Study**

In response to Hurricane Katrina, a renewed research interest into the impact of natural disasters on mental health, with a focus on psychological trauma, was born (Boyd-Franklin, 2010; Moore & Varela, 2010). Many studies link disaster trauma to psychological distress and disorders (Boyd-Franklin, 2010; Moore & Varela, 2010; Norris et al., 1999), as well as

psychological growth (Caplan, 1964; O'Leary & Ickovics, 1995; Tedeschi & Calhoun, 1995). Research studies on various aspects of place attachment are plentiful (Falah, 2013; Forjaz, 2011; Gage, 2013; Gumpert, 2012; Sundblad, 2011), and there is some research on the role of place in the disaster recovery process (Cox & Perry, 2011). However, there is little available research regarding how the experience of disaster in a place influences a person's place attachment. The current study sought to fill this void by exploring how disaster experienced in a place impacts a person's place attachment, and with it, the psychological health of the person and community. This study is important in that it helps illuminate the factors, including disaster trauma experienced in a place, that influence place meanings and drive decision making (Stewart, 2006), including the decision to return to a place following a disaster. The information generated from this research on the relationship between disaster and place attachment informs intervention strategies for people and communities following disaster.

### **Research Questions**

The initial research question stemmed from the research problem and purpose (Hennink et al., 2011): What is the lived experience of Hurricane Katrina survivors in the Gulf Coast area? This overarching research question was supplemented by related questions that helped frame the experience of Hurricane Katrina, and the meaning that participants ascribed to this experience, in the context of place attachment: What meaning did participants ascribe to their experience of Hurricane Katrina? How did the experience of Hurricane Katrina affect participants' level of attachment to the place in which they lived at the time of the hurricane? And finally, what were the factors that influenced participants' decision to return to their pre-hurricane community or move elsewhere?

### **Literature Review**

#### **The Concept of Place Attachment**

Definitions of place attachment are varied and evolving (Morgan, 2010). Brown and Perkins (1992) define place attachment as “positively experienced bonds, sometimes occurring without awareness, that are developed over time from the behavioral, affective and cognitive ties between individuals and/or groups and their sociophysical environment” (p. 284). Hernandez et al. (2007) added another perspective to this definition: “Place attachment is an affective bond that people establish with specific areas where they prefer to remain and where they feel comfortable and safe” (p. 1). The authors noted that the manner and magnitude to which people bond to a place is highly variable and complex.

#### **Impact of Disaster on Individuals and Communities**

##### ***Negative Effects***

Disasters typically cause an intense emotional response for individuals, the effects of which can reverberate throughout entire communities. This emotional response, in turn, causes a range of stress reactions in people with the potential to impact their physical and mental well-being following a disaster, both acutely and chronically (Tracy, 2012). This psychological trauma is associated with such psychiatric disorders as acute distress disorder and posttraumatic stress disorder (PTSD), according to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013).

### ***Posttraumatic Growth***

While the unique trauma and stressors associated with disasters put individuals at risk for psychological distress and disorder, they also have the potential to produce psychological growth and well-being (Calhoun & Tedeschi, 1998; Caplan, 1964; Hansel et al., 2020; O'Leary & Ickovics, 1995; Shing et al., 2016). The enhanced personal strength or life meaning that may occur post-disaster is often accompanied by interpersonal growth (Ludin et al., 2019; Wilkinson, 1983) and an improved sense of social support and connectedness post-disaster (Drabek et al., 1975; Platt et al., 2016). The enhanced group cohesion that results post-disaster may help mitigate the negative psychological consequences of disaster. While measures to determine the exact mechanisms underlying community stress-related growth are in development (Schoch-Spana et al., 2019), it seems clear that communities do indeed serve to protect people against posttraumatic psychological distress following exposure to disaster and may even serve to promote psychological growth (Fritz, 1961; Greenley et al., 1975; Quarantelli, 1960). After the disaster, both victims and non-victims in the community mobilize and engage in immediate relief efforts, and in the process of saving and helping each other, gain a collective sense of determinism (Kaniasty & Norris, 1995). This post-disaster altruism provides community cohesion and bonding that are therapeutic in the midst of suffering (Fritz, 1961; Jobe, 2011).

It is clear that the mechanisms of trauma, loss, grief, and attachment, occurring against the social context of others and community, can lead to meaning making, growth, and resiliency post-disaster. What is less known is how the experience of disaster impacts a person's attachment to place and community through these processes of loss and recovery at personal, interpersonal, and community levels.

## **Method and Procedures**

A phenomenological approach seemed ideal for the current study, in which the author sought to discover participants' shared lived experience of Hurricane Katrina through their descriptions of their individual experiences. Social constructivism and meaning making underlying phenomenology closely parallel the social context and meaning making processes of loss, grief, and recovery (Berger & Luckmann, 1967; White & Epston, 1990; Worden, 2009) that emerged during the study.

