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# Environmental effects on adolescents exposed to hurricane Katrina

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ENVIRONMENTAL EFFECTS ON ADOLESCENTS EXPOSED TO HURRICANE  
KATRINA

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
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requirements for the degree of  
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in

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by

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## **Abstract**

Adolescents in New Orleans were displaced by hurricane Katrina and returned to find their city devastated by this natural disaster. Although many studies have found a relationship between hurricane exposure and development of psychopathology, the current study evaluated this relationship within the context of protective and risk factors. Specifically, the current study evaluated whether community violence, parent support, and peer support moderated the relationship between hurricane exposure and adolescent PTSD or depression. Results found no relationship between hurricane exposure and adolescent depression. Although there was a main effect for hurricane exposure and PTSD, the proposed variables did not moderate this relationship. Results are discussed in the context of previous studies detailing the relationship between hurricane exposure and psychopathology as well as the impact that social support and community violence has on an adolescent's psychological functioning.

## Introduction

Exposure to a natural disaster is associated with numerous psychological difficulties in children (Vernberg, LaGreca, Silverman, & Prinstein, 1996). However, not all children who experience a trauma develop psychopathology; some children are resilient to negative outcomes (Carr & Vandiver, 2001; Werner, 1984).

The destruction caused by Hurricane Katrina in August, 2005 was compounded by the difficulties already faced by many of the citizens of New Orleans. This was a city already ranked 5<sup>th</sup> poorest in the nation with over 28% of the population living below the poverty line (Sherman & Shapiro, 2005). These statistics, describing the inhabitants of New Orleans, have been shown in many studies to serve as risk factors, increasing the likelihood that children will suffer psychological trauma (Attar, Guerra, & Tolan, 1994). However, it is also important to elucidate what factors were present that may actually serve a protective role. Thus, the purpose of the current study is to examine specific risk and protective factors that moderate children's psychological functioning post hurricane Katrina.

This study specifically examined one major risk factor that urban adolescents are encountering on an increasing basis, community violence. Research has shown that adolescents exposed to higher levels of community violence have more internalizing and externalizing psychological and behavior problems (McCloskey et al., 2000). Protective factors studied were parent and peer support. After a hurricane, parental support appears more prevalent than other forms of support and has been shown to predict lower levels of PTSD (LaGreca et al., 1996). Although peer support and its role in mitigating the negative effects of a natural disaster has not been extensively studied,

research on peer support in general has found that it is associated with lower levels of behavior problems (Dubow & Tisak 1989).

The following review examines the scope of devastation caused by hurricane Katrina. It goes on to describe the challenges facing the children of New Orleans, with an emphasis on violence exposure, especially community violence. Children's resiliency is also discussed with an emphasis on specific protective and risk factors. Children's adjustment is then discussed in the context of hurricane exposure, detailing protective and risk factors on the subsequent development of PTSD and depression.

### **New Orleans: Before and After Hurricane Katrina**

On August 29, 2005 Hurricane Katrina became one of the worst natural disasters to hit the shores of mainland United States. In New Orleans, Hurricane Katrina led to breaches in the levees, flooding nearly 80% of the city for weeks (Swensen & Marshal, 2006). The Federal Emergency Management Agency (FEMA) has paid over \$6 billion to more than 950,000 individuals for housing and other needs, the most ever paid for a single natural disaster (FEMA, 2007). There are over 121,000 people living in trailers due to the total destruction or unlivability of their homes, over 59% of them in Louisiana (FEMA, 2007). More than 1,500 Louisiana citizens lost their lives. (Louisiana Department of Health and Hospitals, 2006).

As the city flooded, those who remained during the hurricane were forcibly evacuated. By September 4<sup>th</sup> the city was pretty much completely evacuated. It was not until mid-September that the city reopened to residents with only 1,700 children returning to schools between the 2006 and 2007 spring semesters (Jervis, 2007). Although 45% of New Orleans schools currently are open, many of the 25 schools

slated to open in the fall of 2007 still have essential repairs that need to be done (Jervis, 2007). As families returned to New Orleans, it became imperative to study how the youngest of those affected, the children, were fairing.

New Orleans is a city that, prior to hurricane Katrina, experienced much strife and challenge. Louisiana is the 2<sup>nd</sup> poorest state in the nation with over 19% of its inhabitants living below the poverty line (Sherman & Shapiro, 2005). In New Orleans, 28% of the inhabitants lived below the poverty line with families earning an average yearly income of \$31,369, and the city was ranked as the 5<sup>th</sup> poorest large city in the 2000 Census Bureau (Sherman & Shapiro, 2005). Prior to Katrina, only 58% of people over the age of 16 were working, well below the national average of 64%. With so few people working, 54% of New Orleans lived in rental property, again largely discrepant from the national average of 34% (US Census Bureau, 2006).

### **Neighborhood Disadvantage and Community Violence**

These economic statistics are what Attar, Guerra, and Tolan (1994) called “neighborhood disadvantage.” They defined “neighborhood disadvantage” as community level stressors that increase the risk of children to face more severe adjustment problems, including emotional and behavioral problems (Attar, et al., 1994; Dodge, Petit, & Bates, 1994; Elder et. al, 1995; Linares et al., 2001; Plybon & Kliwer, 2002). These stressors include poverty, unemployment or underemployment, limited resources, substandard housing, high crime rates, and single-parent household (Attar et al., 1994; Elder et al., 1995; Linares et al., 2001). Attar et al. (1994) found that children from “disadvantaged neighborhoods “ reported an average of seven daily life stressors,



which was significantly more than children from moderately disadvantaged neighborhoods.

Prior to Hurricane Katrina, one source of stress facing the children of New Orleans was chronic violence exposure. Margolin (2004) described childhood violence exposure as falling within three categories. The first is child maltreatment, where children suffer familial abuse and neglect. The second form is violence between parents or other adult caretakers. Third is community violence, which includes direct victimization as well as witnessing violence. Community violence has been defined as “the presence of violence within a person’s proximal environment” (Shahinfar, Fox & Leavitt, 2000). Kupersmidt, Shahinfar, and Voegler-Lee (2002) were more specific when they suggested that community violence includes exposure “in or around the home, school or neighborhood; may involve physical as well as threatened harm; may be witnessed, heard about, or experienced; and may involve known or unknown perps.” (pg. 381)

Unfortunately, inner-city children are chronically exposed to community violence through various modalities, such as media, observation, hearing about, and victimization (Cooley-Quille, 2001). Males are significantly more likely than females to be exposed to community violence, especially stranger victimization (Ceballo et al., 2003; Cooley-Quille et al., 2001; Durant, Cadenhead, Pendergrast, Slavens, & Linder, 1994; Langhinrichsen-Rohling & Neidig, 1995).

Studies on community violence exposure have found that over 50% of urban American children and adolescents have reported engaging in some form of violent behavior (Berman et. al, 1996; Durant et al., 1994; Farrell & Bruce, 1997;

Langhinrichsen-Rohling & Neidig, 1993). Fitzpatrick and Boldizar (1992) found that 70% of inner city children were victims of at least one violent act, while Schwab-Stone and colleagues (1995) found that over 40% of urban adolescents had witnessed a shooting or stabbing in the past year. Four years later, Moses (1999) found that inner city adolescents reported an average of witnessing 3.41 types of violent activities. Exposure to chronic violence is significantly higher among inner-city, low socio-economic status (SES) children than their higher SES counterparts (Gladstein, Rusonis, & Heald, 1992; Singer, Anglin, Song, Lunghofer, 1995).

Studies conducted by Osofsky (1993) with elementary school children in the New Orleans area found even higher results, with 91% of children having witnessed some form of violence and over 50% victims of violence. Specifically, 26% had witnessed a shooting and 19% a stabbing, 3 out of 53 children had been stabbed or raped, 40% had seen a dead body, 72% had seen weapons used, and 49% had seen someone wounded. A more recent study performed by Overstreet (1999) found that 30% of New Orleans adolescents reported exposure to multiple types of violence in their neighborhoods, including hearing gun shots, knowing someone killed by violence, witnessing a shooting, seeing a dead body, being the victim of physical violence, or being threatened with murder.

The impact of violence exposure on children and adolescents is significant. Children exposed to violence are likely to develop externalizing behavior problems and internalizing psychological problems (Berman, Kurtines, Silverman, & Serafini, 1996; Ceballo et al., 2003; Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Durant et al., 1994; Freeman, Mokros, & Poznanski, 1003; Linares et al., 2001; McCloskey et al., 2000;

Moses, 1999; Ozer & Weinstein, 2004; Schwab-Stone et. al, 1999; White et al., 1998). For example, Linares et al. (2001) found that after controlling for maternal SES and family violence, exposure to community violence had a direct effect on early childhood behavior problems. Margolin (2004) stated that violence exposure led to behavior problems such as aggression. Witnessing violence increases a youth's likelihood of behaving violently, most especially their likelihood of committing stranger violence after having witnessed violence on strangers (Langhinrichsen-Rohling & Neidig, 1995; Margolin, 2004). In circular fashion, the increase in violent behavior places the youth at an increased risk of witnessing or being the victim of other violent events (Cooley-Quille et al., 2001). Children and adolescents exposed to violence are also more likely to use cigarettes and alcohol, exhibit hostility, have peer conflict, have somatic complaints, and have a higher fear of injury, danger, and the unknown (Brookmeyer, Henrich, & Schwab-Stone, 2005; Cooley-Quille et al., 2001; Schwab-Stone et. al, 1999; Sullivan, Kung, & Farrell, 2004; Margolin, 2004).

