Psychological Effects of Disasters on Children: Hurricane Katrina and Child Survivors in New Orleans

By Christina James

In August 2005, Hurricane Katrina fell on the Gulf Coast, resulting in unprecedented, long-term mental health needs of hurricane survivors. Child survivors are especially vulnerable following a disaster; it is therefore crucial that mental health providers understand and utilize effective interventions to address the psychological impacts of disasters on children. This article examines the psychological impacts of disasters on child survivors, exploring factors that increase a child's vulnerability to psychological distress and presenting an evidence-based intervention for child survivors of Hurricane Katrina. The author uses case examples from a New Orleans agency that serves survivors of Hurricane Katrina.

On August 29, 2005, Hurricane Katrina fell on the Gulf Coast, resulting in unprecedented physical destruction, thousands of deaths, and the displacement of hundreds of thousands of individuals (Voelker, 2005). Experts note that the effects of Hurricane Katrina have created unprecedented mental health needs among the storm's survivors, particularly among child survivors (Voelker, 2005). Rebecca Voelker (2005) notes that many of these children experienced multiple traumas during and immediately following the hurricane. Some of these children continue to experience trauma associated with the transition back to life in a recovering city. Indeed, Hurricane Katrina's effects on children show how devastating storms can be on this population; however, it is important to note that not all storms have the same impact.

This article has four goals. First, it examines the literature on the psychological impact of disasters on child survivors, devoting special attention to the association between disasters and posttraumatic stress disorder (PTSD). Second, it discusses several factors that may contribute to a child's experience of PTSD symptoms following a disaster. Third, it presents the experiences of several child survivors of Hurricane Katrina who are living in New Orleans.

Finally, it presents the Project LAST's (Lost and Survival Team) Elementary-Age Grief and Trauma Intervention, a unique, evidence-based intervention for individuals as well as groups. The intervention has been used with children who experienced various traumas, including those experienced as a result of Hurricane Katrina in New Orleans. The article concludes with several policy recommendations.

The article also presents relevant case assessments of and interviews with child survivors of Hurricane Katrina. These are drawn from the author's fieldwork in New Orleans during the months following the hurricane.[1] Fieldwork was conducted through a New Orleans organization that primarily provides mental health counseling to low-income African American children and families. The children and families discussed in this study have experienced multiple traumas as a result of their experiences during and after the hurricane. Although many along the Gulf Coast region experienced similar traumas, this article focuses on child survivors in New Orleans.

It is first important to note that although the tragedy in New Orleans has been generally discussed as the result of Hurricane Katrina, the reality is that the majority of devastation there was caused not directly by the hurricane itself but by the flooding that occurred due to multiple breeches in the levee system. Therefore, the discussion of Hurricane Katrina as it affected New Orleans will not be described as a natural disaster but simply as a disaster. This is done in order to convey the fact that the disaster in New Orleans was the result of both a natural phenomenon and man-made error (e.g., a levee system that was unprepared to withhold the hurricane storm surges).

HURRICANE KATRINA AND NEW ORLEANS CHILDREN

Results of the 2000 U.S. Census reveal that there were 70,629 children ages 9 years and younger living in New Orleans; in addition, 36,769 were between the ages of 10 and 14 years old (U.S. Census, 2000). Children living in New Orleans during Hurricane Katrina were affected by the storm in different ways, whether it was because they lost their homes, their parents lost their jobs, they were forced to change schools, or they lost family members or friends.

Although Hurricane Katrina and the subsequent levee breeches affected most children and families in New Orleans, obstacles to evacuation and subsequent problems in finding shelter made the disaster much more difficult for low-income children and families. In 2000, 43.0 percent of children under age 6 in Orleans Parish were living in poverty; the rate was 42.4 percent among Orleans Parish children between the ages of 6 and 11 (Greater New

Orleans Community Data Center).[2] Understanding the extent of poverty among children living in New Orleans before Katrina is important because the socioeconomic status of these children and their families is likely to have greatly affected their experiences both during and after the hurricane. As Olivia Golden (2006) notes, for children whose families struggled economically before Katrina, the impact of the hurricane may have been that much more damaging.

