



QUICK RESPONSE REPORT

Reconstructing Childhood: An Exploratory Study of Children in Hurricane Katrina

Lori Peek
Colorado State University
Fort Collins, Colorado

Alice Fothergill
University of Vermont
Burlington, Vermont

The views expressed in the report are those of the authors and not necessarily those of the Natural Hazards Center or the University of Colorado.

Abstract

Hurricane Katrina was one of the most devastating disasters in the history of the United States. In this report, we examine children's experiences in the aftermath of the catastrophe. Data was gathered through participant observation, focus groups, informal interviews, and in-depth formal interviews with parents, grandparents, day care service providers, school administrators, elementary school teachers, mental health service providers, religious leaders, and evacuee shelter coordinators in Louisiana. This research describes the experiences of children and their families in the days and weeks following the storm, discusses what was done on behalf of children to reduce their vulnerability, and illustrates various things that children did for themselves and for others to lessen the impacts of the disaster.

The Event

On August 29, 2005, the storm surge from Hurricane Katrina breached the levee system that protected New Orleans from Lake Pontchartrain and the Mississippi River. Most of the city was flooded, and heavy damage was sustained along the coasts of Alabama, Louisiana, and Mississippi. Considering the scope of the powerful hurricane and resultant flooding, Katrina was one of the most deadly, destructive, and costliest natural disasters in the history of the United States. Indeed, the U.S. Department of Homeland Security secretary, Michael Chertoff, described the aftermath of Hurricane Katrina as "probably the worst catastrophe, or set of catastrophes," in the nation's history.

Over 1,300 people lost their lives as a direct or indirect result¹ of the storm, and several thousand

people remain unaccounted for, so the death toll will almost certainly rise higher (Knabb, Rhome, and Brown 2005). Financial losses from the event may exceed \$100 billion due to the environmental damage, economic disruption, and the number of houses, businesses, and even entire communities that were destroyed or heavily damaged by flooding and strong winds. Thousands of individuals and families living in the Gulf Coast region lost their homes and remain displaced, many of whom are still living in hotels, temporary housing, and shelters throughout the United States. Officials estimate that over 300,000 school-aged children from Louisiana, Mississippi, and Alabama were displaced as a result of the storm (Hunter 2005). During the frantic days following Katrina's impact, 5,088 children were separated from their families; all of those children have since been reunited with their parents or legal guardians (National Center for Missing and Exploited Children 2006).

Research Problem and Purpose

The purpose of this research project was to examine children's experiences in the aftermath of Hurricane Katrina in an effort to contribute to the disaster literature on this important and seriously understudied topic. Anderson (2005) contends that although significant progress has been made in the social science disaster research field over the past several decades, important areas of research have been seriously understudied, including the impact of hazards and disasters on children and youth.

Drawing on suggestions from Anderson's (2005) call for more research on children in disasters, we developed the following research questions for this

exploratory study: 1) what were the children's experiences in the disaster? 2) what are others doing for the children to lessen their vulnerability? 3) what are children doing for themselves and others to reduce disaster impacts? and (4) what have been children's experiences with relocation, particularly with schooling, family, and friendships? These four research questions were used during a recent research trip to Grand Forks, North Dakota, (Fothergill 2005, data unpublished) and were found to be useful and effective when talking with parents, teachers, and school administrators about children's experiences in the 1997 flood disaster.

This exploratory research will help us gain insight into the experiences of children and families during extreme times (Michaels 2003). As Anderson (2005, 160) states, groups that are understudied can become the "underserved," especially in diverse societies such as the United States. Therefore, we hope that the findings from this research project will help to reduce the vulnerability of children in disasters and to help them get the services they need in the immediate and longer-term aftermath of disaster.

Figure 1. The Cajundome, a large arena with an adjacent convention center, located in Lafayette, Louisiana, at one time housed almost 10,000 evacuees from Hurricanes Katrina and Rita.



Research Methods and Sample

To answer the research questions posed above, we used a combination of ethnographic methods, including informal interviews, in-depth formal interviews, focus groups, and participant observation. In October of 2005, we interviewed a total of 38 individuals in Baton Rouge, Lafayette, Metairie, New Iberia, and New Orleans, Louisiana. We talked to parents (mothers and fathers from single-parent and two-parent families), grandparents, day care

service providers, school administrators, elementary school teachers, mental health service providers, religious leaders, and evacuee shelter coordinators. Our sample was diverse in terms of age, race, social class, gender, professional status, and marital status. The interviews lasted between 30 minutes and two hours and were conducted in homes, schools, day care centers, disaster shelters, and churches.