Internalizing problems resulting from violence exposure include anxiety, posttraumatic stress disorder (PTSD), and depression (Freeman, Mokros, & Poznanski, 1991; Johnson & Kliewer, 1999; Margolin, 2004; Overstreet et al., 1999). For example, Cooley-Quille et al. (2001) found adolescents exposed to more crime exhibited higher anxiety than children exposed to less crime. Berman et al. (1996) found adolescents exposed to violence developed an average of ten symptoms of PTSD, while 35% met full criteria for PTSD. They found no significant difference between children who witnessed versus those who were victims of violence on subsequent development of PTSD. Margolin (2004) suggested that the development of PTSD symptoms may

depend on the intensity of violence experienced and children's attachment to the victims. In a longitudinal study conducted with African American children, White et al. (1998) found that violence exposure predicted 37% of variance for anxiety from Time 1 to Time 2. While males are more likely to witness or be the victim of community violence, females are more likely to exhibit internalizing and concentration problems subsequent to violence exposure (Cooley-Quille et al., 2001; Farrell & Bruce, 1998; White et al., 1998).

Research has indicated that the accumulation of chronic stressors, such as the ones facing New Orleans' children often serve as a catalyst for a child to develop significant adjustment problems (Johnson & Kliewer, 1999; Garmezy, 1993; White et al., 1998). However, despite high rates of violence exposure not everyone develops psychopathology. The discrepancy between those who do and do not develop psychopathology has been coined "resiliency."

### **Psychological Resiliency**

Interest in resiliency began in the 1970's with the examination of children's adjustment to having a schizophrenic mother and the acknowledgment that some children fair very well despite their high risk status. (Garmezy, Masten, & Tellegen, 1984; Luthar, Cicchetti, & Becker, 2000; Masten, Best, & Garmezy, 1990). However, as Cicchetti and Becker (2000) discussed, it was not until 1984 that research began to focus on children's resiliency to experiencing multiple adverse conditions (Werner, 1984; O'Donnell et al., 2002; Luthar, Cicchetti, & Becker, 2000).

Originally, resiliency was defined as a person's ability to cope with stress and to exhibit a degree of psychological strength more than would be expected for their age

(Werner, 1984). However researchers have attempted to more specifically define “psychological strength”. Masten, Best, and Garmezy (1990) proposed three distinct areas of functioning: “(1) good outcomes despite high risk status (2) sustained competence under threat and (3) recovery from trauma.” (p. 426). The first area of functioning suggests that despite the presence of multiple risk factors, children thrive and are successful academically, socially, and/or psychologically. The second area refers to children’s ability to cope effectively during stress, such that no change in functioning is observed. The third area occurs when children recover after exposure to prolonged or severe threat or stress; children may exhibit a negative change in functioning but are able to recover to their pre-trauma levels. Although Masten and colleagues described different areas of functioning, this description has not resolved the debate over whether resiliency should be defined by “unexpected positive trajectories or a pattern of average or better than average functioning” (Brookmeyer, 2005 p. 917). Studies often use the term “resiliency” to mean any of the three areas described by Masten (Brookmeyer, 2005).

Researchers concur that resiliency is a multidimensional, dynamic construct rather than a stable state (Howard, 1996; Freitas, 1998; Luthar et al., 2000; Tusaie & Dyer, 2004; Watson, Ritchie, Demer, Bartone, & Pfefferbaum, 2006). Specific examples of this view include Howard’s (1996) findings that behavioral competence may occur simultaneously with psychological distress and Watson et al. (2006) who emphasized that competency may be exhibited in a particular domain but not other areas.

Research has focused on the role of protective and risk factors in the development of resiliency (Carr & Vandiver, 2001; Luthar, 1991; Rutter, 1985). Protective factors interact with stress in predicting adjustment. Higher levels of protective factors allow a child to be less affected by stress while lower levels result in greater dysfunction. Protective factors can be defined within three dimensions: personal, familial, and environmental (Carr & Vandiver, 2001; Place et al., 2002). Specifically, personal factors are associated with “dispositional attributes” of the child; familial factors focus on parenting variables; and environmental factors include the availability and use of external support systems (Place et al., 2002). On the other hand, higher levels of risk factors are associated with a decline in competence. Freitas (1998) suggest that a single factor that may be protective in one situation may not in another.

Research has found that individual attributes such as intelligence, social skills, internal locus of control, problem solving, and self-appraisal serve as protective factors in children exposed to high levels of stressful events (Carr & Vandiver, 2001; Dubow & Tisak, 1989; Luthar, 1991; Garmezy & Masten, 1986; Piotrowski & Dunham, 1983; See Place et al., 2002 for a good review). For example, higher intelligence protects against classroom problems (Garmezy & Masten, 1986) as well as a decline in interpersonal adjustment.

Studies have found that family attributes such as stability, low levels of parental psychopathology, and positive parenting serve as a protective factors for youth exposed to community violence (Annuziatu, Hogue, Faw, & Liddle, 2006; Gorman-Smith, Tolan, Zelli, & Huesmnn, 1996; Ivanova & Isreal, 2006; Masten et al., 1988; O'Donnell, Schwab-Stone, & Muyeed, 2002; Shalev, Tuval, Frenkiel-Fishman, Hadar & Eth, 2006;

Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000). Although positive parenting was more protective for girls than boys (Garmezy & Masten, 1986), higher levels of family cohesion and routines predicted lower levels of internalizing and externalizing problems for both genders (Kliewer & Kung, 1998; Plybon & Kliewer, 2002). Furthermore, higher levels of family cohesion and parental monitoring positively predicted school engagement for both genders (Annuziatu et al., 2006).

Most studies that examined the protective role of environmental variables focused on social support. In general, social support serves as a protective factor against a variety of psychological and behavioral problems (DuBois, Felner, Brand, Adan, & Evans, 1992; Kliewer & Kung, 1998). For example, Zimmerman et al., (2000) found that increased parental support resulted in decreased levels of anxiety and depression in urban African American youth. Dubow & Tisak (1989) found that social support is correlated with reduced behavior problems at school. Dubois et al. (1992) found support from teachers or other school personnel led to reduced development of psychological distress. However, they also found that social support from any source did not impact school performance. Carr & Vandiver (2001) found that higher levels of family support and guidance were found in the families of non-repeat juvenile delinquents.

Most studies on protective and risk factors in children have evaluated resiliency to a specific traumatic event (hurricane, terrorism, kidnappings etc.) or resiliency to chronic stressors (community violence, domestic violence, war etc.). However, what may encourage a child to be resilient during a specific traumatic event may differ from resilient factors to chronic stressors (Kuperschmidt et al., 2002). As Kuperschmidt and

colleagues suggest, chronic stressors affect every aspect of a child's environment and may not be time limited. In fact children's reactions may not be to one specific event but rather to the culmination of multiple events. Few studies have focused on the relationship between those who experience chronic stress and then are subject to a separate discrete traumatic event (Attar et al., 1994; See Breslau, N., Chilcoat, H., Kessler, R., Glenn, D., 1999 for an example). The current study is unique in that it evaluates risk and resiliency among children exposed to chronic stressors as well as a discrete traumatic event, Hurricane Katrina.

### **Research with Hurricane Exposed Youth**

In the wake of the devastation caused by hurricanes such as Andrew, Hugo and Floyd, research has evaluated the effects of hurricanes on children as well as protective and risk factors. PTSD is the most common type of psychological problem evaluated following a natural disaster (Vernberg, LaGreca, Silverman, & Prinstein, 1996; LaGreca et al., 1996; LaGreca et al., 1996; Shaw, Applegate, & Schorr, 1996; Shaw et al., 1995). For example, LaGreca et al. (1996) and Vernberg et al. (1996) found that 29% of children in grades 3-5 reported severe or very severe symptoms of PTSD three months after hurricane Andrew, 26% had moderate symptoms, and 30% had mild. Shaw et al. (1995) found slightly higher results eight weeks after hurricane Andrew, with 87% of the children from the high impact school reporting at least moderate levels of PTSD symptoms 7 to 10 months after the hurricane. (LaGreca et al., 1996).

Although uncommon, longitudinal studies indicate a decrease in PTSD symptoms over time; although symptom severity remained high 7-10 months post hurricane (Shaw, Applegate, & Schorr, 1996; LaGreca et al., 1996). For example, in the



LaGreca et al. (1996) study cited above, the number of children with severe or very severe symptoms of PTSD decreased to 18.1% at seven months and 12.5% at ten months post-hurricane.

Several studies have examined the effects of hurricane exposure to various psychological and behavioral difficulties not limited to PTSD. Results are inconclusive on the development of anxiety with some studies reporting no change in anxiety (LaGreca, Silverman, & Wasserstein, 1998) and others finding that females exhibit higher levels of hurricane related stress and more symptoms of PTSD (Khoury et al., 1997; Shannon et al., 1994). Khoury et al. (1997) found that after controlling for demographic factors, hurricane exposure significantly resulted in a decrease in school performance. Shannon et al. (1994) found that males were more likely to develop symptoms of cognitive and behavioral problems while females had more difficulty with emotional processing.