As the organization Save the Children (2006, p. 1) notes, "Now, a year after the storm, children still face enormous challenges. Many still live in temporary and often unwelcoming situations. They have lost their communities and schools, disrupting [sic] social networks and learning. And studies have found high rates of depression, anxiety, and behavioral problems among many children trying to make their way in a post-Katrina world." The child survivors of Hurricane Katrina may be vulnerable to these and other traumas for many years to come.

DATA

Data for this study were collected during the author's fieldwork with a New Orleans-based agency. The author was part of a staff that provided mental health services in the aftermath of Hurricane Katrina. Services included grief and trauma counseling for children and families affected by the hurricane, the subsequent flooding, and violent crimes. Many of the children experienced multiple traumas during and after the hurricane. Clients seeking services at the agency come on a voluntary basis. The majority of clients are low-income African American children and families. All of the clients discussed in this study reported that they lived in New Orleans at the time of the hurricane.

The case examples included in this article come from the author's work with the agency between the months of June and September, 2006, almost a year after Hurricane Katrina. The article's content results from an assessment of approximately 14 children who ranged in age from 4 years to 12 years old. The majority of the cases were elementary-age children at the time of assessment. Most of the assessments come from the author's family therapy work with four families, three of which were seen by the author and supervisor in the community (i.e., either in their home or at another location in the community). The author saw one family alone in the office. Parents of the children were included in the family sessions. The number of sessions in which each family participated varied from 4 sessions to 10. In addition, the article also presents the case of a 9-year-old child who was assessed by the author and was considered for participation in the Project LAST Intervention school-based group treatment. The author conducted the assessment under the supervision of an agency employee in the child's school.

The cases included in this article were chosen for their relevance to the topics covered in the article and thus may serve as illustrative examples. The cases included were also ones of which the author had first-hand knowledge. It is important to note that although the included cases may serve as examples of the experiences of some families after the hurricane, their experiences cannot necessarily be generalized to the larger population of New Orleans families. Each family's experience was unique.

Many of the clients seeking services at the agency experienced multiple traumas during the hurricane. One child reported to the author during an assessment (as part of a family session) that he had seen a dead body at the Ernest Morial Convention Center and that he and his mother were eventually taken in a plane without being told where they were going. The mother of this child reported to the author that they were thusly transported to Texas, where they stayed in a shelter for several weeks. The child reported being scared during his time at the shelter and described an incident in which he was separated from his mother at one point. According to staff reports, other children reported witnessing acts of violence, hearing about a relative dying in horrific conditions, being separated from a parent during the evacuation, and being air-rescued. Whether the child experienced these events as traumas depends on several factors that will be described later in the article. However, unpublished data from the agency under study show that 30 percent of the children seeking services have experienced two or more traumas as a result of Hurricane Katrina, and 10 percent have experienced three or more traumas. These findings suggest that children in New Orleans need effective and appropriate coping strategies to help them work through these traumas.

PSYCHOLOGICAL EFFECTS ON CHILDREN WHO HAVE SURVIVED A DISASTER

Background

In recent years, there has been an increase in research on the psychological consequences of man-made and natural disasters (Williams, 2006). Some of this work focuses specifically on the consequences that those events have for children. Juliet Vogel and Eric Vernberg (1993) find that researchers in the 1970s and 1980s became increasingly aware of the enduring and severe effects that disasters can have on child survivors. This shift reflected a recognition that the effects were greater than research previously acknowledged. Nonetheless, current research continues to suggest that the psychological and emotional needs of children (both man-made and natural) are still often neglected after disasters. Annette La Greca and associates (2002) note several reasons for this

neglect. First, a disaster may compel parents and caregivers to deal with their own traumas, making it difficult for them to address the needs of their children. Second, parents and caretakers may not be fully aware of the extent to which their children are in distress. Finally, as La Greca and associates (2002, p. 4) observe, because of the stage of their developmental process, children may lack the ability to recognize their own distress or to seek help.

