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The Associations between Loss and Posttraumatic Stress and Depressive Symptoms Following Hurricane Ike

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Abstract

Disasters can have wide-ranging effects on individuals and their communities. Loss of specific resources (e.g., household contents, job) following a disaster has not been well studied, despite the implications for preparedness efforts and post-disaster interventions. The present study used random-digit-dial methodology to recruit hurricane-affected adults from Galveston and Chambers, TX, counties one year after Hurricane Ike. Data from 1,249 survivors were analyzed to identify predictors of distress, including specific resource losses. Variables that were significantly associated with PTSD symptoms included sustained losses, hurricane exposure and socio-demographic characteristics; similar results were obtained for depressive symptoms. Together, these findings suggest risk factors that may be associated with the development of post-hurricane distress that can inform preparedness efforts and post-hurricane interventions.

Keywords

Hurricane; disaster; loss of resources; PTSD; depression

Acute stress symptoms and general distress are typical responses among disaster survivors (Davidson & McFarlane, 2006; Foa et al., 2006). Although most survivors demonstrate resilience, such that their symptoms resolve without direct intervention (Norris et al., 2002), many disaster survivors face diverse challenges that may prolong these problems (Davidson & McFarlane, 2006; Foa et al., 2006). Individual risk factors for persistent problems post-disaster include direct and high levels of exposure to the disaster, life threat, disaster-related losses and difficulties with readjustment (for a review, see Norris et al., 2002). Posttraumatic stress disorder (PTSD) is the most commonly observed disorder in disaster survivors; however, survivors often also report symptoms of depression, generalized anxiety, grief and substance abuse (Foa et al., 2006; Norris et al., 2002).

Although research has examined a number of potential correlates of these post-disaster outcomes, loss of resources, including property and other belongings, has received comparatively little attention. Hobfoll's (1989) *Conservation of Resources* (COR) model can be used to help explain the effects of hurricane-related losses on psychological outcomes. Specifically, the model postulates that "individuals strive to obtain, retain, and protect that which they value" (Hobfoll & Lilly, 1993, p. 129). More specifically, COR contends that,

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when faced with an actual loss of resources, the threat of the loss of resources, or a lack of gain after investment of resources, people experience psychological stress and reduced coping effectiveness. Hobfoll identified four domains in which losses occur: valued objects (e.g., one's home, physical possessions), personal characteristics (e.g., self-esteem, coping skills), conditions (e.g., employment, marriage) and energies (e.g., money, adequate time for sleep). Importantly, both perceived and objective losses may result in these negative outcomes.

COR postulates that individuals are driven to build resource surpluses when they are not under stress in order to minimize the effects of potential losses, as well as minimize net losses during times of stress (Hobfoll, 1989; 2001). These complementary processes are facilitated by peoples' use of available resources (e.g., obtaining insurance for belongings, diligent efforts invested to advance at work, time spent with loved ones to enhance relationships). Should individuals be unable to directly replace a loss (e.g., getting a substitute possession, finding a new job after losing one), symbolic or indirect replacement may occur (e.g., focusing on other skills if one is lacking in a given area, making efforts to increase the likelihood of a positive response from others if self-esteem is damaged).

Although this model can be used to conceptualize peoples' behavior in general, it has specific application to disasters. Further exploration of the effects of loss on post-disaster distress is particularly important when considering disasters, like hurricanes and tornadoes, that devastate large areas at once and impact both the individual (e.g., homes, personal possessions) and community levels (e.g., workplaces, financial institutions), in contrast to other disasters that may not result in such widespread effects (e.g., mass violence). The negative impact of these disasters not only depletes peoples' resources, but also their coping abilities (Benight et al., 1999a; 1999b), creating a loss cycle that negatively affects subsequent coping and functioning (Hobfoll, 2001; Hobfoll & Lilly, 1993). Further, the unique features of disasters, including their unexpected nature and the significant demands placed on survivors, result in rapid resource depletion. Hurricanes and other natural disasters also confer additional problems, as not only are the individual's resources depleted, but so are those of the surrounding community, thus affecting available social resources and support (Hobfoll, 2001).