Vernberg et. al (1996) suggested four factors that may uniquely account for the subsequent development of PTSD symptoms in children exposed to hurricanes. The four factors were (1) characteristic of the child (2) exposure to traumatic event: life threat and loss disruption (3) efforts to cope with the events and (4) characteristics of the social environment. Characteristics of the child include age, gender, pre-existing anxiety problems, and ethnic background, all of which are predictive of children's adjustment post-hurricane (LaGreca et al., 1996, Wasserstein & LaGreca, 1998; Shannon et al., 1994; Khoury, Warheit, Hargrove, Zimmerman, Vega, & Gil, 1997; A25, Vernberg et al., 1996; LaGreca et al., 1996).

In terms of the second factor trauma exposure, studies consistently report level of exposure to hurricane related events is highly predictive of PTSD symptoms (Vernberg et al., 1996; Russoniello et al., 2002). Exposure includes life threatening situations as well as loss of property or the disruption of personal relationships and routines.

Coping behaviors have also been shown to significantly impact children's development of PTSD symptoms. Higher levels of self-criticism, resignation, blame/anger, social withdrawal, and wishful thinking have been associated with more PTSD symptoms (Jeney-Gammon, Daugherty, Finch, Belter, & Foster, 1992; LaGreca et al., 1996; Russoniello et al., 1996; Vernberg et al., 1996). In fact, Vernberg et al. (1996) found that three months after hurricane Andrew, blame and anger accounted for 13% of the PTSD exhibited by children. Alternatively, cognitive restructuring and seeking social support have been associated with less symptomatology (Jeney-Gammon et al., 1992)

Characteristics of the environment, such as social support, have been suggested to be important depending on the source of support and type of stressor (Wilcox & Vernberg, 1985). After a hurricane, children often report receiving the most support from parents and close friends and less support from classmates and teachers (LaGreca et al., 1996; Prinstein et al., 1996; Vernberg et al., 1996). Studies have found greater social support predicted lower levels of PTSD symptoms (LaGreca et al., 1996; LaGreca, Silverman, Vernberg, & Prinstein, 1996; Vernberg et al., 1996).

As Norris (2006) stated, disasters "generate an array of individually and collectively experienced stressors of varying degrees of intensity that interact with

multiple characteristics of the person and environment to produce a diverse set of outcomes that evolve over time” (p. 173). Few studies, however, look at resiliency in terms of a child’s exposure to chronic stressors with the added terror of a discrete traumatic event (Attar et al., 1994). This study is unique in that it looks at a population confronted with chronic daily stressors who also faced the terror of a discrete traumatic event, Hurricane Katrina.

### **Summary and Rationale for Current Study**

Many children who live in New Orleans not only experienced the devastating effects of Hurricane Katrina but also encounter high levels of neighborhood disadvantage; including poverty, unemployment, substandard housing, and community violence (Sherman & Shapiro, 2005). Research has shown that these stressors, especially community violence, often result in children experiencing significant psychological symptoms (Brookmeyer et al., 2005; Cooley-Quille, 2001; Margolin, 2004). However, not everyone develops psychopathology or adjustment problems when exposed to a traumatic event (Werner, 1984).

Vernberg et al. (1996) proposed four factors that may impact children’s adjustment to the devastating effects of a natural disaster. These are: characteristic of the child, exposure to traumatic event, efforts to cope with the event, and characteristics of the social environment. Few studies have evaluated the relationship among these variables (Kuperschmidt et al., 2002).

The purpose of the present investigation is to (1) study the effects of community violence on adolescents’ adjustment (PTSD, anxiety, and depression) (2) to determine the effect that social support has on adolescents’ adjustment (PTSD, anxiety, and

depression) and (3) to determine whether positive parenting factors serve as protective factor and whether negative parenting serves as a risk factors on adolescents' adjustment (PTSD, anxiety, and depression).

### **Present Study and Hypotheses**

The current study investigated how these variables affected the direction and strength of the relationship between hurricane exposure and the subsequent development of PTSD, anxiety, and depression. This study tested the following hypotheses:

(1) The first hypothesis sought to replicate and extend existing literature that has found a relationship between hurricane exposure and development of psychopathology. Specifically, it was hypothesized that adolescents exposed to higher life threat and loss/disruption from Hurricane Katrina would exhibit higher levels of PTSD, general anxiety, and depression.

(2) The second hypothesis stated that the effects of disaster exposure on psychological functioning would be moderated by community violence exposure. Specifically, adolescents exposed to higher rates of community violence would exhibit higher rates of PTSD, anxiety, and depression post hurricane Katrina than adolescents with less community violence exposure.

(3) The next hypothesis examined the moderating role of social support on the development of psychopathology post hurricane Katrina. It was hypothesized that adolescents who reported higher levels of social support would exhibit lower levels of PTSD, anxiety, and depression than children with less perceived social support.

(4) The last hypothesis examined the moderating role of parenting variables on adolescents' reports of PTSD, anxiety, and depression. Specifically it was predicted

that adolescents whose mothers reported more parent involvement and positive parenting would exhibit lower levels of psychopathology than adolescents whose parents reported lower levels of these variables. Furthermore, it is hypothesized that adolescents whose mothers reported higher levels of poor monitoring/supervision would exhibit higher levels of psychopathology than adolescents whose parents reported lower levels of these variables.

## **Method**

### **Participants**

Participants were recruited as part of a larger National Institutes of Mental Health Study evaluating the psychological and behavioral functioning of children and adolescents after hurricane Katrina. Data for the current study were collected from October, 2005 until January, 2006 at public schools located in New Orleans and surrounding parishes.

Participants of the current study were adolescents and their mothers who lived in New Orleans or the surrounding parishes after Hurricane Katrina. There were 194 adolescent participants and included 88 male child participants and 106 female child participants. Adolescent ages ranged from 12-16 years old. Mothers' mean age was 39.

The participating sample was composed of 62% African American families, 28% Caucasian families, 5% Asian families, 3% Hispanic families, and 2% Other Ethnicity families. Fifty-one percent of families reported a yearly income in the range of \$0-24,999, 31% of families reported a yearly income in the range of \$25,000-74,999, and 3% of families reported a yearly income in the range of \$75,000 and up.

### **Measures**

Demographic Questionnaire. Mothers were queried about child and family characteristics (see Appendix A).

Hurricane-Related Traumatic Experiences (HURTE; Vernberg et al., 1996). The HURTE is a measure developed to assess child traumatic experiences during and after a hurricane. It yields two factor scales: Threat and Loss/Disruption. Each scale has

demonstrated sufficient test-retest reliability and predictive validity; although no specific correlation data could be found (LaGreca et al., 1996; Vernberg et al., 1996). However, for the current study, these two factors were combined to obtain a measure of child exposure to hurricane-related traumatic experiences and the Cronbach alpha was .98. (see Appendix B)

UCLA PTSD Reaction Index (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998). The UCLA PTSD Reaction Index is a 22-item child-report instrument used to screen symptoms of PTSD according to the DSM-IV. This version of the PTSD Reaction Index has demonstrated adequate internal consistency, test-retest reliability, and high sensitivity and specificity (Pynoos, Goenjian, & Steinberg, 1998; Rodriguez, Steinberg, Saltzman, & Pynoos, 2001; Steinberg, Brymer, Decker, & Pynoos, 2004). Specifically, test-retest reliability was .59 and a correlation with positive PTSD diagnosis of .91 (Shaw, Applegate, & Schorr, 1996; Shaw et al., 1995). The Index Summary Score was used as an overall index of child-reported PTSD symptoms and the Cronbach alpha was .93. (see Appendix C)

Screen for Adolescent Violence Exposure (SAVE; Hastings & Kelley, 1997). The SAVE consists of 32 items, rated on a five-point Likert type scale ranging from Never to Always. It is an adolescent self-report scale, which assesses frequency of violence exposure in settings relevant to adolescent adjustment (School, Neighborhood, and Home). The study combined the scores from School and Neighborhood to ascertain a community violence score. The SAVE has been shown to demonstrate acceptable test-retest reliability, and adequate convergent and discriminate validity (Hastings & Kelley, 1997). The Cronbach alpha was .97. (see Appendix D)

Alabama Parenting Questionnaire (APQ; Shelton, Frick, and Wootton 1996). The APQ is a 42-item parent report measure, which consist of six factor scales: Parent Involvement, Positive Parenting, Poor Monitoring/Supervision, Inconsistent Discipline, Corporal Punishment, and Other Discipline Techniques. Items are rated on a 5-point scale (1=never, 5-always). The APQ has adequate reliability (Essau, Sasagawa, & Frick, 2006). The study used the parent involvement, positive parenting, and poor monitoring/supervision scales (see Appendix E)

Harter's Social Support Scale for Children (SSSC; Harter, 1985). The SSSC is a 24-item child self-report instrument that measures a child's perception of social support from parents, classmates, teachers, and close friends. Each scale contains six items, which are scored on a 4-point Likert scale. The SSSC has been shown to exhibit adequate reliability and validity (LaGreca et al., 1996). Specifically, internal consistencies have ranged from .72 to .83. A total score of parent social support and peer social support was used in the current study. (see Appendix F)

Behavior Assessment System for Children, Second Edition-Self Report Scale (BASC-2; Kamphaus & Reynolds, 2004). The BASC-2 SRS is a self-report measure that assesses a child's emotional and behavioral symptoms and adaptive behaviors. It is comprised of sixteen primary scales and five composite scales: School Problems, Internalizing Problems, Inattention-Hyperactivity, Emotional Symptoms Index, and Personal Adjustment. The current study used the primary scales of Anxiety and Depression. This measure has demonstrated good internal consistency and test-retest reliability (Kamphaus & Reynolds, 2004). The Cronbach alpha was .92. (see Appendix G)



## **Procedure**

Following institutional review board, school board, and school consent, mothers and students in grades 4 through 8 were recruited to participate in the study via flyers that were sent home. Following the return of the mother's completed packet to the child's school, the identified child was assessed for their assent. Children who assented completed the questionnaires in small groups under researcher supervision. These groups were held in private rooms, either the cafeteria or an empty classroom. Younger children and children with reading difficulties were read the questionnaires. Compensation depended on the schools preferences and ranged from \$5 cash awards for the children to participation in a pizza party. All mothers were paid \$20 for participating. All responses were confidential; packets were coded to eliminate use of names.