Both immediately following a disaster and in the long-run, neglecting the emotional and psychological needs of children may have detrimental consequences. Such neglect may impede the long-term growth and development of children (La Greca et al., 2002). Joy Osofsky (2004, pp. 6–7) notes, "The psychological outcomes of … trauma on children include threats to their sense of basic trust and secure attachment…. Thus it is crucial that parents and other caregivers be able to listen to their children and hear their concerns."[3]

DISASTER-SPECIFIC PTSD IN CHILDREN

Posttraumatic stress disorder (PTSD; see American Psychiatric Association, 2000) occurs as the result of the experience a traumatic event. Among children, PTSD manifests itself through disorganized or agitated behavior (American Psychiatric Association, 2000). Children may continue to reexperience the trauma through intrusive thoughts, and such thoughts may manifest themselves in repetitive play that depicts the traumatic event. Children may also reexperience trauma through recurrent dreams that come in the form of nightmares in which the content is unrecognizable to the child. Children with PTSD may resist discussion of the traumatic event or may give a flat, seemingly unemotional description of the event (Kronenberger and Meyer, 2000). Research shows that children's symptoms of PTSD are more likely to be behavioral than cognitive (Kronenberger and Meyer, 2000). Examples of this behavioral manifestation include aggressive behavior, throwing tantrums, and "escape behavior" (Kronenberger and Meyer, 2000, p. 251).

One's reaction to a traumatic event depends, however, on the type of trauma that one experiences. Anait Azarian and Vitali Skriptchenko-Gregorian (1998) find that the trauma experienced as a result of a disaster differs from such other traumas as physical abuse or rape. They point, for example, to the fact that disasters often involve multiple stressors, which affect survivors in a variety of ways. "As a result of such interwoven stressors and such an overwhelming life experience, the survivors manifest a wide range of cognitive, emotional, and behavioral problems" (Azarian and Skriptchenko-Gregorian, 1998, p. 81). Azarian and Skriptchenko-Gregorian (1998) study 839 child survivors of the 1988 Armenian earthquake, conducting personal interviews

and questionnaires 1 year after the earthquake. They find that these children showed many common PTSD symptoms, including reenactment and avoidance. The most common forms of reenactment were nightmares and drawings, but the authors also note, "Certain places, smells, sounds, memories, feelings, thoughts, even people who reminded them of the original traumatic events, were energetically avoided" (Azarian and Skriptchenko-Gregorian, 1998, p. 103). Azarian and Skriptchenko-Gregorian report, for example, that many children refused to go to school because this may have been where they were when the earthquake occurred. Ricky Greenwald (2005, p. 16) discusses similar phenomena and presents the idea of "survival orientation," an aspect of avoidance, or "the wish to keep any more bad things from happening. For example, a traumatized child might avoid walking down a certain street where she was hit by a car, both to avoid a recurrence of the accident and to avoid being reminded of the memory" (2005, p. 16).

Azarian and Skriptchenko-Gregorian (1998) also report that expressions of guilt were common among the child survivors they studied. For example, some adolescents reported feeling guilty that they hadn't been able to say goodbye to a parent who was later killed. Other children reported feeling guilty that they had done something to cause the earthquake (Azarian and Skriptchenko-Gregorian, 1998, p. 96).