In each interview, we attempted to learn as much as possible about children's experiences, both during and following the hurricane, from the adults in their lives.² We spoke with the parents of infants, young children, school-aged children, adolescents, and teenagers. We also interviewed professionals who were working with preschool-aged children, elementary school-aged children, adolescents, and teenagers. We have given pseudonyms to all individuals and schools to keep their identities confidential.

In addition to the interviews, we were also able to gather observational data at a day care center and at two schools—the Bayou Schoolhouse, which was formed by two teachers and a group of parents following Hurricane Katrina, and a private Catholic school on the outskirts of New Orleans that had just reopened. We observed shelter operations at the Cajundome in Lafayette (a large mass shelter that at one time housed almost 10,000 evacuees from Hurricanes Katrina and Rita—see Figure 1) and at a much smaller shelter at a Baptist church in Baton Rouge. We also visited the Goodwill food and clothing distribution center for hurricane evacuees in Lafayette. Additionally, we spent one afternoon surveying the flood and hurricane damage in New Orleans (see Figure 2). We also observed a newly established Federal Emergency Management Agency (FEMA) "trailer city" on the outskirts of Lafayette (see Figure 3). All observations were recorded using standard field note techniques (Atkinson 1992).

Gaining Entrée

We gained access to our initial sample population through a variety of personal and professional connections. Fothergill's sister used to live in New Orleans, so she provided Fothergill with a list of friends who have children and evacuated as a result of the storm. A sociology professor at the University of Louisiana at Lafayette helped us gain access to the Cajundome by providing the name of a staff member whom she had recently met. She also gave us the names of day care service providers and school administrators in Lafayette. Another colleague gave us the name of an interfaith leader in Baton Rouge.

In addition to our initial contacts, we also secured interviews through a referral snowball sampling technique (Biernacki and Waldorf 1981). The use of snowball sampling helped to ensure sample diversity and to enrich the depth of our data.

Figure 2. Fothergill (right) and Peek survey storm damage in a residential neighborhood in New Orleans.



Figure 3. FEMA trailer housing, located in Carencro, Louisiana, was set up next to a racetrack.



Preliminary Findings

The findings from our qualitative, exploratory research project on children in Hurricane Katrina are detailed in the following sections. While the findings are preliminary, there are consistent prominent themes emerging from the data, which we discuss here and should be considered further.

Children's Experiences in the Disaster

For the children and families who had spent most of their lives in Louisiana, living with hurricanes was nothing new. It was simply one aspect of everyday life. Following the active hurricane seasons of 2003 and 2004, when some of the families had evacuated numerous times, Hurricane Katrina came as a surprise. In fact, in the days leading up to Katrina, several of the families indicated that they had not planned to evacuate. But, as the storm switched directions and headed toward New Orleans, parents began calling one another and they decided to leave their homes and evacuate. Almost all of the parents we spoke to stated that it was because of their children and their concerns for their safety that they decided to evacuate. Several remarked that they definitely would have stayed in the city if they had not had children.

The children's experiences with the evacuation from New Orleans varied greatly. Some families who had the resources drove out of town and were able to stay at hotels, friends' houses, or with relatives. Several parents expressed that for their young children, the evacuation to a grandparent's house was similar to a vacation, and they did not understand any of the larger issues the family faced. Shashi, for example, said that her young children were "very happy" staying with their grandparents and getting so much attention from them and their aunts and uncles.