### **Participants**

A network sampling method—specifically, snowball sampling—was used to obtain the 12 participants for this study. Bernard et al. (2017) state that this sample size is sufficient for research involving case study, phenomenology, and narrative analysis. The participants were Hurricane Katrina survivors in the Gulf Coast area of the United States. The communities within 20 miles of Bay St. Louis, Mississippi suffered the greatest loss of people and property associated with the hurricane (National Oceanic and Atmospheric Administration, 2005). It was thought that tapping this broader geographic area could provide a more comprehensive and complete picture of the experience of Hurricane Katrina than would be possible by focusing on a specific city or community.

Bernard et al. (2017) note that snowball sampling is also appropriate when studying hard-to-find or hard-to-study populations. A significant challenge for the

author, as a relative newcomer to the geographic region of the study and an "outsider" was to identify participants who would be willing to share the personal and perhaps painful stories of their experience. Thus, the author used her professional relationship with a small number of "gatekeepers" (Creswell, 2018) who introduced her to others who were interested in participating in the study.

One group of seven participants was made up of individuals who returned to the community in which they lived before Hurricane Katrina. A second group of five participants was made up of those who did not return to their pre-Katrina community. The sample ranged from 40 to 81 years of age. Four of the participants were male, and eight were female. Each was assigned a pseudonym to protect their confidentiality. Complete participant demographics are shown in Table 1. Participants were interviewed in the fall of 2014 and the winter of 2015, about nine years after Hurricane Katrina.

*Table 1*

Participant Demographics

	<b>Pseudonym</b>	<b>Gender</b>	<b>Race</b>	<b>Age</b>	<b>Marital Status</b>
<b>Participant 1</b>	Nan	Female	Caucasian	58	Widowed
<b>Participant 2</b>	Sean	Male	Caucasian	40	Single
<b>Participant 3</b>	Eva	Female	Caucasian	58	Divorced
<b>Participant 4</b>	Mae	Female	Caucasian	81	Married
<b>Participant 5</b>	Ella	Female	Caucasian	74	Married
<b>Participant 6</b>	Harry	Male	Caucasian	77	Married
<b>Participant 7</b>	Tina	Female	Caucasian	61	Married
<b>Participant 8</b>	Mary	Female	Caucasian	58	Married
<b>Participant 9</b>	Dana	Female	Caucasian	71	Married
<b>Participant 10</b>	Jack	Male	Caucasian	64	Married
<b>Participant 11</b>	June	Female	Caucasian	70	Married
<b>Participant 12</b>	Dan	Male	Caucasian	74	Married

## **Instrumentation**

### *In-Depth Interview*

The study utilized in-depth interviews as the primary data collection method. The interview questions paralleled the research questions and were based on The Place Attachment Scale (Williams & Roggenbuck, 1989), a published and validated survey instrument that measures participants' place attachment.

### *Supplementary Data*

In keeping with the tradition of phenomenological research, in-depth interviews were supplemented with photographs and other personal-family-social artifacts. A third source of data was researcher reflection or journaling (memoing). These three data sources helped to complete the picture of participants' experience and served to corroborate and strengthen the study's results (Creswell, 2018). Data from the in-depth interviews, supplementary sources and reflective journal were transcribed, coded, and analyzed. The resulting data were linked to the identified themes for the in-depth interviews, both manually and through NVivo qualitative data analysis software (QSR International Pty. Ltd., 2012).

## Summary of Findings

The rich qualitative data derived from in-depth interviews and other sources yielded much useful information to describe the disaster experience of participants and illuminate the research questions. These findings are summarized below.

Elements of trauma and crisis were common to the disaster experience for participants. The impact of these experiences on participants was profound, but not necessarily negative. Most participants gleaned positive meaning from the disaster experience that ultimately benefited their recovery and resilience. The strong influence of the disaster trauma experience on participants' attachment to place, primarily through attachment to family and others, was also evident.

Attachment to place and people emerged in the data as a crucial component of disaster recovery. Returning to the pre-Katrina place was a key initial step in the grief and recovery process for most participants, and people and connection played an important role in this process. Both the commonalities and the exceptions among participants further our understanding of the impact of disaster trauma, help inform intervention for survivors, and clarify the complex dynamics of attachment to people and place.

### Disaster Experience

#### *Pre-Katrina Context*

While participants were free to choose the point from which to begin to tell their story, and the stories were quite different, they all began with a description of the elements—cultural, historical, and personal—that together form the context or backdrop against which Hurricane Katrina occurred. This pre-Katrina context is crucial to a full understanding of the disaster experience as it relates to trauma and place attachment.