In recent years, a fair amount of research has connected disasters and PTSD (Shaw et al., 1995; Azarian and Skriptchenko-Gregorian, 1998; Thienkrua et al., 2006; Williams, 2006). In fact, of all the symptoms that a child might experience after a disaster, PTSD symptoms are the most frequently studied (Silverman and La Greca, 2002). La Greca and Mitchell Prinstein (2002, p. 120) observe that "the most common psychological reactions to hurricanes and earthquakes are consistent with current formulations of PTSD." Evidence on postdisaster PTSD among children suggests that if these symptoms emerge, they usually do so weeks or months after the disaster (Silverman and La Greca, 2002). Vogel and Vernberg (1993) note that children's PTSD symptoms typically decrease quickly after a disaster. Children usually recover fully between 18 months and 3 years afterwards. They note, however, that symptoms may be prolonged for children whose disaster experience involves a severe threat to life or "long-term family and community disruption" (Vogel and Vernberg, 1994, p. 464).

Reviewing the situation 1 year after the disaster, Amy Liu, Matt Fellows, and Mia Mabanta (2006, p. 2) observe, "New Orleans has rebounded unevenly, leaving entire neighborhoods mostly out of the recovery effort and many key pieces of the city's infrastructure – from childcare centers to affordable housing to utility service – lagging" (Liu et al., 2006, p. 2).

Such conditions can affect the emotional and psychological healing of the city's children.

Reminders of the disaster represent recurring challenges for children in New Orleans. Many children seeking services at the agency in this study reported avoidance symptoms. For example, one 9-year-old survivor of Hurricane Katrina reported that he avoided walking past certain houses in his neighborhood because he remembered seeing the wind knock the doors of theses houses down during the hurricane. Another child reported that he and his mother did not talk about Hurricane Katrina because it was "too sad" to think about.

Along with symptoms of avoidance, child survivors of Hurricane Katrina may have also experienced guilt similar to that described by Azarian and Skriptchenko-Gregorian (1998). In order to be rescued, some of the children in this study were forced to leave behind their family pets. This may have caused them to experience guilt. For example, a 9-year-old male who sought services at the agency in this study reported that he had to leave his dog at the house when he and his mother were rescued by boat. Leaving his dog was something that this boy brought up multiple times in sessions, despite the fact that he and his mother endured other harrowing experiences. Although he did not outwardly express guilt about having to leave his dog, educating children about things that are out of their control is one way to alleviate any guilt they might be experiencing after a disaster.

FACTORS THAT CONTRIBUTE TO CHILDREN'S EXPERIENCE OF PTSD SYMPTOMS

Child survivors of a disaster are vulnerable to experience PTSD symptoms, but not all children who have been exposed to a disaster will have a traumatic reaction or display clinical levels of PTSD symptoms. What makes some children more likely than others to be vulnerable to PTSD symptoms? Philip Lazarus, Shane Jimerson, and Stephen Brock (2003, p. 2) note that children who experience a disaster may have a variety of PTSD symptoms and that the severity of these symptoms depends on several factors, including, "personal injury or loss of a loved one, level of parental support, dislocation from their home or community, [and] the level of physical destruction." Vogel and Vernberg (1993) add that whether the child was separated from others during the disaster, whether a child lost someone to the disaster, the characteristics of the child's family and community, and the severity of the exposure to the disaster can all contribute to a child's experience of PTSD symptoms.

Child survivors of Hurricane Katrina reported varying levels of exposure to the hurricane and subsequent flooding. For example, some children were able to evacuate with their parents before the hurricane hit, but other children were still in their houses when the levees broke. One 9-year-old male seeking services at the agency reported seeing the water rush into his home after the levees breeched. The rising water forced him to sleep in the attic with his mother. However, he did not display clinical levels of PTSD. Although the factors mentioned above may contribute to a child's experience of PTSD symptoms, each factor alone is not necessarily a predictor of PTSD.

Child survivors of Hurricane Katrina also reported separation from others during the hurricane. For example, one 6-year-old reported that, of all of the things that he endured during Katrina, the most difficult thing for him to talk about was how scared he had been that his aunt, who was not able to evacuate with the rest of his family, was going to die alone in her house during the hurricane. His aunt survived, but over a year after the hurricane, the child still found it still extremely difficult to talk about the separation from his aunt during the evacuation.