## Results

### Bivariate Correlation Analyses

Bivariate correlations are listed in Table 1. As seen in the table, the only demographic variable that was significantly correlated with at least one criterion variable was Family Income after Hurricane Katrina ( $-.21, p < .01$  for PTSD). Therefore, it is the only demographic variable considered in subsequent analyses.

In the current study, the parenting variables as measured by the APQ of Parent Involvement, Positive Parenting, and Poor Monitoring were not significantly correlated with any outcome variables. Therefore, these variables were not considered in further analyses.

Additionally, Anxiety and Depression are correlated at the .01 level of significance. They are also significantly correlated with the same variables: Community Violence ( $.32, p < .01$  for anxiety;  $.20, p < .01$  for depression), Parent Support ( $.32, p < .01$  for anxiety;  $.59, p < .01$  for depression), Peer Support ( $.21, p < .05$  for anxiety,  $.31, p < .05$  for depression), and PTSD ( $.59, p < .01$  for anxiety;  $.43, p < .01$  for depression). PTSD, however, was correlated with Family Income after Katrina ( $-.20, p < .05$ ), Hurricane Exposure ( $.40, p < .05$ ), Community Violence ( $.41, p < .05$ ), Anxiety ( $.59, p < .01$ ) and Depression ( $.43, p < .01$ ). The high correlation between Anxiety and Depression ( $.70, p < .01$ ) and its correlation with many of the same variables suggested that the inclusion of both variables would not significantly contribute new information. Due to PTSD being considered an anxiety disorder and the fact that it was correlated with separate variables from anxiety and depression, it was decided to focus on depression and PTSD as dependent variables.

Table 1

## Correlation Matrix of the Control, Predictor, Moderator, and Criterion Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Gender	-	.01	.16*	-.23**	-.13	-.08	.03	.08	.11	-.08	.11	.08	.25**	-.02	.04	.04
2. Race		-	.05	-.01	-.24**	-.23**	.06	-.23**	-.17*	.20*	.03	-.03	-.01	-.09	-.09	-.08
3. Displacement			-	.03	.04	.01	.41**	-.01	.01	-.17*	.02	.02	.25**	-.16	-.01	-.03
4. Mother Educational Level				-	.45**	.35**	-.11	.18*	.07	-.24**	-.16*	-.01	-.10	.07	-.02	-.10
5. Yearly Family Income before Katrina					-	.87**	-.25**	.14	.11	-.35**	-.30**	-.05	.12	-.03	-.09	-.20*
6. Yearly Family Income after Katrina						-	-.31**	.14	.11	-.32**	-.33**	.03	.11	-.13	-.14	-.21**
7. HURTE							-	-.09	-.20*	-.02	.32**	-.05	.05	.12	.17*	.40**
8. Parent Involvement								-	.67**	-.37**	.04	.10	.03	-.11	-.18	-.02
9. Positive Parenting									-	.36**	-.09	.16	.04	-.14	-.17	-.07
10. Poor Monitoring										-	.16	-.09	-.16	.11	.10	.07
11. Community Violence											-	-.01	-.08	.32**	.20*	.41**
12. Parent Support												-	.47**	-.32**	-.59**	-.15
13. Peer Support													-	-.21*	-.31**	-.10
14. Self-Report Anxiety														-	.70**	.60**
15. Self-Report Depression															-	.43**
16. Self-Report PTSD																-

<sup>a</sup> Code as follows: male=1; female=0.

<sup>b</sup> Code as follows: Caucasian=1; African American=2; Hispanic=3; Asian=4; Native American=5; Pacific Islander=6; other=7.

<sup>c</sup> Code as follows: 6<sup>th</sup> grade or less=1; junior high school=2; partial high school=3; high school graduate=4; partial college=5; standard college or university=6; graduate professional degree=7.

\*  $p < .05$ . \*\*  $p < .01$ .

### **Description of Predictor Variable**

As measured by HURTE, 80.4% of the adolescent participants reported at least one loss disruption event. Specifically, 43.3% indicated that their house had been badly damaged or destroyed, 40.2% had to attend a new school due to the hurricane, 25.8% had a parent who lost a job, and 21.1% had trouble getting adequate food and water after the hurricane. Results from the HURTE also indicated that 40.2% suffered at least one incident of threat. Specifically, 3.1% reported getting hurt during the hurricane, 6.7% were staying in a building that became so heavily damaged during the hurricane that they had to evacuate the building, 5.2% reported getting hit by something that was falling or flying, and 15.5% indicated seeing someone else get hurt.

### **Description of Moderating Variables**

Frequencies of exposure to community violence and level of perceived parent and peer support were computed. Exposure to community violence was assessed using the SAVE. According to the adolescents' responses, 22.7% reported hardly or never feeling safe in their neighborhood. Many of the adolescents reported "always" or "almost always" experiencing direct community violence: 1.5% had been beaten up by adults in the community; 2.5% had been beaten up by a peer in the neighborhood; 2.5% had had a knife pulled on them; 2.0% had been attacked with a knife; 2.5% had had shots fired at them; 1.5% had actually been shot. Adolescents have reported "always" or "almost always" witnessing more violence than direct victimization: 4.1% had seen a dead body in the community; 6.2% had actually seen someone killed; 8.2% had witnessed an adult beat up a child; 18.5% had heard about someone getting shot; 21.6% had seen someone carry a gun; 8.1% had witnessed someone getting shot.

According to their responses on the Harter's Scale of Social Support, adolescents reported strong levels of parent support, respect, and feeling that they were understood by their parents. Specifically, 50.5% reported that their parents understand them; 62.9% feel that their parents want to hear about their problems; 71.1% have parents who ask about their feelings; and 66.5% reported that their parents act like what their kids do is important. Regarding peer support, the findings were more variable. Although the majority reported being asked to play in games with their peers or that they spend recess playing with classmates (60.3% and 60.9% respectively), only 43.8% reported not being teased or made fun of by their classmates.

### **Description of Outcome Variables**

Frequencies of depression and PTSD were assessed using the BASC-SRS and the UCLA PTSD Index respectively. Results indicated that 8.1% of adolescents reported significant levels of depression. Analyses indicated that 4% of adolescents exhibited severe levels of PTSD symptomatology (score of 38 or greater on the PTSD Index).

### **Regression Analyses**

Hierarchical regressions were conducted to examine whether parent support, peer support, or community violence moderated the relationship between the HURTE score and the two criterion variables: child reported PTSD and child reported depression. To control for multicollinearity, the predictor and moderator variables were centered as recommended by Aiken and West (1991) and Holmbeck (2002). The centered predictor variables and the centered moderator variables were multiplied to create an interaction term. In Step 1, the demographic variable of family income after

Hurricane Katrina was entered to control for its effect. Step 2 included the centered predictor and all moderator variables while Step 3 included the interaction terms. Two separate regression analyses were run for each criterion variable.

### Adolescent-Rated Depression

Examination of the predictor variable indicated that there was not a significant main effect for hurricane exposure and depressive symptoms ( $B=.328, p>.05$ ).

Examination of the moderator variables indicated that there was a significant negative main effect for parent support ( $B= -8.122, p<.001$ ). The HURTE X Parent Support, HURTE X Peer Support, and HURTE X Community Violence interactions were not significant ( $B= -.23, p>.05$ ;  $B= -.02, p>.05$ ;  $-.01, p>.05$  respectively). Thus, parent support, peer support, and community violence did not moderate the relationship of hurricane exposure and depression as assessed by the interaction terms (see Table 2).

Table 2

Final Step of Hierarchical Regression Analyses Evaluating the Moderating Effects of Community Violence, Peer and Parent Support on Adolescent Reported Depression

Variable	CDEP	
	B	$\beta$
Family Income after Hurricane Katrina	-.36	-.09
HURTE	.31	.10
Community Violence	.02	.07
Peer Support	.19	.02
Parent Support	-8.12	-.64***
HURTE X Community Violence	-.01	-.04
HURTE X Peer Support	-.02	-.01
HURTE X Parent Support	-.23	.46

Note. ADEP=adolescent self-reported depression

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## Adolescent-Rated PTSD

Examination of the predictor variable indicated that there was a significant main effect for hurricane exposure and PTSD symptoms ( $B=.970, p<.05$ ). Examination of the moderator variables indicated that there was a significant positive main effect for community violence ( $B=.162, p<.005$ ). The HURTE X Community Violence, and HURTE X Parent Support interactions were not significant ( $B= -.03, p>.05$ ;  $B= -.a69, p>.05$  respectively) while the HURTE X Peer Support interaction approached significance ( $B=1.257, p=.089$ ). Thus, community violence, parent support, and peer support did not significantly moderate the relationship of hurricane exposure and PTSD as assessed by the interaction terms (see Table 3).