#### *Pre-Katrina Attitudes About Hurricanes*

For the participants, all of whom had lived in hurricane-prone areas their entire lives, hurricanes were a fact of life. All had survived many hurricanes, some more severe and problematic than others. Previous hurricanes helped shape the learning and expectations that participants carried forward into the Hurricane Katrina experience, and drove their preparation and evacuation decision-making for the hurricane. In this sense, Hurricane Katrina was just another hurricane for which they prepared like any other. As Nan said:

. . . if somebody had said to me, "Nan, this is gonna wipe out the whole Coast," I would have probably left, but at the time, it was just like any other storm: they just reported on it, they didn't say, "Get the hell out of Dodge!" But a lot of people did say it's not going to look the same after this storm, the Coast is not gonna look the same. So, we stayed . . .

Participants discussed that hurricanes were a common aspect of growing up in the coastal South. Past hurricanes were not necessarily traumatic; in fact, they could even be a positive childhood memory. As Sean said, "We don't evacuate, we have parties." Most participants expected that they would have to evacuate but planned to return home in a couple of days.

### ***People and Connection***

Another important commonality in participants' stories that has relevance to place attachment and also trauma recovery was the role of people and connection. These are people who, prior to Hurricane Katrina, shared deep connection, responsibility, and commitment to others in their families, communities, and beyond. There is a spirit of generosity among the people in this community, who easily give and receive help, care, and love. In this context, everyone is included in this huge extended family. As Dana said, "And hugs! There's no place that gives you hugs like New Orleans. I mean, people that you don't know, you know?"

### ***Risk Factors***

A few participants experienced pre-trauma risk factors that likely caused them to feel the trauma produced by Hurricane Katrina more acutely. Pre-trauma risk factors for the development of post-disaster trauma psychopathology are past or family psychiatric history, and exposure to previous trauma that results in a psychiatric diagnosis (Brewin et al., 2000). In addition, all of the participants were exposed to the fresh trauma of Hurricane Katrina.

### ***Disaster Experience Metaphor***

The metaphoric phrases that participants used when discussing Hurricane Katrina aptly describe the iconic hurricane's scope and impact, on both a personal and community level. Examples are Sean's statement, "Downtown Gulfport looked like Beirut" and Eva's statement, "It felt like the end of the world."

### **Meaning from Disaster**

#### ***Perception of Loss***

Perception of loss emerged as a key component of meaning making for participants, via the personal processing of their loss due to the hurricane. This evaluative process included not only their unique perspectives on and interpretations of their own loss, but also a comparison of their loss to others'. An important part of this valuation was assessing and comparing what one still had left in relation to what had been lost. This and other meaning making processes emerged as key factors in participants' recovery and resilience.

#### ***Meaning from Disaster***

The meaning from disaster theme encompassed a broad range of meanings drawn from the Hurricane Katrina experience, from philosophical, spiritual, or religious meanings, to newfound optimism and gratitude, to ambivalence and even negative meanings. Despite this diversity in viewpoints, a commonality that emerged was a renewed faith in and valuing of people.

#### ***Post-Katrina Context***

The "new normal" that emerged in the Hurricane Katrina's aftermath included a range of factors with the potential to profoundly influence place meanings and drive future decision-making. The hurricane was repeatedly referred to as "the great equalizer" that produced tighter-knit communities and a new concern for others, but also greater disconnect between people. In separate interviews, participants Sean and Eva described this eloquently:

Sean (who was not in the area at the time of the hurricane): There was disconnect!—it was massive disconnect. There were certain things I couldn't say . . . I was not a member of this club, because I had not experienced it and had not gone through the torture and the devastation. But I was a member of my own club, because I don't think anybody could relate to what it would be like on the other side of having to watch it and witness it and hear it and see it and not know, and feel how it was . . .

Eva: (sharing the story of talking to visitors to Bay St. Louis about the hurricane) How many people do you know that drowned? I know a half a dozen. (pauses)

Researcher

So how can they know? How can they know if they didn't . . . ?

Eva: They can't know. And I . . . 'cause it's not just knowing it, it's *feeling* it. . . . And don't claim you had my experience because you didn't.

In one fell swoop, the hurricane wiped out life savings, livelihoods, and lifetimes spent building wealth, status, and with these, self-identity. A theme that emerged in the trauma narrative was a deep fear of being rendered homeless that pre-existed Hurricane Katrina, as the following exchange with Tina describes:

Tina: And so, for the rest of my life until right now, I'm still, that is my worst fear is to be homeless. And one morning I woke up and I was homeless! Home-less.

Researcher: So, your worst fear had really been realized.

Tina: Yes.