Several authors report that threats to life, or perceived threats to life, can be another factor that contributes to children's experience of PTSD symptoms after a disaster. Wendy Silverman and La Greca (2002, p. 24) note, "The more children perceive their lives or the lives of loved ones to be threatened, the higher are their reports of PTSD symptoms." Preexisting risks, such as a previous traumatic experience, represent a final (and crucial) factor that may contribute to children's experience of PTSD symptoms after a disaster (Lazarus et al., 2003, p. 2). Carol Garrison and associates (1993, as cited in La Greca and Prinstein, 2002, p. 123) find that "adolescents who have a history of experiencing other traumatic or violent events have reported more severe PTSD symptoms after hurricanes than those without prior trauma exposure." This gets back to the idea, mentioned previously in the article, about multiple layering of traumas. If a child has had previous unresolved traumas, this lack of resolution will affect his or her experience of a current trauma.

For example, one family in this study survived Katrina and endured multiple traumas in the year after the hurricane. Several months after the hurricane, the oldest son in the family (who was also a father-figure to the younger children) was murdered. One month later, a close cousin (a teenager) was killed in a drunk-driving accident. The author and other agency staff worked with the family to address the family's multiple traumas. Each family member's experience of each event was unique, and family members were at different stages of healing. The goals in the work with this family were thus to build on their

many strengths as a family, to further develop their coping strategies, and to build on the family unit as a support system.

PROJECT LAST: AN ELEMENTARY-AGE GRIEF AND TRAUMA INTERVENTION

Project LAST's (Loss and Survival Team) Elementary-Age Grief and Trauma Intervention (hereafter, Project LAST Intervention) is a unique evidence-based effort created by Alison Salloum (2006) through her work with a New Orleans-based agency that addresses the mental health needs of predominantly low-income, African American children and families. The intervention was originally developed as part of the agency's work on Project LAST, a program created in 1990 to respond to the needs of children and families who witnessed, or been a victim of violence, including having a loved one murdered (Salloum, 2006). The intervention was expanded after Hurricane Katrina to address the needs of children who, because of the hurricane or to the death of someone close to them, experienced grief, loss, and moderate symptoms of posttraumatic stress. The Project LAST Intervention is being used in several New Orleans public schools to engage child survivors of Hurricane Katrina. Children who meet the intervention criteria participate in the Project LAST Intervention group model with other child survivors. Children who do not meet the criteria for the group intervention (e.g., children who are suicidal or whose identified trauma occurred less than a month before the beginning of the intervention) are given the option of participating in the individual intervention that is to be conducted by clinicians trained in the Project LAST Intervention (Salloum, 2006).

The Project LAST Intervention is unique because it was developed in New Orleans by a clinician familiar with the population (Salloum, 2006). The program was piloted in New Orleans both before and after Hurricane Katrina. It has been modified to meet the specific cultural and emotional needs of the post-Katrina New Orleans population. However, it was originally developed and continues to be a model intervention for children and families who experienced other types of traumas unrelated to Hurricane Katrina.

According to Salloum (2006), the three main goals of the Project LAST Intervention are to help the child: (1) learn more about grief and traumatic reactions through psychoeducation; (2) express his or her thoughts and feelings about the event that brought the child to the intervention, for example, through the creation of a coherent narrative; and (3) reduce traumatic reactions, as measured by the *UCLA PTSD Index for DSM-IV* (Pynoos et al., 1998). In the group intervention model, children attend 10 sessions, including a closing session in which children celebrate the work that they have completed. The

individual intervention model is also based on a 10-session schedule but can be modified to fit the needs of the child.