Freedy and colleagues (1992) explained that COR predicts that disasters will result in distress due to experienced losses across Hobfoll's (1989) domains and a depletion of available coping skills. To this end, COR has been applied in studies examining survivors of various types of disasters, including hurricanes: Hurricane Hugo (Freedy, Shaw, Jarrell, & Masters, 1992), Hurricane Andrew (Benight, 1999a; Ironson et al., 1997), Hurricane Opal (Benight, 1999b) and Hurricane Katrina (Adeola, 2009; Blaze & Shwalb, 2009; Erlich et al., 2010; Wadsworth, Santiago, & Einhorn, 2009; Weems, 2007; 2010). In general, results from this body of research support the critical role of resource loss in post-disaster psychological distress (e.g., depression, PTSD, perceived stress) across multiple populations (Hobfoll, 2001).

Unfortunately, despite the considerable work examining the application of the COR theory to natural disasters, this literature suffers from a restricted assessment of resource loss. Many of the studies listed assess a range of losses, but then combine them into a single index representing overall loss, which prevents the examination of the relative impact of different types of loss on hurricane survivors. Of those few studies that examined categories of loss, Ehrlich and colleagues (2010) distinguished between tangible (e.g., car, money) and non-tangible losses (e.g., social support, time) among women who were pregnant during, or directly after, Hurricane Katrina. The researchers speculated that their found association between tangible losses and depression was mediated by nontangible losses, in that tangible

losses lead to nontangible ones, and that psychosocial factors may influence one's report of perceived and actual losses. Consistent with this idea, Ironson and colleagues (1997) found that perceived loss of both tangible items (e.g., car) and psychological resources (e.g., self-esteem) was an even stronger predictor of post-hurricane distress than actual damage to one's home and possessions. In explaining their results, the authors acknowledged that individuals who are more highly distressed may report both greater psychological symptoms and greater perceived losses.

More specific losses were assessed by Sattler and colleagues (2002), who examined a cross-national sample of 697 college students exposed to Hurricane Andrew, and found that personal characteristic losses, loss of object resources, loss of condition resources, loss of basic object resources (e.g., water, money for living expenses) and poor social support were associated with acute stress disorder symptoms among respondents. Finally, Lowe and colleagues (2009) assessed the effects of loss of a pet among 365 female participants exposed to Hurricanes Katrina and/or Rita in an educational intervention and found that pet loss was a significant predictor of mood and anxiety symptoms; this relation was stronger among participants with poorer pre-hurricane social support.

Despite the existence of a fair amount of research assessing the effects of loss among hurricane survivors, particularly within the context of COR, specific losses are still not well-understood. Understanding the resultant effects from wide-spread post-disaster loss can assist with both disaster preparedness efforts (e.g., items to include in an evacuation kit), as well as interventions that can be implemented post-disaster (e.g., assisting property owners in collecting insurance claims to replace damaged objects, treatment for post-disaster symptoms), underscoring the need to assess specific losses in this population. This study helps to address this gap in the literature by examining the effects of specific types of loss using one of the largest samples of hurricane survivors to date.

Participants in this study were survivors of Hurricane Ike, a strong Category 2 storm that hit Galveston, TX in 2008. This storm had a massive impact on the Gulf Coast, as more than one million Texans were evacuated and 38 counties were declared disaster areas (Office of the Governor, 2008). It was the third costliest hurricane in US history and resulted in 84 American deaths (Centers for Disease Control and Prevention, 2008). Data presented here are an extension of previous research using a methodologically rigorous sampling procedure to examine post-hurricane symptoms among a highly disaster-affected sample (Ruggiero et al., 2012). Importantly, in addition to being one of the largest samples of hurricane survivors assessed, it is also among the first to apply COR to survivors of this hurricane.