Participants discussed profound changes—to the landscape, community, and geography—and to their own values, interests, and routines due to Hurricane Katrina. The hurricane brought new anxiety and fear, and also ambivalence about future hurricanes. Participants discussed anxiety about losing memories or one's memory, but not things. Newly-acquired things could be lost again and would then need to be replaced. While participants acknowledged that things made their lives easier, and made them feel okay or normal, accumulating too many things could be anxiety-provoking. Participants' metaphoric statements about these personal possessions seem to convey optimism and positivity in the aftermath of the hurricane, and also ambivalence and troubling existential questions that follow from the trauma experience. These are exemplified in separate interviews with Tina and Harry:

Tina: So, it was a cleansing. But everything was gone.

Harry: . . . he (his son) said, "Dad," he says, "I'm ridin' around, I don't know where to go, what to do," he says.

## **Decision to Return**

### ***Returnees***

All of the seven participants who returned to their pre-Katrina home cited family or people as the primary factor in their decision to return. Further, they discussed that they returned at least in part to restore or rebuild—to "put things right"—for self and family. Most of the returnees also said the decision was not really a conscious decision at all, but rather automatic,

instinctual, or intuitive. All but one returnee stated that they felt attached to their pre-Katrina home, and that their attachment to place was primarily to family and/or community.

### ***Non-Returnees***

All of the five participants who did not make a permanent return to their pre-Katrina home stated that it was too psychologically traumatic or physically impossible to return. Examples of psychological trauma were the disaster trauma itself, and for one participant, the additional trauma of reexperiencing an abusive relationship that had been experienced in the place. For other participants, the job of rebuilding was too overwhelming physically due to age and/or disability, or the post-hurricane environment proved too toxic to return to it.

### ***Commonalities***

Of note is the fact that all participants returned to their pre-Katrina homes at least initially, even if only to assess the damage or dispose of their property. Importantly, this return to the pre-Katrina home, though painful, seemed to be a key step in their survival, grief, and recovery process.

### **Place Attachment**

#### ***Returnees***

Clearly, returnees' attachment to place was through attachment to people, especially family. This attachment to family was a central motivation in their decision to return, so that they could be near family and spend time with them. Returnees discussed that the hurricane produced a renewed attachment to family and friends, old and new, and magnified the importance of their family history in the place. Their attachment to place seemed to be about the responsibility they felt to restore people and order in that place. Importantly, this getting them "back to right" was also key to their own recovery and modeled the recovery process and instilled hope for others ("If they can do it, I can do it").

Regardless of the level of trauma experienced there and the changes created by the storm, home suggested familiarity, and with it, safety or normalcy, the importance of which was magnified by the trauma of the hurricane. One participant called her home her "sanctuary" and said, "You get real familiar with a place, and it's almost like it's a part of you." Clearly, it was important for returnees to have physical proximity to place and the people in it following Hurricane Katrina.

#### ***Non-Returnees***

Non-returnees' attachment was less clear-cut. All but one non-returnee said that they were able to attach to their new home and community and build a life there. Once again, people and connection appeared to play a central role in attachment to the new place. Non-returnees discussed that they were able to make even more friends in their new home, and that they liked their neighbors, neighborhood, and community. The other part of this important dynamic was the negative changes that had occurred to make the pre-Katrina place undesirable or even unlivable. Many of the people in their pre-Katrina community had not returned, and the places that served as social venues for people were also gone. As Tina said, "No people, no attachment." She and other participants spoke poignantly of feeling attached to the people and things that existed in the pre-Katrina place, but that now exist only in their memory or imagination. For example, Ella and

Harry still felt a strong connection to their former home, saying "that's my house," even as they noted, "but this is home." Participants' metaphoric phrases about returning to place were analogous to their journey through loss (as in Tina's statement, ". . . just everybody was just so lost. . . . But I was lost too . . .") and return to normalcy, or self (as in Sean's statement, "Oh, yeah, I just stayed. It was back, I was back").

## **Discussion**

### **Disaster Experience**

All of the participants in the current study had disaster experiences that meet the definition of trauma, according to Benamer and White (2008). This fact underscores the global impact of catastrophic events like hurricanes on people (Braga et al., 2008). The varied range of disaster experiences reported by participants, and also their unique view of these experiences spotlights the important role of perception in trauma (Levers, 2012).

While elements of crisis or trauma were present in every participant's story, and their impact was profound, the disaster experience was not necessarily negative. Most participants were able to glean positive meaning from the experience that eased their recovery and ultimately strengthened their resilience. The impact of the disaster trauma was largely dependent on participants' personal and unique perception of these events. Participants' individual responses to these traumatic events were also influenced by "interactive components" (Baggerly & Green, 2015) such as individual factors, the nature of the crisis event, and factors in the support system. These contextual factors strongly impact the similarly individualized processing of loss and grief, and meaning making, and ultimately, place decisions and attachment.