The Project LAST Intervention is to be used under the general framework of an ecological perspective (Salloum, 2006). This framework is preserved by maintaining an awareness of each child's environment and individual cultural practices. The Project LAST Intervention was created using theories of cognitive-behavioral therapy and narrative therapy. Some of the intervention's elements are based in cognitive-behavioral theory. These include imaginative exposure; creating a coherent narrative through the creation of My Story (described below); making connections among thoughts, feelings, and behaviors; relaxation exercise; and the use of psychoeducation (Salloum, 2006).

The use of cognitive-behavioral strategies is reflected in the intervention's focus on anger management. In several of the sessions, children are asked to list their physical anger signs (e.g., racing heart, flushed face) so that they can recognize their body's reaction to anger. Therapists then ask children to identify the feelings, thoughts, and behaviors that are associated with their physical anger signs. The process is intended to enable the child to understand how all four (body reactions, feelings, thoughts, and behaviors) are connected. Children are also taught relaxation strategies, both physical and thought-based (e.g., children tell themselves they are relaxed), so that they can use these strategies when they become aware of their physical anger signs. These strategies are reinforced during each session, and children are encouraged to practice on their own (Salloum, 2006).

Some of the narrative therapy strategies used in the Project LAST Intervention include: telling of the trauma story with the focus on the meaning to the child; telling of stories with rich descriptions; exploring alternative stories and unique outcomes; retelling of the story with a different outlook; recognizing that the problem did not occur within the child but rather is external; highlighting the child's strengths; using the child's language; and working collaboratively (Salloum, 2006). One crucial element of the narrative therapy strategy is that each child creates My Story, a compilation of the work that he or she does throughout the intervention. During each session, children complete worksheets related to different aspects of their experienced trauma (or traumas). The worksheet activities are done in three parts: drawing; explaining the drawing to the clinician; and writing about the drawing. The last of these can be done either by the child or the clinician. Finally, the child is encouraged to share the drawing or written story with an outside witness, usually a parent or other caring adult, to include the witness in the process of the intervention and to increase support. At the completion of the intervention, all of the drawings and written stories that the child completed throughout the sessions are compiled into the personal My Story narrative (Salloum, 2006).

Other unique aspects of the Project LAST Intervention include the use of cofacilitators in the group intervention; strong parent involvement, including frequent meetings with clinicians and involvement in their child's My Story narrative; a focus on clinicians' self-care and awareness of vicarious traumatization; and the fact that the intervention has been effective both in the group and individual setting (Salloum, 2006). Two pilot tests with random assignment have been performed on this intervention. In both tests, the intervention was shown to be effective in reducing PTSD and depressive symptoms in the child (Salloum, 2006). The most recent pilot test was performed with 56 children who were experiencing grief, loss, and moderate symptoms of posttraumatic stress. Children's experiences were due to Hurricane Katrina or to the death of someone close to them. The pilot intervention was conducted between January and May 2006 in New Orleans schools. Children ranged in age from 7 to 12 years old, and the majority (90 percent) were African American (Salloum, 2006).

Using a quasi-experimental design, a pilot test was performed on the Project LAST Intervention between 1997 and 2001. The sample includes 102 children who participated in the school-based form of the group intervention. The quasi-experimental design was employed using secondary data analysis from participant case records and the child posttraumatic stress reaction index (Nader, 1996) was used to measure posttraumatic stress (Salloum, 2006).

Results of the pilot test show that there was a statistically significant decrease in mean posttraumatic stress scores over time (Salloum, 2006). There was also a statistically significant decrease in mean depression scores over time. The results suggest that the Project LAST Intervention helped to decrease the PTSD and depression symptoms in the children who participated. This intervention continues to be used in New Orleans with child survivors of Hurricane Katrina in a culturally sensitive manner by clinicians who know the population well. The intervention can be used with children and families in future disasters. It is also being used with children and families who have experienced other traumas unrelated to disasters (Salloum, 2006).