Table 3

Final Step of Hierarchical Regression Analyses Evaluating the Moderating Effects of Community Violence, Peer and Parent Support on Adolescent Reported PTSD

Variable	CPTSD	
	B	$\beta$
Family Income after Hurricane Katrina	.11	.02
HURTE	.97	.23
Community Violence	.16	.43
Peer Support	.47	.02
Parent Support	-1.63	-.10
HURTE X Community Violence	-.01	-.03
HURTE X Peer Support	1.26	.73
HURTE X Parent Support	-.69	.64

Note. APTSD=adolescent self-reported PTSD

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## **Summary and Conclusion**

This study was unique in that it evaluated the moderating role that community violence, peer support, and parental support had on adolescents exposed to a hurricane and their self-reported symptoms of PTSD and depression. It was predicted that adolescents exposed to higher rates of community violence would exhibit higher rates of PTSD and depression after hurricane Katrina than those exposed to lower rates of or to no community violence. This prediction was only partially supported. While adolescents who were exposed to more community violence did have significantly more severe symptoms of PTSD than adolescents exposed to less community violence, this variable did not moderate the relationship between hurricane exposure and PTSD. There were no significant findings in relation to community violence and depression. It also was predicted that adolescents who reported more peer or parent support would exhibit lower levels of PTSD and depression after hurricane Katrina than those who reported lower levels of support. These predictions were not validated as no relationship was found between support and PTSD or depression in the current study.

### **Effects of Hurricane Katrina**

A large percentage of adolescents exposed to hurricane Katrina experienced the event as life threatening while many also suffered significant loss of property and other things. However, more adolescents reported experiencing loss and disruption than life threat (80.4% and 40.2% respectively). This may be due to the fact that many adolescents and their family evacuated New Orleans prior to hurricane Katrina and, therefore, experienced the storm from a safe physical distance. However, upon



returning to New Orleans, there was a considerable loss in property and disruption in routines.

Consistent with past research (LaGreca et al., 1996; Shaw, Applegate, & Shorr, 1996; Vernberg et al., 1996), hurricane exposure was associated with a greater number of PTSD symptoms. However, the rate of severe PTSD symptomatology in the current study (4%) is lower than that found in studies of adolescents exposed to other hurricanes. For example, LaGreca et al., (1996) and Vernberg et al. (1996) found that after hurricane Andrew, 29% of children, in grades 3-5, reported severe or very severe symptoms of PTSD. The discrepancy between the current study and those conducted by researchers such as LaGreca and Vernberg, may be explained by the age of participating youth. Specifically, younger children may be more affected by perceived loss/disruption and threat to life than adolescents (McDermott & Palmer, 2002; Ozgur, Akbiyik, Kirmizigul, & Sohmen, 2004).

The findings on adolescent depression indicated that although 8% of the sample endorsed significant levels of depression, depression scores were not related to hurricane exposure. These findings are similar to other epidemiological studies evaluating adolescent rates of depression (Adewaya, Ola, & Aloba, 2007; Costello, Erkanli, & Angold, 2006). Research studying the amount of exposure to a natural disaster and rates of depression are inconsistent ( Belter et al., 1991; Crabbs & Heffron, 1981; Farrell & Barrett, 2007; Goenjian, 2001; Jenney-Gammon, Daugherty, Finch, Belter, & Foster, 1993).

## **The Effect of Community Violence**

The current findings were similar to those of previous research (Berman et al., 1996; Margolin, 2004; White et al., 1998) documenting the relationship between violence exposure and PTSD. In the current study, adolescents reported high rates of community violence. However, contrary to studies such as Margolin (2004), community violence exposure was not related to depression. This may be due to the fact that continued exposure to chronic daily stressors and violence may desensitize the youth, such that community violence may have little to no impact on the development of depression (Fitzpatrick & Boldizar, 1993).

## **The Effect of Social Support**

In the current study, the role of social support in predicting psychological symptoms was varied. Peer support was not found to have any relation to adolescent rates of PTSD or depression. A review of the literature reveals that although few studies have evaluated the role of peer support on an adolescent's development of psychopathology, the current findings were similar to those of Stice, Ragan, & Randall (2004) who found no relationship between peer support and depressive symptoms.

Parental support, however, was significantly negatively related to the development of depression. That is, the more parent support an adolescent reported, the lower their depressive symptoms. This finding is consistent with other research. For example, Ceballo, Ramirez, Hearn, and Maltese (2003) found that parental support in the form of monitoring buffered the effects of community violence on the development of depression and feelings of hopelessness.

### **Community Violence, Peer Support, and Social Support as Moderators**

The findings indicated that exposure to community violence or increased parental or peer support did not moderate the effects of hurricane Katrina on an adolescent rates of PTSD or depression. In other words, in the current study, the presence or absence of community violence, peer support, and/or parental support do not affect the direction or strength of the relationship between hurricane exposure and symptoms of depression or PTSD. It would appear obvious that this moderating role would be absent in studying hurricane exposure and depression since, as stated earlier, there was no direct relationship between hurricane exposure and depression.

However, it is not so clear when evaluating the relationship between hurricane exposure and PTSD, as there was a main effect in this relationship. However, neither peer support, parental support, nor community violence moderated this relationship as assessed by the interaction terms. A review of the research indicates that the findings regarding parental support were similar to those of Pina et al. (2008). Pina and colleagues studied children's psychological functioning after hurricane Katrina and found that the amount of extra-familial support, rather than familial support, was more important on the psychological functioning of children after hurricane Katrina.

### **Strengths and Limitations of the Current Study**

The current study was important as it expanded the literature assessing the effects of a natural disaster. It was unique in that it assessed this relationship within the context of a ethnically diverse sample, mixed income population, who lived in a city which prior to hurricane Katrina faced daily and chronic "neighborhood disadvantages." Another strength of the study was that it assessed the psychological functioning of

adolescents within weeks to months of their return to a largely destroyed and abandoned city.

However, there are significant limitations to consider when interpreting the results. First, is the questionnaires used in the study. Although questionnaires such as the HURTE, UCLA PTSD Index, and the SSSC have been consistently used in research evaluating the effects of exposure to a natural disaster, the few psychometric properties available indicate that these measures may not adequately measure the intended constructs. Second, is the fact that the participating population were those who immediately returned to New Orleans. These adolescents and their families were able to return quickly, whether due to financial security, family support, or the fact that their housing was not destroyed by the hurricane. It would be interesting to conduct this study with adolescents whose families have not been able to return to New Orleans, possibly due to a lack in the above stated reasons. A third limitation is that due to the preference of the principals at the participating schools, data was collected using various incentives. Lastly, the unique aspects of this study, such as evaluating the effects of a natural disaster on a population already considered "at risk", limits the ability to generalize the findings beyond the New Orleans population who experienced hurricane Katrina. Researchers have documented the unique aspect every trauma has as well as the difficulty in generalizing results (Terr, 1993).

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## Appendix A

### Demographic Questionnaire

#### ABOUT YOU AND YOUR FAMILY

Please fill out the following background information about yourself and your family. Read each item carefully.

**Your age:** \_\_\_\_\_

**Your spouse's age:** \_\_\_\_\_

**Your child's age:** \_\_\_\_\_

**Your child's sex:** \_\_\_\_\_

#### **Your Child's School History:**

Your child's current grade: \_\_\_\_\_

School your child attended BEFORE the hurricane? \_\_\_\_\_  
(Circle one: Public or Private)

School your child attends NOW, after the hurricane? \_\_\_\_\_  
(Circle one: Public or Private)

#### **Race:**

- \_\_\_\_\_ White
- \_\_\_\_\_ Black
- \_\_\_\_\_ Hispanic
- \_\_\_\_\_ Asian
- \_\_\_\_\_ Native American
- \_\_\_\_\_ Pacific Islander
- \_\_\_\_\_ Other

#### **Marital Status:**

- \_\_\_\_\_ Never Married
- \_\_\_\_\_ Married
- \_\_\_\_\_ Separated
- \_\_\_\_\_ Divorced
- \_\_\_\_\_ Widowed

**Education:** What is the highest level of education completed by?

#### Yourself

- \_\_\_\_\_ 6<sup>th</sup> grade or less
- \_\_\_\_\_ Junior High school (7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> grade)
- \_\_\_\_\_ Partial high school (10<sup>th</sup>, 11<sup>th</sup> grade)
- \_\_\_\_\_ High school graduate
- \_\_\_\_\_ Partial college (at least 1 year) or specialized training
- \_\_\_\_\_ Standard college or university graduate
- \_\_\_\_\_ Graduate professional degree (Master's, Doctorate)

#### Your Spouse

- \_\_\_\_\_ 6<sup>th</sup> grade or less
- \_\_\_\_\_ Junior High school (7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> grade)
- \_\_\_\_\_ Partial high school (10<sup>th</sup>, 11<sup>th</sup> grade)
- \_\_\_\_\_ High school graduate
- \_\_\_\_\_ Partial college (at least 1 year) or specialized training
- \_\_\_\_\_ Standard college or university graduate
- \_\_\_\_\_ Graduate professional degree (Master's, Doctorate)

**Past Income:** What was the total annual income of your household **BEFORE** the hurricane?  
(Combine the income of all the people living in your house right now as well as any government assistance.)