However, other parents told us of frightening and stressful evacuations with their children. One mother, Debra, worked as a nurse at one of the city's hospitals and was told by her superiors to bring her family members to the hospital to be safe from the storm. Unfortunately, the hospital lost power and ran out of supplies. Debra, who had to take care of patients, was panic-stricken several times when she could not find her nine-year-old daughter in the pitch black hospital halls. Eventually, they were rescued by helicopter and taken to a shelter, but both mother and child appeared traumatized by the experience. Another mother, Sherron, who was staying at the Cajundome, recounted how she had to steal a truck and drive out of the city to save her four children. Deirdre, a mother at a Baptist church shelter in Baton Rouge, explained how she had to tie her one-year-old daughter to her body with a blanket in order to evacuate during the storm. Michelle, a public health service worker, told us one of the most difficult stories from our research. A young mother was being lifted off a roof in a helicopter basket

with her young baby, and due to the high winds and the movement of the basket, her baby fell into the raging flood waters below. Michelle said that when the mother came to the morgue to look for her baby weeks later, she was very calm and exhibited symptoms of shock.

Most of the children, like their parents, thought that they would only be gone from home for a few days, as they had in the past. Thus, the voluntary evacuees we spoke with had only taken a few personal items and two or three days worth of clothes. Many had not even bothered to gather up the most special things, such as photo albums, a cherished toy, and so forth, because they were so used to evacuating that this time they did not worry about it (see Figure 4).

Figure 4. A damaged family home in a New Orleans neighborhood.



Once the reality set in that the families would not be returning to New Orleans in the near future (in the beginning, many thought they would not be able to enter the city for more than a year), children began expressing more uncertainty and asking more questions about the future. There were many emotional issues for the children, including fear, disbelief, and sadness. Several people, including parents and professionals, felt that the older the child, the more the anxiety. Very young children often seemed completely unaware or unaffected by the degree of familial upheaval and community stress.

Children also had to cope with being far from family members and friends. Many children were used to having extended family nearby for emotional and financial support. In the hurricane aftermath, families were scattered in shelters and temporary homes across the country. Children also missed their friends. Jack, who was only five years old, showed

an uncanny awareness of this situation. He told his mom that the thing he thought would be the most different after Hurricane Katrina was that “some of his friends wouldn’t be able to come back because their parents lost their jobs and their homes got destroyed.”

The degree of loss made a difference in how the children fared. Parents noted that even if the first floors of their houses were destroyed, they were able to reassure their children that their bedrooms—and stuffed animals, toys, clothes, etc.—were safe on the second floor. Children with any loss of life in their family were in a much more fragile state. In one school, a young girl’s two-year-old cousin died during evacuation. The girl had a “tummy ache” every day and sat with the school counselor instead of going to class.

Following Katrina, many of the children’s parents were struggling financially. Some had lost their jobs, homes, and most of their possessions. By extension, the children also were suffering from economic hardship, which was affecting their day-to-day lives.

Lessening Children's Vulnerability

Children are vulnerable in disaster situations, and often the adults in their lives, such as parents or grandparents, and also teachers, public officials, and others, take steps to lessen that vulnerability. In Hurricane Katrina, we gathered data on how adults attempted to lessen children’s vulnerability. Parents, for example, worked to reestablish everyday routines for their children. Many of the parents agreed that one of the most difficult issues for their families following Katrina was living in a constant state of flux and uncertainty. Thus, one of the first priorities for the parents was to reestablish as much normalcy and sense of routine as possible. Routines included things such as getting children back in school, playing games, having dinner together, and sleeping on a regular schedule.

Often it was the responsibility of a sole caretaker to protect and care for the child during the disaster and its aftermath. One mother, Tina, had divorced several months before the storm, but had received some help from her three-year-old’s father until Hurricane Katrina. When the storm hit, he evacuated to Los Angeles and decided to stay there permanently. Suddenly, overnight, coparenting had turned into single parenting, and Tina struggled to protect and provide for her child. Unfortunately, FEMA paid the same amount for each household, regardless of the number of children, so her expartner received the

same \$2,000 that she did. Her child factored heavily in her decision making, and, ultimately, she decided to relocate to a town in Georgia that she felt would be a good place for her son. Another mother, Karla, who suffered the death of a child many years ago and was very family oriented, felt that the best thing that parents could do was to keep the immediate family together at all times during the ordeal.

Sometimes, however, it was hard for parents to help their children because they, themselves, were still suffering and coping and unable to see what they needed to do for their children. Reverend Kimberly Morris, an African American minister and community leader who worked with families that had evacuated to Baton Rouge, explained that the parents often needed guidance on how to help their own children, some of whom had seen dead bodies. Often, she said, she just needed to encourage parents to “pay attention” to the children. In one case, a mother decided not to talk to her five-year-old daughter about the father’s suicide during the disaster, because she was not in an emotional place where she could help her daughter grieve. Reverend Morris, however, felt that the young girl “already seemed to know” about her father and needed to talk about his death.