### **Meaning from Disaster**

#### ***Loss and Grief in the Context of Attachment***

Regardless of their differences in disaster experiences and perception, and whether or not they returned to the pre-Katrina place following the hurricane, all participants were confronted with the same tasks of recovery through the processing of loss and forming new or renewed attachment to others. While participants' strong attachment and support systems may have mediated the lasting negative effects of the disaster trauma experience for participants, the close connection they shared may also have led them to feel the pain of separation more acutely when these attachments were threatened, disrupted, or broken (Levers, 2012; Worden, 2009). This strong attachment survived the disconnect that is a common grief reaction, and that many participants discussed was common during and after the hurricane (Worden, 2009). However, once survivors knew they were safe, the next immediate thought was for the safety and welfare of loved ones. Participants spoke of their intense need to return home and reunite with the beloved people that had been temporarily lost. This behavior may be rooted in the strong instinctual drive to reattach to significant others and resume the relationships that had been severed due to the hurricane (Bowlby, 1977).

#### ***Processing of Loss and Grief in the Context of Community***

All participants experienced significant loss due to the hurricane and were faced with grieving this loss along the way to recovery. Survivors who were able to engage in a productive processing of the loss were more successful in weathering the consequences of the loss. Through

an evaluative process that included not only survivors' unique perspectives on and interpretations of their own loss, but also a comparison of their loss to others' losses, survivors could become aware of the whole reality of the loss, including the positives and negatives associated with that reality. These participants seemed generally more able to view their loss more positively than those who focused on the negative aspects or perceptions of the loss.

Most participants were able to view their own loss due to the hurricane in the context of a larger picture of loss across the vast population of survivors. In comparing their loss to another's greater loss, they could identify positives for themselves in the difference, while at the same time feel grief and empathy for another's loss in the shared connection. This presented participants with a supportive group of people with whom the survivor could process their grief and loss. This is accomplished through the mutual exchange of hope, resources, and psychosocial support, the sharing of story, and validation of the grief experience (Swartwood et al., 2011). This validation and social support for one's experience helps facilitate self-reflection and growth (Walter & McCoyd, 2009).

For some participants, risk factors in place before the hurricane may have made it more difficult to see beyond the negatives in their perceptions of the hurricane. These risk factors are associated with high levels of negative affectivity (neuroticism) arising, for example, from a previous diagnosis of depression, anxiety, or PTSD, or differences in temperament or attachment styles. Such individuals would likely find it more challenging to engage in a productive processing of the loss, and to see the whole reality of the loss, including its positives or benefits. Even in the absence of such risk factors, the fresh trauma of Hurricane Katrina may have produced a new set of acute stressors and reactions with the potential to further complicate the normal grief process (Shear et al., 2011).

### *Meaning from Disaster Arising from Loss and Grief*

The construction of one's own reality, and the meanings conveyed by that reality are thought to be an essential component of the loss and grief process (White & Epston, 1990). Those participants in the current study who struggled with the processing of loss step also found it more difficult to find positive meaning or understanding from the hurricane. A trauma survivor's ability to derive meaning or understanding from the trauma experience via the functions and processes of cognition is key to improved coping and resilience. Survivors who have been able to gain this knowledge and understanding of the previous trauma are better equipped to navigate the new trauma. Negative cognitive errors (for example, overgeneralizing, catastrophizing, selective abstractions, and personalizing) may interfere with the productive processing of loss and grief and can also pose an obstacle to effective problem-solving following the adverse event (Flouri & Panourgia, 2011).

Importantly, a normal human response to such an overwhelmingly negative event is generally negative. While disaster survivors can develop psychopathological symptoms that meet the criteria of PTSD and major depressive disorder (Madianos & Evi, 2010), the majority of survivors do not experience these consequences (Goldmann & Galea, 2014). However, a common task for disaster survivors is to make sense of the event. These meaning making processes are crucial to post-disaster recovery and resilience (Park, 2016).

All of the participants in the present study, regardless of their trauma history or other contextual factors, struggled to make sense of the Hurricane Katrina experience and identify positives within this tragic event. Like the processing of loss, the meaning making process seemed directed by participants' unique perspectives on and interpretations of the events of the hurricane. Participants fell back on pre-existing spiritual, religious, and philosophical beliefs and attitudes to accomplish this. The meanings they expressed represented the full range of experience, from negative to ambivalent to positive. Much of the meaning that participants derived was broadly philosophical in nature and conveyed central questions about the meaning of life and death, and whether we ultimately have control.

One common experience for most participants as they emerged from the processing of their loss was a newfound optimism and gratitude. This gratitude was for a most basic but important gift—that they and their loved ones had survived. Thus, there was a renewed valuing of life, and of being alive, and a renewed faith in and valuing of people, beginning with family and loved ones. Life, health, loved ones, and home were valued over things. The fact that many participants described the hurricane as "the great equalizer" or a cleansing of all that was negative suggests that they viewed the removal of material things not as a loss, but rather as a prerequisite to growth and positive change.