_____ \$0-4,999	_____ \$15,000-24, 999	_____ \$50,000-74,999
_____ \$5,000-9,999	_____ \$25,000-34,999	_____ \$75,000-99,999
_____ \$10,000-14,999	_____ \$35,000-49,999	_____ \$100,000 and up

**Current Income:** What is the total and **CURRENT** annual income of your household?  
(Combine the income of all the people living in your house right now as well as any government assistance.)

_____ \$0-4,999	_____ \$15,000-24, 999	_____ \$50,000-74,999
_____ \$5,000-9,999	_____ \$25,000-34,999	_____ \$75,000-99,999
_____ \$10,000-14,999	_____ \$35,000-49,999	_____ \$100,000 and up

If you are unable to say what your annual income is, what is your monthly income?  
\$ \_\_\_\_\_

**Past Occupation:** Please provide the following information about you and your spouse's job(s) **BEFORE** the hurricane.

#### About You

What was your occupation/job title? (If you were retired, please write "retired" and your past occupation. If you did not work outside the home, write "unemployed.")

\_\_\_\_\_

If employed, what kind of industry or company? (For example, elementary school, clothing store, hospital, restaurant, etc.)

\_\_\_\_\_

If employed, what were your job duties? (Please be specific.)

\_\_\_\_\_

If you were **unemployed before** the hurricane, were you seeking a new job? Yes / No

#### About Your Spouse

What was your spouse's occupation/job title? (If they were retired, please write "retired" and their past occupation. If they did not work outside the home, write "unemployed.")

What kind of industry or company did they work for? (For example, elementary school, clothing store, hospital, restaurant, etc.)

---

What were their job duties? (Please be specific.)

---

---

If your spouse was **unemployed before** the hurricane, were they seeking a job? Yes / No

**Current Occupation:** Please provide the following information about you and your spouse's job(s) **CURRENTLY**.

#### **About You**

What is your occupation/job title? (If you are retired, please write "retired" and your past occupation. If you do not work outside the home, write "unemployed." If your job is the same as it was before the hurricane, please write "same.")

---

If employed, what kind of industry or company? (For example, elementary school, clothing store, hospital, restaurant, etc.)

---

If employed, what are your job duties? (Please be specific.)

---

---

If you are **currently unemployed**, are you currently seeking a new job? Yes / No

#### **About Your Spouse**

What is your spouse's occupation/job title? (If they are retired, please write "retired" and their past occupation. If they do not work outside the home, write "unemployed." If their job is the same as it was before the hurricane, please write "same.")

---

What kind of industry or company did they work for? (For example, elementary school, clothing store, hospital, restaurant, etc.)

---



What are their job duties? (Please be specific.)

---

---

If your spouse is **currently unemployed**, are they currently seeking a new job? Yes / No

**Family:** Please list the age and sex of all those living in your household **BEFORE** the hurricane, including yourself, your spouse, other relatives, and all children.

<u>Relationship to you</u>	<u>Age</u>	<u>Sex</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>
_____	_____	<u>Male/Female</u>

What was the TOTAL number of people, including yourself, living in your home **BEFORE** the hurricane? \_\_\_\_\_

What was the TOTAL number of adults over 18, including yourself, living in your home **BEFORE** the hurricane? \_\_\_\_\_

What was the TOTAL number of children under 18 living in your home **BEFORE** the hurricane? \_\_\_\_\_

## Appendix B

### Hurricane-Related Traumatic Experiences (HURTE)

#### What Happened To You During the Hurricane?

##### During the Hurricane

1. Where were you during the hurricane? (you can check more than one)  

<input type="checkbox"/> in my home	<input type="checkbox"/> in a closet
<input type="checkbox"/> in a friend's or relative's home	<input type="checkbox"/> in a bathroom
<input type="checkbox"/> in a shelter	<input type="checkbox"/> in a hallway
<input type="checkbox"/> out of town (evacuated)	<input type="checkbox"/> in a car
<input type="checkbox"/> in a hotel/motel	<input type="checkbox"/> in an attic
<input type="checkbox"/> other (describe) _____	

---
2. Did windows or doors break in the place you stayed during the hurricane?
  - a. Yes
  - b. No
3. Did you get hurt during the hurricane?
  - a. Yes
  - b. No
4. At any time during the hurricane, did you think that you might die?
  - a. Yes
  - b. No
5. Did you see anyone else get hurt badly during the hurricane?
  - a. Yes
  - b. No
6. Did you have to go outside during the hurricane because the building you were staying in was badly damaged?
  - a. Yes
  - b. No
7. Did a pet you liked get hurt or die during the hurricane?
  - a. Yes
  - b. No
8. Did you get hit by anything falling or flying during the hurricane?
  - a. Yes
  - b. No
9. Was your mother or father with you during the hurricane?
  - a. Yes
  - b. No
10. Overall, how scared or upset were you during the hurricane?
  - a. Not at all
  - b. A little
  - c. A lot
  - d. A whole lot
11. Did you have to be rescued from the place you stayed during or after the hurricane?
  - a. Yes
  - b. No



## Appendix C

### UCLA Index for DSM-IV

Here is a list of problems people sometimes have after very bad things happen. Please **THINK** about a bad thing that happened to you. Then **READ** each problem on the list carefully. **CIRCLE ONE** of the numbers (0,1,2,3, or 4) that tells how often the problem has happened to you in the past month.

PLEASE BE SURE TO ANSWER ALL QUESTIONS

HOW MUCH OF THE TIME DURING THE PAST MONTH	NONE	LITTLE	SOME	MUCH	MOST
1. I watch out for danger or things that I am afraid of.	0	1	2	3	4
2. When something reminds me of what happened, I get very upset, afraid, or sad.	0	1	2	3	4
3. I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I do not want them to.	0	1	2	3	4
4. I feel grouchy, angry, or mad.	0	1	2	3	4
5. I have dreams about what happened or other bad dreams.	0	1	2	3	4
6. I feel like I am back at the time when the bad thing happened, living through it again.	0	1	2	3	4
7. I feel like staying by myself and not being with my friends.	0	1	2	3	4
8. I feel alone inside and not close to other people.	0	1	2	3	4
9. I try not to talk about, think about, or have feelings about what happened.	0	1	2	3	4
10. I have trouble feeling happiness or love.	0	1	2	3	4
11. I have trouble feeling sadness or anger.	0	1	2	3	4
12. I feel jumpy or startle easily, like when I hear a loud noise or when something surprises me.	0	1	2	3	4
13. I have trouble going to sleep or I wake up often during the night.	0	1	2	3	4
14. I think that some part of what happened is my fault.	0	1	2	3	4
15. I have trouble remembering important parts of what happened.	0	1	2	3	4
16. I have trouble concentrating or paying attention.	0	1	2	3	4

17. I try to stay away from people, places, or things that make me remember what happened.	0	1	2	3	4
18. When something reminds me of what happened, I have strong feelings in my body, like my heart beats fast, my head aches, or my stomach aches.	0	1	2	3	4
19. I think that I will not live a long life.	0	1	2	3	4
20. I have arguments or physical fights.	0	1	2	3	4
21. I feel pessimistic or negative about my future.	0	1	2	3	4
22. I am afraid that the bad thing will happen again.	0	1	2	3	4

## Appendix D

### SAVE

	<u>How often it happens</u>				
	Never	Hardly Ever	Sometimes	Almost Always	Always
1. I have seen someone carry a gun...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
2. Someone has pulled a gun on me...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
3. Grownups beat me up...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
4. Someone my age has threatened to beat me up...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
5. I have been shot...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
6. I have seen the police arrest someone...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
7. Someone my age hits me...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
8. I have seen someone get killed...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
9. I have seen a grownup hit a kid...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4

- in my neighborhood	0	1	2	3	4
10. I have heard about someone getting shot...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
11. Someone has pulled a knife on me...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4

How often it happens

	Never	Hardly Ever	Sometimes	Almost Always	Always
12. Grownups threaten to beat me up...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
13. I have had shots fired at me...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
14. I have seen someone carry a knife...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
15. I have seen someone get shot...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
16. I have been attacked with a knife...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
17. I have seen a kid hit a grownup...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
18. I have seen people scream at each other...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4

19. I have seen someone pull a gun on someone else...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
20. I have seen someone get beaten up...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
21. I have heard about someone getting killed...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
22. I have heard about someone getting attacked with a knife...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4

How often it happens

	Never	Hardly Ever	Sometimes	Almost Always	Always
23. I have heard about someone getting beaten up...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
24. I have seen someone pull a knife on someone else...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
25. I have been badly hurt...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
26. I have seen someone get attacked with a knife...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
27. I hear gunshots...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
28. I have seen someone get badly hurt...					
- at my school	0	1	2	3	4



- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
29. I have ran for cover when people started shooting...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
30. Grownups scream at me...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
31. I have heard of someone carrying a gun...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4
32. Grownups hit me...					
- at my school	0	1	2	3	4
- in my home	0	1	2	3	4
- in my neighborhood	0	1	2	3	4