In addition to helping parents devote attention to their children, Reverend Morris also wanted to make sure that parents felt that they had some control over their family life. For example, evacuated families were encouraged to enroll their children in Baton Rouge schools. However, if parents decided not to, because they thought it would be too hard on their children, then the shelter directors and religious leaders did not force them. As Reverend Morris stated, “We are not here to inflict more pain; we want the parents to make these decisions for their children.”

In addition to parents, we found that shelter workers and local volunteers were crucial in helping children. Many children lived for long periods in mass shelters with their families. One shelter in Lafayette set up a drop off play area, where parents could leave their children for an hour or two while they worked on finding housing or assistance, took a shower or nap, or just took some needed down time. Unfortunately, in this particular case, children had to be potty trained to stay at the child drop off area, so parents with children under three years of age—often the ones that needed a break the most—were unable to use the service.

Shelter workers also tried to set up book areas and other activity centers. We witnessed one shelter

volunteer, for example, playing a game of chess with a young boy. Several local businesses and large corporations, such as Wal-Mart and Toys-R-Us, donated toys and games for the children. In this particular shelter, they threw away any used donations as they felt that the children deserved new items. One volunteer started a basketball clinic for girls and boys after school at the shelter. On one of the days when we were observing shelter activities, we accompanied her as she made her rounds through the shelter encouraging any child she saw to head out to the basketball court to join in the game.

Shelter workers also tried to make some exceptions for children who needed extra care. While babies could not be dropped off at the children’s area, shelter workers did try to reserve the shelter “suites” for mothers with newborn babies or children with other special needs. Renee, one of the directors of the shelter, explained how one young girl with Down’s syndrome could not handle the noise and chaos of the shelter and was screaming and scared. The shelter workers made sure that her family got one of the few suites. Unfortunately, among the hundreds of shelter volunteers from around the country, some lacked the skills to help children in the most effective ways. For example, in one situation, we observed a young black girl that had skinned her knee playing basketball and was crying and looking for a band-aid. First, she approached the mental health table, and the white mental health workers, annoyed to be mistaken for the nurses and missing an opportunity to talk to an upset child, told her she was in the wrong place and waved her over to the nurses’ table. Subsequently, the white nurse approached the little girl and scolded her, saying “Have you been out there playing basketball with the boys again?” While the nurse may have been trying to be light-hearted with the comment, we could tell by the girl’s facial expression that she heard the reprimand, not the humor.

Overall, however, we observed many positive interactions between shelter workers and families in both the large shelter in Lafayette and the smaller Baptist church shelter in Baton Rouge. Indeed, when one mother and daughter were overjoyed to hear that they had been offered a FEMA trailer to live in for 18 months, they came running to share the news and to hug the shelter worker who had helped them find the housing.

Children's Actions to Reduce the Impacts of the Disaster

According to Anderson (2005), research has failed to examine the ways in which children themselves do things to reduce disaster impacts. The idea is that children are not passive in disasters; they are active observers and take actions before, during, and after that help them to cope with the disaster. We gathered data indicating that children did take actions, such as communicating about the risk with both adults and other children, playing a role in preparedness in their homes, writing in journals or creating art, and helping other children recover.

Our research indicates that children communicated about the risk and the subsequent disaster in a wide range of ways. Clearly, the youngest, preverbal children were less able to take actions to reduce their vulnerability and help themselves recover. Older children did talk about the event, although some more than others. In a day care center in Lafayette, the children who had lost their homes in the flood did not want to discuss their experiences. Some schools and shelters had counselors come in to help the children talk about what happened to them, but we heard on several occasions from parents and teachers that often the counseling was more problematic than helpful, as it seemed to upset the children. Overall, it appeared to help children if they could talk, when they needed to, with someone they knew and trusted.