This study contributes uniquely to the literature by providing information about the associations between a range of hurricane-related variables, including experienced losses and mental health outcomes. More specifically, we examined associations between a range of hurricane-related experiences, including socio-demographic characteristics, storm exposure and specific tangible and interpersonal losses, and symptoms of PTSD and depression. Consistent with COR theory and previous hurricane research, it was expected that loss from this hurricane would be positively associated with psychological distress. The associations between specific types of loss (e.g., valued object vs. condition) and psychological distress were assessed, although specific hypotheses regarding these relations were not made, given the lack of extant research. With respect to socio-demographic correlates identified in previous research (McFarlane, 2005; Norris et al., 2002), it was also hypothesized that women, ethnic minorities, middle-aged adults and those who reported greater intensity of exposure to the hurricane (e.g., fear of physical injury) would report higher levels of distress.

Method

Data Collection

Random-digit-dial methodology was used to survey adults from Galveston and Chambers counties, two of the counties hardest hit by Hurricane Ike. Data were weighted by age to be consistent with 2008 Census distributions of the populations in these counties. Eligible participants were 18 years or older and had a landline phone and internet access at home, as required for participation in the larger research study of an online intervention for disaster survivors. After an eligible household was contacted, interviewers used the most recent birthday method to select a participant. This common and accepted method has been demonstrated to be technically equivalent or superior to other respondent selection techniques and involves less respondent burden (Gaziano et al., 2005). Throughout recruitment, the gender balance in the sample was monitored by supervisors nightly in a systematic manner. Interviews were conducted approximately one year after Hurricane Ike. The overall cooperation rate, calculated according to American Association for Public Opinion Research (AAPOR) industry standards (i.e., [completed interviews + screen outs] divided by [completed interviews + screen outs + refusals]), was 65.9%. A total of 5,536 households were contacted for the interview. A total of 2,403 failed to meet inclusion criteria, 1,768 refused to complete the interview, and 116 were not interviewed because the quota for their area had been met.

Participants and Procedure

Participants were 1,249 adults from Galveston and Chambers counties in Texas; 50% of the respondents were female. Racial/ethnic status (non-mutually-exclusive categories) was 76% Caucasian, 13% African American, 6% Hispanic, 2% Asian, 1% American Indian/Alaska Native, 1% Native Hawaiian/Pacific Islander and 1% other. The sample was consistent with the broader area with regard to income and racial background according to the 2000 US Census estimates. However, Hispanic participants were underrepresented, likely due to only having the interview and website available in English. The mean age of the sample (M = 46.24, SD = 17.29, range 18–99) was greater than that of the broader area, but equally distributed across genders due to targeted enrollment; all analyses were weighted for age.

Interviews were conducted by Schulman, Ronca and Bucuvalas, Inc. (SRBI), and included assessments of demographics in addition to measures of hurricane-related losses, disaster exposure, and mental health symptomatology (i.e., PTSD and depression). Interviewers for SRBI did not necessarily have a background in mental health, but are a well-trained and highly skilled workforce with extensive experience conducting interviews about sensitive topics including an extensive series of studies addressing mental health in disaster-affected populations, such as those affected by Hurricane Hugo; the Loma Prieta earthquake; the Los Angeles Riots; the Pan Am 103 Lockerbie bombing; the Oakland Hills fires; Hurricanes Charley, Frances, Ivan, and Jeanne; the September 11 terrorist attacks; Hurricane Katrina; and the 2011 Spring tornadoes in Alabama and Joplin, MO; among several others. In addition to the exceptional training and oversight they generally receive, interviewers also received additional training by the investigators prior to beginning this study. Further, the Computer-Assisted Telephone Interviewing (CATI) system used by SRBI facilitated the administration of the study measures, given that its programming helps with verbatim instruction and skip patterns, ensuring that all questions were asked and responses were logged. Supervisors conducted random checks of data entry accuracy and interviewers' adherence to the assessment procedures. The average interview length was 21 minutes and respondents were paid $10 for their participation. All procedures were approved by the Institutional Review Board at a major medical university.