## Appendix E

### Alabama Parenting Questionnaire (APQ)

**INSTRUCTIONS:** The following are a number of statements about your family. Please rate each item as how often it TYPICALLY occurs in your home. The possible answers are:

1 = Never      2 = Almost Never      3 = Sometimes      4 = Often      5 = Always

	1	2	3	4	5
1. You have a friendly talk with your child.	1	2	3	4	5
2. You let your child know when he/she is doing a good job with something.	1	2	3	4	5
3. You threaten to punish your child and then do not actually punish him/her.	1	2	3	4	5
4. You volunteer to help with special activities your child is involved with (such as sports, scouts)	1	2	3	4	5
5. You reward or give something extra to your child for obeying you or behaving well.	1	2	3	4	5
6. Your child fails to leave a note or let you know where he/she is going.	1	2	3	4	5
7. You play a game or do other fun things with your child.	1	2	3	4	5
8. Your child talks you out of being punished after he/she has done something wrong.	1	2	3	4	5
9. You ask your child about his/her day in school.	1	2	3	4	5
10. Your child stays out in the evening past the time he/she is supposed to be home.	1	2	3	4	5
11. You help your child with his/her homework.	1	2	3	4	5
12. You feel that getting your child to obey you is more trouble than it's worth.	1	2	3	4	5
13. You compliment your child when he/she has done something well.	1	2	3	4	5
14. You ask your child what his/her plans are for the coming day.	1	2	3	4	5
15. You drive your child to a special activity.	1	2	3	4	5
16. You praise your child for behaving well.	1	2	3	4	5
17. Your child is out with friends that you don't know.	1	2	3	4	5
18. You hug or kiss your child when he/she has done something well.	1	2	3	4	5
19. Your child goes out without a set time to be home.	1	2	3	4	5
20. You talk to your child about his/her friends.	1	2	3	4	5
21. Your child is out after dark without an adult with him/her.	1	2	3	4	5
22. You let your child out of a punishment early (like lift restrictions earlier than you said).	1	2	3	4	5
23. Your child helps plan family activities.	1	2	3	4	5
24. You get so busy that you forget where your child is and what he/she is doing.	1	2	3	4	5
25. Your child is not punished when he/she has done something wrong.	1	2	3	4	5
26. You attend PTA meetings, parent-teacher conferences, or other meetings at your child's school.	1	2	3	4	5
27. You tell your child that you like it when he/she helps out around the house.	1	2	3	4	5
28. You don't check that your child comes home at the time he/she was supposed to.	1	2	3	4	5
29. You don't tell your child where you are going.	1	2	3	4	5
30. Your child comes home from school more than an hour past the time you expect him/her.	1	2	3	4	5
31. The punishment you give your child depends on your mood.	1	2	3	4	5
32. Your child is at home without adult supervision.	1	2	3	4	5
33. You spank your child with your hand when he/she has done something wrong.	1	2	3	4	5
34. You ignore your child when he/she is misbehaving.	1	2	3	4	5
35. You slap your child when he/she does something wrong.	1	2	3	4	5
36. You take away a privilege or money from your child as a punishment.	1	2	3	4	5
37. You send your child to his/her room as a punishment.	1	2	3	4	5
38. You hit your child with a belt, switch, or other object when he/she has done something wrong.	1	2	3	4	5
39. You yell or scream at your child when he/she has done something wrong.	1	2	3	4	5

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 40. You calmly explain to your child why his/her behavior was wrong when he/she misbehaves. | 1 | 2 | 3 | 4 | 5 |
| 41. You use time-out (make him/her sit or stand in a corner) as punishment.                 | 1 | 2 | 3 | 4 | 5 |
| 42. You give your child extra chores as a punishment.                                       | 1 | 2 | 3 | 4 | 5 |

## Appendix F

### Harter's Social Support Scale for Children (SSSC)

**INSTRUCTIONS:** Read each statement. Then, circle the one statement that **you think is true for you**. Then, check one of the boxes below the statement you circled.

#### SAMPLE ITEM

Some kids like to do fun things with a lot of other people.

Really True for Me       Sort of True for Me

**BUT**

Other kids like to do fun things with just a few people.

Sort of True for Me       Really True for Me

1. Some kids have parents who *don't* really understand them.

Really True for Me       Sort of True for Me

**BUT**

Other kids have parents who really *do* understand them.

Sort of True for Me       Really True for Me

2. Some kids have classmates who like them the way they are.

Really True for Me       Sort of True for Me

**BUT**

Other kids have classmates who wish they were *different*.

Sort of True for Me       Really True for Me

3. Some kids have a teacher who *helps* them if they are *upset* and have a problem.

Really True for Me       Sort of True for Me

**BUT**

Other kids *don't* have a teacher who helps them if they are upset and have a problem.

Sort of True for Me       Really True for Me

4. Some kids have a close friend who they can tell problems to.

Really True for Me       Sort of True for Me

**BUT**

Other kids *don't* have a close friend who they can tell problems to.

Sort of True for Me       Really True for Me

5. Some kids have parents who *don't* seem to want to hear about their children's problems.

Really True for Me       Sort of True for Me

**BUT**

Other kids have parents who *do* want to *listen* to their children's problems.

Sort of True for Me       Really True for Me

6. Some kids have classmates that they can become friends with.

Really True for Me       Sort of True for Me

**BUT**

Other kids *don't* have classmates that they can become friends with.

Sort of True for Me       Really True for Me

7. Some kids *don't* have a teacher who helps them to do their very best.

Really True for Me       Sort of True for Me

**BUT**

Other kids *do* have a teacher who *helps* them to do their very best.

Sort of True for Me       Really True for Me

8. Some kids have a close friend who really understands them.

Really True for Me       Sort of True for Me

**BUT**

Other kids *don't* have a close friend who understands them

Sort of True for Me       Really True for Me

9. Some kids have parents who care about their feelings.

Really True for Me       Sort of True for Me

**BUT**

Other kids have parents who *don't* seem to care very much about their children's feelings.

Sort of True for Me       Really True for Me

10. Some kids have classmates who sometimes make fun of them.

Really True for Me       Sort of True for Me

**BUT**

Other kids *don't* have classmates who make fun of them.

Sort of True for Me       Really True for Me

11. Some kids *do* have a teacher who cares about them.

Really True for Me       Sort of True for Me

**BUT**

Other kids *don't* have a teacher who cares about them.

Sort of True for Me       Really True for Me

12. Some kids have a close friend who they can talk to about things that bother them.

Really True for Me       Sort of True for Me

**BUT**

Other kids *don't* have a close friend who they can talk to about things that bother them.

Sort of True for Me       Really True for Me

13. Some kids have parents who treat their children like a *person* who really matters.

Really True for Me       Sort of True for Me

**BUT**

Other kids have parents who *don't* usually treat their children like a person who matters.

Sort of True for Me       Really True for Me

14. Some kids have classmates who pay attention to what they say.

Really True for Me       Sort of True for Me

**BUT**

Other kids have classmates who *usually don't* pay attention to what they say.

Sort of True for Me       Really True for Me

15. Some kids *don't* have a teacher who is fair to them.

Really True for Me       Sort of True for Me

**BUT**

Other kids *do* have a teacher who is fair to them.

Sort of True for Me       Really True for Me

16. Some kids *don't* have a close friend who they like to spend time with.

Really True for Me       Sort of True for Me

**BUT**

Other kids *do* have a close friend who they like to spend time with

Sort of True for Me       Really True for Me

17. Some kids have parents who like them the way they are.

Really True for Me       Sort of True for Me

**BUT**

Other kids have parents who wish their children were *different*.

Sort of True for Me       Really True for Me

18. Some kids *don't* get asked to play games with classmates very often.

Really True for Me       Sort of True for Me

**BUT**

Other kids *often* get asked to play in games by their classmates.

Sort of True for Me       Really True for Me

19. Some kids *don't* have a teacher who cares if they feel bad.

Really True for Me       Sort of True for Me

**BUT**

Other kids *do* have a teacher who cares if they feel bad.

Sort of True for Me       Really True for Me

20. Some kids *don't* have a close friend who really *listens* to what they say.

**BUT**

Other kids *do* have a close friend who really listens to what they

Really True for Me       Sort of True for Me

21. Some kids have parents who *don't* act like what their children do is important.

Really True for Me       Sort of True for Me

22. Some kids often spend recess being *alone*.

Really True for Me       Sort of True for Me

23. Some kids have a teacher who treats them like a person.

Really True for Me       Sort of True for Me

24. Some kids *don't* have a close friend who cares about their feelings.

Really True for Me       Sort of True for Me

say.

Sort of True for Me       Really True for Me

**BUT**

Other kids have parents who *do* act like what their children do is important.

Sort of True for Me       Really True for Me

**BUT**

Other kids spend recess playing with their *classmates*.

Sort of True for Me       Really True for Me

**BUT**

Other kids *don't* have a teacher who treats them like person.

Sort of True for Me       Really True for Me

**BUT**

Other kids *do* have a close friend who cares about their feelings.