We discovered in Louisiana that children coped with the disaster by writing in journals, creating disaster jokes or music, and drawing pictures. We observed elementary school-aged children keeping journals about their experiences. At the Bayou Schoolhouse, a new school assignment for the children was a journal writing project that enabled them to write and draw about their hurricane experiences. Each day the children were required to write at least three sentences in their journals. One teacher shared with us a copy of a journal that one of his second-grade students, Cally, had been writing in following Hurricane Katrina. For Cally, almost every day in mid-September of 2005 began with the phrase "I hate hurricanes." On September 21, 2005, as Hurricane Rita was descending on the southern United States, her entry read: "I hate hurricanes." "I hope it doesn't [sic] hit Louisiana." "I wish hurricanes would [sic] go away forever because they destroy [sic] to [sic] many things!" On September 26, 2005, she wrote, "I hate hurricanes!" and "I am glad I have food, a bed, and a house to go home to!" and

drew a small picture of a house at the bottom of her journal page.

In addition to writing, younger students also drew pictures, thus expressing their thoughts and emotions through a visual medium (see Figure 5). In the makeshift classroom of the Bayou Schoolhouse, the teacher had placed a sign on the wall that said "Words for Our Hurricane Adventure Stories." Below the sign, the students had posted their pictures and some word associations. The children drew pictures that included images of a crowded highway packed with cars and a levee with water pouring from the side. Words that they used to associate with these images included "grass dirty" and "disgusting water." An elementary school art teacher told us that "kids will draw everything they normally would, but now there is flood water at the bottom of many of the pictures."

Figure 5. Children's artwork hanging on the wall at the Bayou Schoolhouse.



Some children invented new hurricane games. For example, two children who evacuated from New Orleans played a game they called "evacuation" in their new temporary home. In this game, they ran around their house with bags and tried to throw as many things in the bag as quickly as possible, as if

they were frantically leaving their home before the hurricane.

According to the National Mental Health Association (2005), in the aftermath of a disaster, adults should help children find ways to help others—no matter what age the child. The process of helping others deal with tragedy can reassure children and help them cope with their own anxiety and sense of loss. We found that children of all ages were engaging in a variety of helping activities following Hurricane Katrina, such as helping take care of younger children and assisting their parents with household chores. One example was in the Baptist church shelter in Baton Rouge. An African American mother in her 30s described her five-year-old's birthday party at the shelter. It was organized by teenagers from the congregation and the shelter, and they worked hard to decorate the shelter and devise songs and games for the five-year-old. The party included all the teenagers standing in two lines with their hands at the top creating a tunnel that the child walked through as they sang to him. By creating the party for the young child, who claimed it was his "best birthday ever," the teenagers were also helping their own recovery.

Relocation Issues: School and Friendships

Perhaps one of the most significant findings from this exploratory study is the importance of school situations and friendships for children during their displacement and relocation. In this final data section, we address these particular aspects of children's overall experiences in Hurricane Katrina and its aftermath.

Children had a wide range of experiences adjusting to new day cares, preschools, elementary schools, middle schools, and high schools. Two day care workers, Beverly and April, noted that young children were experiencing some problems following the hurricane. Both women agreed that "everything has changed" in the aftermath of Katrina. In the days immediately following Katrina, children who had previously been well behaved were acting out and causing problems. Beverly attributed these behavioral issues first and foremost to the disruption of the children's lives. Many of their parents were away from home helping with the disaster relief effort, while others had moved several times since the disaster. April contended that the children had been watching too much television coverage of the disaster, which had a negative effect. After about

a week, the children in the day care began to settle back down.

There were also physical issues for the children in the schools. According to one teacher, the youngest children would cry, use baby talk, and were having potty-training problems. The younger children did not want to leave their parents and "clinginess" was a problem, which is consistent with the literature on children and disasters (Green 1993; Norris et al. 2002).

There were also issues related to diversity. Often times, children found themselves attending a school with a different ethnic, religious, or racial composition than the one they had attended before the storm. Shashi, a mother from India, for example, found that her child was the only child of color in her new preschool in Lafayette. Whereas, in New Orleans schools, children were of numerous ethnic and racial backgrounds and it had not been an issue for them.

Some of the schools were faced with emotional and behavioral issues as children struggled to cope with the anxiety from the disaster. We spoke with one kindergarten teacher who had taught for over 20 years. She said that in all of her years in the classroom, she had never witnessed children more upset than after this hurricane. She said that one of the evacuee students "had a total meltdown" at school and had spent most of the morning crying. Although she tried to help the child, the teacher said he was beyond consolation.