This finding is in keeping with Levers' (2012) discussion of loss, grief, and destabilization as implicit to the trauma experience. Paradoxically, these are also central to life and growth, as new life, change, or forward movement can only be achieved after losing the old lifestyle, behavior, or other functioning of the status quo. Many people view possessions as an indicator of their own or others' social achievement or success; thus, the loss of materialistic things may represent significant loss of status (Richins & Dawson, 1992). Perhaps the most important of these material possessions is one's home. Losing their homes and becoming temporarily homeless or displaced during the hurricane was a profoundly negative experience for participants. Despite the new de-emphasis on material things, there was a special grief for those things that were irreplaceable and that held special meaning, as they served as tokens and spurred memories of the important experiences and people in participants' lives.

Some participants discussed that the Hurricane Katrina experience gave them new strength, self-sufficiency, or independence, a deepened sense of self, and even a new purpose and focus. For all participants, there was a renewed awareness of the goodness of people, and gratitude for their services, however imperfect. This belief in and gratitude for people transcended even participants' negative experiences with people during and after the hurricane. The fact that participants were able to identify positive meaning from the disaster experience demonstrates that it is possible for a person to experience psychological growth or thriving after exposure to highly stressful or disruptive events (Caplan, 1964; O'Leary & Ickovics, 1995; Tedeschi & Calhoun, 1995). Calhoun and Tedeschi (1995) noted that posttraumatic growth and well-being are typically preceded by loss, and that distress and psychological growth can co-exist.

## **Place Attachment**

### ***Decision to Return and Attachment, Loss and Grief, and Recovery***

Returning to the pre-Katrina home or place, at least initially or temporarily, accomplished key grief and recovery tasks. Perhaps the most important of these was reconnecting with lost loved ones. For some participants, this included "putting things to right" for self and others to restore equilibrium and normalcy (Levers, 2012). Participants' depiction of the decision to return home as not a conscious decision at all, but rather automatic, instinctual, or intuitive suggests that these were efforts to reattach to the loved lost people and objects there (Bowlby, 1980/1998). Attachment theory also helps explain why it was so important for returnees to have physical proximity to place and the people in it. Home seemed to imply familiarity, and with it, normalcy and even safety: If one could just get back home, oneself, and everyone and everything else would be all right. In fact, familiarity is an important element in the definition of home: "A familiar or usual setting" (Home, 2015).

While finding lost loved ones and ensuring that they were alive and safe were prioritized, locating other familiar people in the pre-Katrina place was important also, and a crucial component in recovery. It answered the anxious question about where one's "people" were. And, if these significant others had survived and recovered, then perhaps one could too. Returning to the scene of the disaster, if only to assess the damage or dispose of property, was important because it presented participants with tangible proof of the reality of the loss—similar to viewing the body of a deceased person—which aided in the processing of the loss (Worden, 2009).

Hurricane Katrina resulted in drastic changes to communities that posed a problem for return and reattachment. Such communities suffered attrition, and property values and insurance rates skyrocketed. Lovely mature neighborhoods were replaced by Federal Emergency Management Agency trailers, mobile homes, empty lots with the concrete footprints of former buildings, and debris piles. Everywhere, and especially in the vast amounts of open space and "nothingness" that the storm produced, there are still reminders of the hurricane's destruction. As many participants said, and as was experience by the author in her two and a half years on the Mississippi Gulf Coast, it is very difficult living in the midst of all this loss.

## **Implications for Practice**

### **Timely and Evidence-Based Interventions are Important**

The vastly different mental health treatment experiences and outcomes related by Eva and Tina underscore the importance and value of connecting trauma survivors with timely and evidence-based therapeutic intervention post-disaster (Jacob, 2015). There are many effective treatment options for trauma available to therapists, and knowledge of the impact of disasters on mental health is substantial (Levers, 2012). However, research on effective intervention specific to disaster trauma is less available, perhaps due to the prioritizing of life-threatening conditions following disaster (Gelbach, 2008).

Despite this scarcity of disaster trauma-specific intervention research, trauma experts agree that the central goal of trauma therapy is to avoid retraumatizing or otherwise harming the client. Stabilization of the traumatized person before and during attempts to process trauma memories is paramount. Returning to the scene of the disaster trauma is potentially traumatizing,

especially if the person has not developed adequate coping skills to manage the intense emotional response to the environment or trigger situation. To ensure treatment success and minimize the risk of retraumatizing or otherwise harming the client, the therapist must be intentional in creating a therapeutic milieu that respects the client and emphasizes safety, trust, attachment, communication, and empathy (Levers, 2012).