CONCLUSION

Hurricane Katrina brought to light the crucial need to invest in research on the psychological effects of disasters on survivors and specifically on children. It prompts researchers to identify the ways that social workers can address the effects of disasters on children through practice and policy. Although research interest has increased in recent years, many gaps remain. There are a few reasons for this, including lack of funding and difficulties in deploying research teams to communities that have been affected by a disaster (La Greca et al., 2002).

In order to ensure that the psychological needs of children are met following a disaster, several improvements need to be made. First, there is a need for increased funding for research on the psychological effects of disasters on children. Research should also be expanded to include long-term studies on the effects of disasters, as current research tends to focus on a short period of time following a disaster. Long-term research is especially important for children who have experienced multiple traumas. Second, more research is needed on protective factors for child survivors of a disaster. Current research tends to focus on the factors that make children more vulnerable to the negative psychological effects of disasters. Although this focus is crucial (and central to this article), it is also critical to understand why certain children fare better than others after a disaster.

Third, there needs to be further exploration of posttraumatic growth in children who have experienced a trauma. Although there is a growing research interest in posttraumatic growth (i.e., positive change as a result of a trauma) among adults, research has largely ignored such growth among children. Understanding protective factors and the dynamics of posttraumatic growth in children may increase social workers' ability to facilitate such growth among vulnerable children.

Finally, social workers should use interventions, such as the one developed by Project LAST, that employ culturally sensitive practice to enable children to create a narrative of the traumas they have experienced. The Project LAST Intervention has helped New Orleans children who experienced multiple traumas to develop coping strategies that they can use throughout their lives.

REFERENCES

American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders: Text Revision: DSM-IV-TR* (4th ed.). Washington, DC: American Psychiatric Association.

Azarian, Anait, and Vitali Skriptchenko-Gregorian (1998). Traumatization and Stress in Child and Adolescent Victims of Natural Disasters. In Thomas W. Miller (Ed.), *Children of Trauma* (pp. 77–118). Madison, CT: International Universities Press.

Golden, Olivia (2006). *Young Children after Katrina: A Proposal to Heal the Damage and Create Opportunity in New Orleans* (Report in the series, After Katrina: Rebuilding Opportunity and Equity into the New New Orleans). Washington, DC: Urban Institute. Retrieved on December 27, 2006 from http://www.urban.org/UploadedPDF/900920_young_children.pdf.

Greater New Orleans Community Data Center (n.d.). Orleans Parish: Income and Poverty. Retrieved on November 11, 2006 from http://www.gnocdc.org/orleans/income.html.

Greenwald, Ricky (2005). *Child Trauma Handbook: A Guide for Helping Trauma-Exposed Children and Adolescents.* Binghampton, NY: Haworth Press.

Kronenberger, William G., and Robert G. Meyer (2000). *The Child Clinician's Handbook* (2nd ed.). Boston: Allyn and Bacon.

La Greca, Annette M., and Mitchell J. Prinstein (2002). Hurricanes and Earthquakes. In Annette M. La Greca, Wendy K. Silverman, Eric M. Vernberg, and Michael C. Roberts (Eds.), *Helping Children Cope with Disasters and Terrorism* (pp. 107–38). Washington, DC: American Psychological Association.

La Greca, Annette M., Wendy K. Silverman, Eric M. Vernberg, and Michael C. Roberts (Eds.). (2002). Introduction. In *Helping Children Cope with Disasters and Terrorism* (pp. 3–8). Washington, DC: American Psychological Association.

Lazarus, Philip J., Shane R. Jimerson, and Stephen E. Brock (2003). *Helping Children after a Natural Disaster: Information for Parents and Teachers* (Report). Bethesda, MD: National Association of School Psychologists. Retrieved on January 2, 2007 from http://www.nasponline.org/resources/crisis_safety/naturaldisaster_ho.pdf.

Liu, Amy, Matt Fellowes, and Mia Mabanta (2006). *Special Edition of the Katrina Index: A One-Year Review of Key Indicators of Recovery in Post-Storm New Orleans* (Special Analysis in Metropolitan Policy, August). Washington, DC: Brookings Institution, Metropolitan Policy Program. Retrieved on January 2, 2007 from http://www.brook.edu/metro/pubs/20060822_Katrina.pdf.