It may be that anxiety manifested itself in different ways depending on the gender and age of the child. Frank, a Red Cross volunteer and high school counselor, thought that adolescents and teenagers who had been displaced by the storm, particularly boys, were exhibiting some behavioral issues. He was hired by one school district to deal with these issues. If children were acting out in the classroom (talking back to teachers, getting into fights with other students, etc.), Frank would receive a "referral form" from the school. He would then review the form and decide whether to meet with the student to talk to him or her about the problem. One school counselor was very clear that in her school, the older the child, the harder the experience, as we mentioned earlier. It is important to note that not all children seemed to suffer from emotional problems. One fifth-grade teacher told us that some kids did not seem upset at all by the hurricane.

The children displaced by Hurricane Katrina were separated from many friends. Although a few of New Orleans's schools reopened in early 2006,

many children have not yet returned to their schools because they evacuated to other parts of the country, their parents lost their jobs, or their old schools had yet to reopen (see Figures 6, 7, and 8). Thus, for the children who returned, they not only had to deal with the disruption in their families and their own loss, they also had to come to terms with the loss of their friends and classmates.

Figure 6. This children's playground, located in New Orleans, sustained heavy damage in the hurricane.



Children starting new schools had to form new friendships. This was particularly difficult for children if their temporary housing continued to change and they moved from school to school. One mother said that her daughter, who is in high school, had changed schools four different times since the hurricane. Teenagers' dating relationships with their peers also faced challenges due to the uncertainty. One teenager, Peter, had just begun to form a romantic relationship with a longtime friend, Theresa, when the storm hit and her family evacuated to the West Coast. He started at a new school outside of New Orleans, where he met a new girl and wanted to date her, but was not sure ethically what to do. It was uncertain if his old girlfriend was returning or if their old school would ever reopen. While it may seem trivial in light of other challenges, this type of anxiety weighed heavily on Peter, and he confided in his mother that he was emotionally upset by the situation.

The schools themselves faced many challenges in how to best serve old and new students. Mrs. Murphy, an elementary school teacher, said she had sent a note to one little girl's family asking if they would like to participate in the class snack calendar, in which each child is assigned a day to bring a treat to share with the class. The child's parents responded that they were financially unable to participate.

For the children attending private elementary schools, where the tuition can run into the thousands of dollars each semester, the economic struggles were particularly acute for parents. At the Catholic school we visited, the principal, Sharlene Alarie, indicated that they were not asking parents to pay tuition, but that the policy would have to end soon because, obviously, the school has large operating costs. She worried about what would happen when the time came to require tuition again.

Another issue was the politics of placing exceptional high school athletes in temporary schools during evacuation. While school placement was supposed to be determined by temporary housing location, there were rumors that coaches were fighting over the best athletes and that at times tuition at private schools was mysteriously waived for the most talented athletes. These rumors placed students in the middle of many upset parents and school administrators.

Figure 7. Kid's World, a preschool located in New Orleans, had not yet reopened following the hurricane.



In one situation, in an effort to recreate a familiar environment for their children, parents from a New Orleans elementary school formed a new school during evacuation. They felt that establishing a new, temporary school with two teachers and about 20 children from their old school would help their children deal with the evacuation. The school, the Bayou Schoolhouse, as named by the children, was located in the back of an old, unused accounting office in a small town two hours west of New Orleans. The children could have attended local public schools, but the parents chose the new school partly because one of the teachers, Mr. Fontenot, was willing to teach for free and supported the idea of the temporary school. In addition, the parents wanted to keep their kids together, rather than putting them in unfa-

miliar schools. The children took daily field trips to the bayou, the public library, and to the sugar cane fields in the surrounding areas. The school also arranged for special guests, such as a local singer, who came to perform for the children the day that we were there observing.

Figure 8. This New Orleans high school was flooded and heavily damaged in the storm.