Trauma interventions must be compatible with the person's particular culture and needs (Gelbach, 2008). The survivor's sociocultural realities and resources, including their simultaneous experience of one or more layers of oppression, must be considered. For example, the survivor may simultaneously experience racism, sexism, heterosexism, able-bodyism, ageism, classism, religious intolerance, transphobia, and xenophobia. Effective trauma recovery care must also attend to the multiple ways in which the survivor identifies, including race, ethnicity, culture, age, gender, migration, status, disability, sexual orientation, and religion or spirituality (Bryant-Davis, 2019). Trauma survivors in therapy may be especially attuned to signs of inattention, abandonment, or betrayal from the therapist; thus, therapists must be self-aware of their behavior and take care to communicate compassion and respect to the client (Pearlman & Saakvitne, 1995).

In areas where people are especially vulnerable to disaster, community intervention must be both proactive and responsive, including ensuring that there are adequate numbers of trained and competent clinicians and paraprofessionals who can provide psychoeducation about the disaster trauma response and teach stabilization methods. Communities that are the most effective in recovering from disaster are those that take deliberate actions to mobilize existing community resources and skills (Gelbach, 2008). Effective trauma intervention increases a person's ability to take an active part in community restoration post-disaster. Miller and Rasco (2004) noted that psychosocial interventions, rather than psychotherapy may be a more effective option post-disaster. The authors' rationale is that psychotherapy tends to pathologize survivors and their coping behaviors that are in fact human, normal responses to trauma. Also, psychotherapy is rendered less effective post-disaster when communities and societal support systems are typically disrupted.

Interventions that consider individuals in the context of the social and relational systems around them, and that also take advantage of the innate human motivation to reach out to others in times of adversity may be helpful for disaster survivors. As well, treatment can help survivors positively reframe overgeneralizations resulting from victimization during disaster, for example, "people are hostile," or "life is dangerous", to more functional schemas, and develop a more positive and functional way of viewing the loss (Staub & Vollhardt, 2008).

### **Disaster Trauma Effects are Profound and Enduring**

Participants for the present study were interviewed in the fall of 2014 and the winter of 2015, about nine years after Hurricane Katrina. The finding that many years later the memories of Hurricane Katrina were still vivid and emotionally charged attests to the profound and enduring impact of the disaster on survivors. This finding is in keeping with that of other research that has detected significant long-term mental distress in Hurricane Katrina survivors. One study of 1,000 families who survived the hurricane found that more than half the participants still experienced significant mental

distress nearly two years after the disaster. While many Katrina survivors reported that their mental distress had subsided, as the ten-year anniversary of Hurricane Katrina approached, survivors reported a rise in anxiety, prompting a community outreach effort in the greater New Orleans area to apprise residents of available mental health resources. As the city's director of health noted, for Hurricane Katrina survivors, "there's probably not a day that goes by that you don't think about it" (Jacob, 2015, p. 864). These findings point to the importance and impact of Hurricane Katrina on survivors even many years later, and the need for opportunities to continue to share their story to continue to process the experience.

### **Sense of Place Issues are Important to Disaster Trauma Recovery**

Participants' strong drive to return home, to find and reattach to lost loved ones in the nuclear family and community, and restore safety and normalcy has important implications for therapists and others who work with disaster trauma survivors. Indeed, Hurricane Katrina survivors who were able to restore this normalcy by quickly becoming reestablished into permanent homes and jobs suffered less long-term mental distress than those who experienced delays in resettling (Jacob, 2015).

Sense of place issues are an important area to discuss and explore with the survivor. Helping survivors explore how they conceptualize self in the context of home, family, and place, as well as how the trauma experience shaped this perspective, can guide discussions and decision-making about place. The interrelationship and dynamics between place attachment, and loss and recovery could be included in psychoeducation for survivors, to help them better understand and cope with these normal and human reactions to trauma. This information can help survivors better define and create a place of safety, familiarity, and belongingness that can be an important resource for recovery and resilience in the aftermath of disaster.

## **Implications for Research**

### **Areas of Future Research**

Some important questions followed from the data in the present study that warrant further exploration. These questions are rooted in the themes that emerged in participants' stories.

#### ***Fear of Losing Memory***

Participants expressed fear or anxiety about losing their memory or memories. This fear or anxiety may have been magnified by the new importance of memories, especially if memories were all that one had left after losing the things that were tokens for those memories. The central question that emerged in the participants' metaphoric statements is whether the fear of forgetting or losing the memory is really about the fear of losing even more important things, such as one's identity, mind, or self. What is also unclear is the origin of this fear, and whether it is linked to the disaster trauma experience. Also, participants related feelings of detachment, numbness, disconnect, and depersonalization. While these feelings are considered normal grief reactions (Worden, 2009), it is unclear whether these are manifestations of the fear of losing key aspects of self or identity.

### ***Fear of Homelessness***

A theme that emerged in participants' trauma narratives was a deep fear of being rendered homeless. This fear pre-existed Hurricane Katrina. It is unclear whether participants' fear of being homeless, coupled with the extremely negative experience of having that fear realized during Hurricane Katrina magnified the importance of home for participants, or fueled the already strong drive to return home after the hurricane. More research is needed to explore this question.