Measures

Hurricane-related losses—Questions were modified from earlier research with adults affected by Hurricane Hugo in 1994 and the Florida Hurricanes in 2004 (Freedy et al., 1994). Questions assessed (yes/no) whether or not participants experienced loss of, or damage/injury to, their: 1) home or apartment, 2) furniture, appliances or other household contents, 3) sentimental possessions (e.g., photographs), 4) cars or trucks, 5) pets, and 6) crops, trees or garden, and 7) other property loss that was not mentioned. An additional question assessed (yes/no) whether or not participants lost their job as a result of Hurricane Ike.

Disaster exposure—Questions were modified from earlier research with adults affected by Hurricane Hugo in 1994 and the Florida Hurricanes in 2004 (Freedy et al., 1994; Freedy, Resnick, & Kilpatrick, 1992). Questions assessed (yes/no) whether or not participants: 1) had to evacuate their homes, 2) were present for hurricane-force winds or rain, 3) were physically injured during the hurricane and 4) were unsure of the safety or whereabouts of family and friends during the hurricane.

Center for Epidemiological Studies-Depression Scale—The Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977) is a 20-item measure designed to assess symptoms of clinical depression, with higher scores indicating greater symptomatology. Possible symptoms are rated on a scale ranging from 1 (rarely or none of the time) to 4 (most or all of the time). The CES-D is one of the most widely used measures of depressive symptoms, with substantial support for its reliability and validity (Edwards et al., 2010). The present study used the CES-D-10, which is a 10-item revised version of the CES-D with similar support in the literature (Cheung et al., 2007). Internal consistency for the present study was good with $\alpha = 0.85$.

PTSD Checklist—The PTSD Checklist (PCL-C; Blanchard et al., 1996) is a 17-item measure designed to assess clinical symptoms of PTSD, with higher scores indicating greater symptomatology. Possible symptoms are rated on a scale ranging from 1 (not at all) to 5 (extremely). The PCL has been shown to have excellent internal consistency, test-retest reliability and convergent validity with alternative measures of PTSD (Orsillo, 2001). Internal consistency for the present study was excellent with $\alpha = 0.92$.

Data Analysis

Hierarchical linear regressions were employed to determine if losses due to disasters improved prediction of mental health symptomatology (PTSD and depression) beyond that afforded by demographics and disaster exposure alone. Analyses were conducted with separate hierarchical models run for each mental health criterion variable. For this study, only those demographic variables with a priori hypotheses, specifically those with established relations to post-disaster distress (i.e., gender, age, ethnicity; Norris et al., 2002), were included in order to maintain the study's focus on loss-related variables and limit the number of predictors included in the statistical analyses. Variables were grouped into conceptual blocks and entered in stepwise. The first block consisted of the aforementioned demographic variables, including sex, age, and minority status (ethnic minority or Caucasian). The second block included dichotomous disaster exposure variables (i.e., evacuation, present for hurricane-force winds/rain, hurricane-related physical injury, concern regarding the safety/location of friends/family). The third block included dichotomous hurricane-related damage and loss variables, (i.e., loss of home or apartment, household contents, sentimental possessions, vehicles, pets, vegetation, and other property loss). Generally data was complete for study participants, with only 4.7% of total information missing. As prior work has suggested that modern missing data methods do not

yield better estimates with such small proportions of missingness (Acuna & Rodriguez, 2004), these values were not estimated and were left missing.

Results

Descriptive statistics for PTSD and depression symptomatology, as well as the proportion of responses for each category of loss, can be found in Table 1. The full model with all three predictor blocks accounted for 30% of the variance in PTSD symptoms, with demographic characteristics accounting for 4% of the variance ($R^2_{\Delta} = 0.04$, $p < 0.01$), exposure to the effects of the disaster accounting for 9% of the variance ($R^2_{\Delta} = 0.09$, $p < 0.01$) and hurricane-related losses accounting for 17% of the variance ($R^2_{\Delta} = 0.17$, $p < 0.01$). Significant predictors from the final step included: Block 1 gender (with women reporting increased PTSD symptoms), minority status (with ethnic minorities reporting increased PTSD symptoms) and a positive relation with age, Block 2 leaving home as a result of the hurricane, fear of physical injury, and uncertainty regarding safety of family and friends; and Block 3 damage to a home, sentimental objects, injury or loss of pets, and job loss due to the hurricane (see Table 2).