Nader, Kathi (1996). Psychometric Review of Childhood PTS Reaction Index (CPTS-RI). In B. Hudnall Stamm (Ed.), *Measurement of Stress, Trauma, and Adaptation* (pp. 83–86). Lutherville, MD: Sidran Press.

Osofsky, Joy D. (2004). Introduction: Different Ways of Understanding Young Children and Trauma. In Joy D. Osofsky (Ed.), *Young Children and Trauma: Intervention and Treatment* (pp. 3–9). New York: Guilford Press.

Pynoos, Robert, Ned Rodriguez, Alan Steinberg, Margaret Stuber, and Calvin Federick (1998). *UCLA PTSD Index for DSM-IV*. Los Angeles: UCLA Trauma Psychiatry Service.

Salloum, Alison (2006). *Project LAST (Lost and Survival Team): Elementary Age Grief and Trauma Intervention Manual* (Version 2, August). New Orleans: Children's Bureau of New Orleans.

Save the Children (2006). Katrina Response: Protecting Children of the Storm (Issue Brief no. 2, September). Westport, CT: Save the Children. Retrieved on January 3, 2007 from http://www.savethechildren.org/publications/reports/katrina-issue-brief.pdf.

Shaw, Jon A., Brooks Applegate, Suzan Tanner, Dorcas Perez, Eugenio Rothe, Ana E. Campo-Bowen, and Benjamin L. Lahey (1995). Psychological Effects of Hurricane Andrew on an Elementary School Population. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34 (9): 1185–92.

Silverman, Wendy K., and Annette M. La Greca (2002). Children Experiencing Disasters: Definitions, Reactions, and Predictors of Outcomes. In Annette M. La Greca, Wendy K. Silverman, Eric M. Vernberg, and Michael C. Roberts (Eds.), *Helping Children Cope with Disasters and Terrorism* (pp. 11–33). Washington, DC: American Psychological Association.

Thienkrua, Warunee, Barbara Lopes Cardozo, M.L. Somchai Chakkraband, Thomas E. Guadamuz, Wachira Pengjuntr, Prawate Tantipiwatanaskul, et al. (2006). Symptoms of Posttraumatic Stress Disorder and Depression among Children in Tsunami-Affected Areas in Southern Thailand. *Journal of the American Medical Association*, 296 (5): 549–59.

U.S. Census Bureau 2000. DP-1. Profile of General Demographic Characteristics: 2000 (Table on New Orleans city, Louisiana, from Summary File 1). Retrieved on December 27, 2006 from http://factfinder.census.gov/servlet/QTTable?_bm=y&-geo_id=16000US2255000&-qr_name=DEC_2000_SF1_U_DP1&-ds_name=DEC_2000_SF1_U&-_lang=en&-_sse=on.

Voelker, Rebecca A. (2005). Katrina's Impact on Mental Health Likely to Last Years. *Journal of the American Medical Association*, 294 (13): 1599–1600.

Vogel, Juliet M., and Eric M. Vernberg (1993). Part 1: Children's Psychological Responses to Disasters. *Journal of Clinical Child Psychiatry*, 22 (4): 464–84.

Williams, Richard (2006). The Psychosocial Consequences for Children and Young People Who Are Exposed to Terrorism, War, Conflict and Natural Disasters. *Current Opinion in Psychiatry*, 19 (4): 337–49.

NOTES

[1] In order to preserve the confidentiality of subjects in this study, this article does not disclose the names of the agency and clients or the specific interview dates.

[2] The Incorporated city limits of New Orleans are the same as the boundaries of Orleans Parish.

[3] It should be noted, however, that not all children who survive a disaster are necessarily traumatized. This idea will be explored later in the article.

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