### ***Origin of Positivity, and its Relationship to Resiliency***

It seems clear that those participants who were able to see the whole reality of their loss were able to view it more positively and constructively. What is less clear is where this positivity or optimism comes from, and whether, and how this aids resiliency following disaster. Future research could explore these questions.

### ***Safety***

Participants in the present study discussed the importance of getting self and others safe and feeling safe and secure to the decision to return or not to the pre-Katrina home. It is unknown whether participants felt safer or were safer in their post-Katrina homes. In future research, specific questions or probes could investigate these factors and their impact on place attachment.

### ***The Role of Home and Family, and Disaster Trauma in Sense of Place Issues***

The goal of the present study was to illuminate how disaster trauma impacts a person's attachment to place. Home and family emerged as important elements that helped to illuminate place attachment and place identity, and the impact of disaster trauma on these factors. Future research could further define these constructs and explore their dynamics and interrelationships.

### **Improvements for Future Research**

The present study included some limitations that could be addressed in future research:

#### ***Broad, Abstract Interview Questions Could be Better Defined***

Participants appeared to struggle to understand and answer the rather broad and abstract questions about meaning from disaster and place attachment. Participants in future research could benefit from having these terms defined in more detail.

#### ***More Representative Samples Needed; Limitations of Snowball Sample***

The sample in the present study was fairly homogenous: Participants were all Caucasian and members of the middle class and ranged in age from 40 to 81. The use of snowball sampling in the current study may have excluded residents who were most impacted by Hurricane Katrina; for example, people of color and those with low socioeconomic status (Shapiro & Sherman, 2005). To capture a broader and more complete picture of the disaster experience, it would be helpful to include in future research participants who represent a wider demographic range; for example, young adults who were children at the time of Hurricane Katrina, or people of color. A sampling method that ensures that the resulting sample is representative of these and other populations would strengthen future studies.

Children have a special vulnerability to the impacts of trauma, including that caused by disaster (Gillies et al., n.d.). Annual surveys of New Orleans schoolchildren by the National Child Traumatic Stress Network indicated that children with high exposure to trauma, and especially multiple traumas, were more likely to experience persistent PTSD. Ten years following Hurricane Katrina, there was speculation that the increasing problems that some teenagers in New Orleans using violence to solve conflict may have stemmed in part from the trauma they experienced as young children due to Hurricane Katrina (Jacob, 2015). The fact that many participants described the hurricane as "the great equalizer" or a cleansing of all that was negative connotes dissatisfaction with certain aspects of the pre-hurricane community, for example, sharp racial or class divisions. However, I did not probe participants for this information. Future research could explore these attitudes in more depth to investigate whether these are related to place attachment or the decision to return to place.

### **Implications for Practice**

#### **Narrative as an Effective Research Tool**

The present study is an apt example of how story can be used effectively to elicit participant insights. The rich details encapsulated in participants' stories help create a more comprehensive and complete picture of participants' perspectives. For these reasons, narrative methodologies have proven a powerful research tool with utility in a wide range of research areas (Block & Weatherford, 2013; Cohen & Mallon, 2001; Langley, 2012).

The research questions in the present study were illuminated through the telling of participants' stories of their Hurricane Katrina experience. Through the retelling of story, participants could more fully process the trauma and loss associated with the hurricane and relate this to the meaning drawn from the disaster, and ultimately, the decision to return and attach to place. The interview was a positive and even therapeutic experience for participants in the present study. Participants experienced deepened understanding and insight, as well as unexpected epiphany. The finding has important implications for research of this type. While the retelling of the trauma story is not appropriate for every person, and there are many important considerations, including benefits and risks associated with this practice, the present research points to the usefulness of incorporating story into qualitative interviews of this type.

#### **Interviewing Skills as Mitigants for Potential Risks**

Basic but important interviewing skills borrowed from clinical counseling work, for example, establishing safety and rapport, reflective listening, and gently probing for more detail and intuitively using probes to elicit more detailed information may help mediate the potential risks associated with research of this type. These include negative reactions to the testing situation, such as experiencing strong emotions in recounting the details of the disaster. Similar to therapy with traumatized persons, this finding reinforces the importance, in trauma research of this type, of establishing an interview relationship and environment that respects the participant and emphasizes safety, trust, attachment, communication, and empathy (Levers, 2012). Interviewers must be vigilant to the participant's behavior as well as their own and take care to communicate compassion and respect to the participant (Pearlman & Saakvitne, 1995).

## Conclusion

While the goal of the present study was primarily to illuminate how disaster trauma impacts a person's attachment to place, home and family emerged as important elements of disaster trauma and recovery. The present study is an ideal starting place for more research to further define these constructs and explore their dynamics and interrelationship.

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