The entire model accounted for 17% of the variance in depression symptoms. Demographic characteristics accounted for 5% of the variance ($R^2_{\Delta} = 0.05$, $p < 0.01$), exposure to the effects of the disaster accounted for 6% of the variance ($R^2_{\Delta} = 0.06$, $p < 0.01$), and hurricane-related losses accounted for 6% of the variance in depression symptoms ($R^2_{\Delta} = 0.06$, $p < 0.01$). Significant predictors from the final step included: Block 1 gender (with women reporting increased depression symptoms) and minority status (with ethnic minorities reporting increased depression symptoms), Block 2 leaving home as a result of the hurricane, exposure to winds and flooding, fear of physical injury, and uncertainty regarding safety of family and friends, and Block 3 loss of sentimental objects, and loss of job because of the hurricane (see Table 2).

Discussion

This study identified demographic and disaster-specific variables associated with post-hurricane distress among Hurricane Ike-affected adults. Several variables that have not received significant attention in the field emerged as unique predictors of both PTSD and depression symptoms in this sample (e.g., personal losses). More specifically, damage to one's home and loss of sentimental belongings (i.e., valued objects loss) and loss of one's job (i.e., condition loss) were both significantly associated with PTSD and depression symptoms, and the injury or loss of a pet (i.e., valued objects loss) was associated with PTSD symptoms. These findings are consistent with Hobfoll's (1989) COR model and provide unique information about the specific losses that are associated with different forms of psychological distress.

The associations between the loss of sentimental belongings and symptoms of both PTSD and depression suggest that this type of valued object loss may be associated with both sadness and traumatic symptomatology. This finding may be understood through the comorbidity between PTSD and depression symptoms (e.g., Breslau et al., 2000; O'Donnell et al., 2004. However, it could be that, consistent with COR, individuals feel that these types of losses will be difficult, if not impossible, to replace, resulting in increased distress. In addition to these forms of resource loss, Hobfoll (1989) also described condition loss, which includes stable employment. Consistent with COR, the current study found that hurricane-related job loss was significantly associated with both PTSD and depression symptoms. The broad impact of job loss on other life domains (e.g., financial stability) may help to explain the relation between this type of loss and reported distress, particularly within the context of

the loss cycle (Hobfoll, 2001; Hobfoll & Lilly, 1993). In interpreting these findings, it is clear that not all those object or condition losses assessed in this study were associated with psychological distress; thus, it is important to continue assessing Hobfoll's (1989) identified losses in future research to help determine the relative impact of broad categories of, and specific, losses.

Additional findings from this study are consistent with previous research (McFarlane, 2005; Norris et al., 2002), demonstrating that both hurricane exposure (e.g., evacuation, fear of physical injury) and socio-demographic variables (i.e., greater distress among women and ethnic minorities, greater PTSD symptoms among older adults) are significantly associated with distress. These findings add to the larger literature about hurricane survivors, and are particularly valuable given that they were obtained using a large sample of survivors from a hurricane that has not been well studied to date.

Further, the identification of variables associated with greater distress helps with developing interventions that can be used both pre-disaster, as well as in its aftermath. Although previous research has not spoken to the effects of these specific types of losses on hurricane survivors, the findings presented here indicate that they may significantly impact distress. Thus, survivors are likely to benefit from assistance with respect to identified losses. Notably, such interventions may not be easily deployed in the aftermath of a disaster, making it important to identify novel and cost-effective ways to help buffer survivors against potential negative outcomes. Given that some individuals and groups have limited pre-existing resources and coping skills, making them more vulnerable to loss and distress (Hobfoll 1989; 2001), these high-risk groups are appropriate for targeted initial intervention. These individuals may also overlap with those identified as at high-risk for post-hurricane distress (e.g., women, ethnic minorities, low-income individuals), underscoring an even greater need for intervention with these populations.