Sort of True for Me       Really True for Me

## Appendix G

### BASC

	Mark: T-True	F-False	1 0
1.	I like who I am.		T F
2.	I hate taking tests.		T F
3.	Nothing goes my way.		T F
4.	My muscles get sore a lot.		T F
5.	People tell me I should pay more attention.		T F
6.	Things go wrong for me when I try hard.		T F
7.	I get mad at my parents sometimes.		T F
8.	I used to be happier.		T F
9.	I often have headaches.		T F
10.	I don't care about school.		T F
11.	I can never seem to relax.		T F
12.	I always go to bed on time.		T F
13.	My classmates don't like me.		T F
14.	I worry about tests more than my classmates do.		T F
15.	My parents are always right.		T F
16.	If I have a problem, I can usually work it out.		T F
17.	I never break the rules.		T F
18.	I have not seen a car in at least 6 months.		T F
19.	What I want never seems to matter.		T F
20.	I worry about little things.		T F
21.	Nothing is fun anymore.		T F
22.	I never get into trouble.		T F
23.	I tell the truth every single time.		T F
24.	I never seem to get anything right.		T F
25.	I have never been mean to anyone.		T F
26.	My friends have more fun than I do.		T F
27.	I like loud music.		T F
28.	I always do what my parents tell me.		T F
29.	No matter how much I study for a test, I am afraid I will fail.		T F
30.	I cover up my work when the teacher walks by.		T F
31.	I wish I were different.		T F
32.	I have just returned from a 9-month trip on an ocean liner.		T F
33.	Nobody ever listens to me.		T F
34.	Often I feel sick in my stomach.		T F
35.	I think that I have a short attention span.		T F
36.	My parents have too much control over my life.		T F
37.	My teacher understands me.		T F
38.	I just don't care anymore.		T F

39.	Sometimes my ears hurt for no reason.	T F
40.	I don't like thinking about school.	T F
41.	I worry a lot of the time.	T F
42.	I get along well with my parents	T F
43.	Other children don't like to be with me.	T F
		1 2
44.	I wish I were someone else.	T F
45.	I tell my parents everything.	T F
46.	I can handle most things on my own.	T F
47.	I like to take chances.	T F
48.	I am sometimes jealous.	T F
49.	My parents are always telling me what to do.	T F
50.	I often worry about something bad happening to me.	T F
51.	I don't seem to do anything right.	T F
52.	I like everyone I meet.	T F
53.	I have attention problems.	T F
54.	Most things are harder for me than others.	T F
55.	I have some bad habits.	T F
56.	Other children are happier than I am.	T F
57.	I would rather be a police officer than a teacher.	T F
58.	I always do homework on time.	T F
59.	I take a plane trip from New York to Chicago at least twice a week.	T F
60.	I never quite reach my goal.	T F
61.	I feel good about myself.	T F
62.	Sometimes, when alone, I hear my name.	T F
63.	Nothing ever goes right for me.	T F
64.	I get sick more than others.	T F
65.	I give up easily.	T F
66.	My parents blame too many of their problems on me.	T F
67.	My teacher cares about me.	T F
68.	Nothing about me is right.	T F
69.	My stomach gets upset more than most people's.	T F
	<b>REMEMBER:</b> Indicate how frequently each behavior occurs by circling  N—Never S—Sometimes O—Often A—Always	1 2 3 4
70.	My school feels good to me.	N S O A
71.	I get so nervous I can't breath.	N S O A
72.	I am proud of my parents.	N S O A
73.	Other kids hate to be with me.	N S O A
74.	I like the way I look.	N S O A



75.	People say bad things to me.	N	S	O	A
76.	I am dependable.	N	S	O	A
77.	I like it when my friends dare me to do something.	N	S	O	A
78.	When I get angry, I can't think about anything else.	N	S	O	A
79.	I get blamed for things I can't help.	N	S	O	A
80.	I worry when I go to bed at night.	N	S	O	A
		1	2	3	4
81.	I feel like my life is getting worse and worse.	N	S	O	A
82.	School is boring.	N	S	O	A
83.	I forget things.	N	S	O	A
84.	Even when I try hard, I fail.	N	S	O	A
85.	My teacher trusts me.	N	S	O	A
86.	People act as if they don't hear me.	N	S	O	A
87.	I like to play rough sports.	N	S	O	A
88.	I have trouble standing still in lines.	N	S	O	A
89.	I can't seem to turn off my mind.	N	S	O	A
90.	I am disappointed with my grades.	N	S	O	A
91.	I get upset about my looks.	N	S	O	A
92.	I feel like people are out to get me.	N	S	O	A
93.	I feel depressed.	N	S	O	A
94.	I sleep with my schoolbooks.	N	S	O	A
95.	I listen when people are talking to me.	N	S	O	A
96.	I stay awake for 24 hours without getting tired.	N	S	O	A
97.	Teachers make me feel stupid.	N	S	O	A
98.	No one understands me.	N	S	O	A
99.	I feel dizzy.	N	S	O	A
100.	Someone wants to hurt me.	N	S	O	A
101.	I feel guilt about things.	N	S	O	A
102.	I like going places with my parents.	N	S	O	A
103.	I feel that nobody likes me.	N	S	O	A
104.	I am good at things.	N	S	O	A
105.	I am lonely.	N	S	O	A
106.	I can solve difficulty problems by myself.	N	S	O	A
107.	I like to experiment with new things.	N	S	O	A
108.	I get nervous.	N	S	O	A
109.	My parents expect too much from me.	N	S	O	A
110.	I worry but I don't know why.	N	S	O	A
111.	I feel sad.	N	S	O	A
112.	I get bored in school.	N	S	O	A
113.	I have trouble paying attention to the teacher.	N	S	O	A
114.	When I take tests, I can't think.	N	S	O	A
115.	Teachers look for the bad things that you do.	N	S	O	A
116.	I am left out of things.	N	S	O	A
117.	I like to ride in a car that is going fast.	N	S	O	A

118.	I talk while other people are taking.	N S O A
119.	When alone, I feel like someone is watching me.	N S O A
120.	I want to do better, but I can't.	N S O A
121.	My looks bother me.	N S O A
122.	I hear voices in my head that no one else can hear.	N S O A
123.	I am good at making decisions.	N S O A
124.	I have trouble sitting still.	N S O A
125.	I pay attention when someone is telling me how to do something.	N S O A
126.	My parents are easy to talk to.	N S O A
127.	Teachers are unfair.	N S O A
128.	I have a hard time slowing down.	N S O A
129.	I like going to bed at night.	N S O A
130.	I see weird things.	N S O A
131.	I get nervous when things do not go the right way for me.	N S O A
132.	My mother and father like my friends.	N S O A
133.	People think I am fun to be with.	N S O A
134.	I feel like I have to get up and move around.	N S O A
135.	Other people find things wrong with me.	N S O A
136.	I like to make decisions on my own.	N S O A
137.	I like to be the first one to try new things.	N S O A
138.	Little things bother me.	N S O A
139.	I am blamed for things I don't do.	N S O A
140.	I worry about what is going to happen.	N S O A
141.	My mother and father help me if I ask them to.	N S O A
142.	I feel like I want to quit school.	N S O A
143.	I have trouble paying attention to what I am doing.	N S O A
144.	I fail at things.	N S O A
145.	My teacher is proud of me.	N S O A
146.	I feel out of place around people.	N S O A
147.	I like to dare others to do things.	N S O A
148.	I talk without waiting for others to say something.	N S O A
149.	Someone else controls my thoughts.	N S O A
150.	I quit easily.	N S O A
151.	I am slow to make new friends.	N S O A
152.	I do things over and over and can't stop.	N S O A
153.	My friends come to me for help.	N S O A
154.	People tell me to be still.	N S O A
155.	My parents listen to what I say.	N S O A
156.	I like to be close to my parents.	N S O A
157.	My teachers want too much.	N S O A
158.	When I get angry, I want to break something.	N S O A
159.	I get phone calls from popular movie actors.	N S O A
160.	I hear things that others cannot hear.	N S O A
161.	I get mad at others	N S O A

162.	I have trouble sleeping the night before a big test.	N	S	O	A
163.	I am liked by others.	N	S	O	A
164.	People tell me that I am too noisy.	N	S	O	A
165.	I feel that others do not like the way I do things.	N	S	O	A
166.	I am someone you can rely on.	N	S	O	A
167.	When I get angry, I want to hurt someone.	N	S	O	A
168.	When I start talking, it is hard for me to stop.	N	S	O	A
169.	People get mad at me, even when I don't do anything wrong.	N	S	O	A
170.	I am afraid of a lot of things.	N	S	O	A
171.	My parents trust me.	N	S	O	A
172.	I hate school.	N	S	O	A
173.	My parents are proud of me.	N	S	O	A
174.	Ideas just race through my mind.	N	S	O	A
175.	My teachers get mad at me for no good reason.	N	S	O	A
176.	Other people are against me.	N	S	O	A

## **Vita**

Karen Davidson was born in Stamford, Connecticut. She moved 9 times before beginning graduate school at Louisiana State University in Baton Rouge. In 2001, she received her Bachelor of Art from Colgate University in Hamilton, New York, with a double major in psychology and German. In 2004, Karen received her Master's of Art from Louisiana State University in clinical psychology. She completed her graduate degree in 2009 when she received her doctorate from Louisiana State University in Clinical Psychology. Karen is married to an attorney. She and her husband have two children, a boy aged 6 and a girl aged 7 and 6, and are expecting their third child. Karen and her family live in Rio Rancho, New Mexico, where Karen is working as a school psychologist.