Reestablishing routine was also a central concern for teachers and school administrators. After the initial novelty of the “extended vacation” wore off, the children actually seemed to want a routine. Cally told us that she thought “school work was too easy” now and she wanted her old math book back. One school principal, Mrs. Alarie, informed us that she had met with all of her staff two days prior to the school reopening (it was one of the first schools on the outskirts of New Orleans to reopen following the disaster). She emphasized to them how important it was that they do everything they could to support the children during this time of immense uncertainty, but that they also should provide the instruction and discipline expected and necessary in any school. She also emphasized to her staff that *all* children were affected by the hurricane, even those who had not lost their homes, and staff needed to be sensitive to this issue.

In the days after classes resumed, Principal Alarie and her teachers worked hard to maintain rules in the classrooms, although there was recognition that some exceptions to the normal rules would have to be made. For example, one student was not wearing the required knee socks with her school uniform. When the teacher pulled the student aside to reprimand her, she found out that the student had lost all of her clothing in the flood and no longer had the appropriate attire to wear to school.

In addition to maintaining discipline, the teachers also worked diligently to counsel students and give them support if they needed it. They tried to help “old” students accept the newly enrolled students. They also tried to help the students cope with the loss of their old friends who had not returned to school because their families had relocated to other parts of the United States. The teachers, school administrators, and school counselor were keenly aware that many students had either lost their own homes or had family members or friends staying in their homes with them. One way or the other, the children’s home lives and routines were disrupted and even somewhat chaotic. The school personnel were particularly aware of this because they, too, were living with others or had guests in their homes. Thus, they were very understanding of the adjustments that children were going through post-Hurricane Katrina.

The teachers had to be flexible because they did not know who would be in class from one day to the next. Some families were returning to the school, and others were relocating to other areas. With the influx of new students, there was also a shortage of books, desks, school uniforms, and school supplies. Thus, the teachers, while focusing on routine, also had to improvise. In one school where uniforms were required, they started a uniform donation program to help displaced students or students who lost their clothes in the flood get new ones.

Students said that they tried to be welcoming to displaced students. Emily, a nine-year-old in Lafayette, remarked that she and her classmates were all trying to be “extra nice” to the new students, and for the most part, the new children were “just like other kids” and “you can’t even tell” who they are. However, Emily did add that two of the new children were very quiet, and one boy, when asked by his classmates why he went to see his old destroyed house in New Orleans, did not answer.

Conclusion

Given the catastrophic damage caused by Hurricane Katrina, many important lessons must be learned, shared, and applied following this tragic event. Theoretically, this research will contribute to the dearth of existing literature on the response of families, and especially children, to extreme events (see Anderson 2005). The information gleaned from this research will also contribute to the current body of applied knowledge in the disaster response literature. Thus, the knowledge that is acquired

may contribute to policy implementation regarding questions of how families and children are able to respond to and recover from natural disasters.

While our findings are preliminary at this stage, several recommendations have emerged from the data. First, the research points to the importance of schools for the recovery of families, children, and entire communities. Indeed, schools are central for a child's return to routine and normalcy. This is in alignment with statements by the National Association of School Psychologists (2006) indicating that schools will play an important role in helping young Katrina victims cope with the disaster.

Second, during evacuation, attention needs to be paid to how schools welcome and integrate displaced children. For example, it may benefit children if schools assign displaced students in schools together and have programs in place to help the children's adjustment. Additionally, teachers and school administrators need to be aware of diversity issues. In disasters, as in Hurricane Katrina, some children will end up attending schools with children of different racial, ethnic, and religious backgrounds from their previous schools. In these situations, there is significant need for cultural sensitivity on all sides, and this should be facilitated by the teachers and school administrators. Schools also, if possible, should waive tuition, fees, and strict uniform requirements while students and their families are recovering.

Our research also demonstrates that in addition to family members as primary caregivers, teachers, day care providers, disaster relief volunteers, and shelter workers all contribute in different but important ways to children's postdisaster emotional and social well-being. Thus, we recommend that individuals who work closely with children in day care centers, schools, and evacuee shelters receive information regarding the importance of routine but also of being flexible in the aftermath of disaster. These individuals obviously play a crucial role in not only helping children but, by extension, entire families recover from disaster.

Given the level of loss and devastation caused by Hurricane Katrina, many children were forced to live for long periods of time in mass shelters with their families. Although this type of situation is certainly not ideal, we found that there were things that shelter workers did to help ease the process. For example, tutoring programs, organized play activities, and child dropoff areas not only helped the children stay active, these programs also gave the parents an opportunity to rest or take care of other important

responsibilities. Thus, we recommend that disaster shelter coordinators support and continue to implement these programs. At the same time, we also recommend that care programs be put in place for children of all ages, including infants and toddlers, so that parents with the youngest children also have extra assistance. In addition, we urge mental health volunteers at shelters to step outside the traditional models to talk with children and families and look for new ways to reach those victims who may not want to approach the mental health table at a shelter. As in all of the scenarios discussed, it appears that demonstrating sensitivity, flexibility, compassion, and creativity will prove to be extremely effective approaches for helping children.

Finally, we recommend a reevaluation of FEMA disaster assistance to single parents with children. Following Hurricane Katrina, a single mother with children received the same amount of FEMA aid as an adult man with no children. In New Orleans, a city with a high percentage of poor single mothers, this was a significant issue for the well-being of children and one that deserves attention. A "one size fits all" approach does not address the needs of the most vulnerable populations struck by disaster, and we must reconsider the distribution of disaster aid.

As the research progresses, additional policy and research recommendations will emerge, but at this point it is certain that more attention needs to be paid to the welfare of children in disasters if we are to reduce their vulnerability and lessen the impacts on them in future disasters.

Acknowledgements

We would like to thank Megan Underhill who served as our graduate research assistant on this project. We would also like to thank Bill Anderson, JoAnne Darlington, and Dennis Mileti for their encouragement and advice.

This material is based upon work supported by the National Science Foundation. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation or the University of Colorado Natural Hazards Center.

Notes

¹ Direct deaths indicate those caused by the direct effects of the winds, flooding, storm surge, or oceanic effects of Katrina. Indirect deaths indicate those caused by hurricane-related accidents

(including car accidents), fires, or other incidents as well as clean-up incidents and health issues.

² In future work, we intend to apply for human subjects approval from our respective universities, so that we can also interview children and adolescents directly about their experiences in disaster. However, given the time constraints involved with this quick response research, we were only able to receive approval from human subjects to interview adults while in the field.

References

Anderson, William A. 2005. Bringing children into focus on the social science disaster research agenda. *International Journal of Mass Emergencies and Disasters* 23 (3): 159-75.

Atkinson, Paul. 1992. *Understanding ethnographic texts*. Newbury Park, CA: Sage Publications.

Biernacki, Patrick, and Dan Waldorf. 1981. Snowball sampling. *Sociological Methods and Research* 10: 141-63.

Green, Bonnie L. 1993. Mental health and disaster: Research review. Paper written for the National Institute of Mental Health, Violence, and Traumatic Stress Research Branch.

Hunter, Marnie. 2005. Schools take in displaced students: Hurricane evacuees begin to enroll in other states. *CNN*. September 9, 2005.

Knabb, Richard D., Jamie R. Rhome, and Daniel P. Brown. 2005. Tropical cyclone report: Hurricane Katrina, 23-30 August, 2005. Report of the National Oceanic and Atmospheric Administration National Hurricane Center. http://www.nhc.noaa.gov/pdf/TCR-AL122005_Katrina.pdf.

Michaels, Sarah. 2003. Perishable information, enduring insights? Understanding quick response research. In *Beyond September 11: An account of post-disaster research*, ed. J.L. Monday, 15-48. Special Publication No. 39. Boulder, CO: University of Colorado Natural Hazards Center.

National Association of School Psychologists. 2006. Guidance on crisis support available for school professionals responding to Gulf disaster. <http://www.nasponline.org/NEAT/katrina.html>.

National Center for Missing and Exploited Children. 2006. Katrina/Rita missing persons hotline: Update on calls/cases. http://www.missingkids.com/en_US/documents/KatrinaHotlineUpdate.pdf.

National Mental Health Association. 2005. Helping children cope. <http://www.nmha.org/reassurance/hurricane/children.cfm>.

Norris, Fran H., Matthew J. Friedman, Patricia J. Watson, Christopher M. Byrne, and Krzysztof Kaniasty. 2002. 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981-2001. *Psychiatry* 65 (3): 207-39.



Natural Hazards Center

Institute of Behavioral Science
University of Colorado at Boulder
482 UCB
Boulder, CO 80309-0482

phone 303.492.6818
fax 303.492.2151

www.colorado.edu/hazards/