The findings presented here provide preliminary support for steps that can be taken prior to a hurricane to improve preparedness. These efforts may help buffer people from specific losses before they occur, such as building up pre-existing resource stores to prevent against the effects of future loss (Hobfoll & Lilly, 1993). Public guidelines for preparedness have understandably focused on practical and logistical issues (e.g., having an evacuation plan, securing one's home; FEMA, 2010a; National Hurricane Center, 2011), including steps to protect pets (e.g., FEMA, 2010b; National Hurricane Center, 2011). However, they often do not address the need to safeguard against the loss of important personal items aside from legal documents (e.g., birth certificate, Social Security card). The results of this study suggest that these standard guidelines could benefit by being supplemented with precautions for protecting specific objects (e.g., electronically scanning photos, using a safe deposit box in another location to store mementos).

In addition to suggestions for disaster preparedness, these findings have implications for post-disaster efforts, as well. Consistent with recommendations made by others (e.g., Benight et al., 1999a; Freedy et al., 1992), disaster response teams and other assisting professionals should act quickly to provide survivors with tangible aid to meet basic needs (e.g., safe housing, clean water), as these acts can help to reverse Hobfoll's (1991) cycle of loss (Benight et al., 1999b). However, it is also important to take steps to assist survivors with respect to other life domains. COR emphasizes the importance of helping individuals replace or rebuild their lost resources (Hobfoll, 1989), and thus, efforts in other areas (e.g., being reunited with friends and family, receiving insurance reimbursement, acute veterinary care for injured pets, creating new sentimental mementos) are also likely to help lessen distress. Importantly, maximizing the "fit" between individuals' needs and the resources provided is essential (Hobfoll & Lilly, 1993). Monnier and Hoboll (2000) provide some

general guidelines in this regard, including conducting an assessment of a community's structure and needs that should be assessed pre-hurricane (e.g., hurricane-prone areas like the Gulf Coast). This knowledge can then guide more specific assessment of losses post-hurricane, along with an assessment of available resources in the area (e.g., community assistance organizations). Of note, the implications of findings from this highly disaster-affected population seem particularly important when considering the number of recent natural disasters that have devastated large areas of the United States (e.g. National Oceanic and Atmospheric Association [NOAA], 2011) and speak to preparation for future events.

A significant limitation of the current project was the specificity of the measures employed. First, not all of the resources identified by Hobfoll (1989) in COR were assessed (e.g., coping skills, optimism), including those associated with reported distress in previous research (Benight et al., 1999a; 1999b). However, this study contributes substantively to what is known about specific types of losses (e.g., sentimental belongings, damage to one's home) to date, and can serve as a starting point for future research that assesses specific losses more comprehensively. Second, the study measures used were limited. More specifically, the CES-D and PCL assess symptoms of depression and PTSD, but are not diagnostic tools; thus, although they give information about participants' distress, they do not provide information about participants' diagnostic status. Additionally, the measures did not specifically assess the distress associated with, or the duration of, each loss (e.g., how long a pet was missing, length of unemployment), thereby preventing definitive causal conclusions. Third, although many of the variables assessed were proxies for individual disaster preparedness, specific preparedness plans were not assessed, limiting the ability to speak to the protective effect of disaster preparedness on later distress. Fourth, the use of retrospective cross-sectional measures after the event meant that participants were reporting on hurricane exposure one year after the event, as well as current symptoms. Although distress may have affected participants' report of hurricane exposure and losses (e.g., Ironson et al., 1997), findings showing high levels of distress underscore the potentially lasting effects of these losses. Finally, generalizability of the results is also limited. Slightly more than 2,000 participants were excluded from participation, and Hispanic participants were underrepresented in the study. Additionally, participants had to have a landline telephone and internet access; a problem which might have been more pronounced for individuals who primarily use mobile phones for communication or who do not have internet access (e.g., low income households, ethnic minorities; Blumberg & Luke, 2010; Jansen, 2010), or who lost the access to these resources due to the hurricane. However, given that the sample's median income range was $60,000–80,000, which is consistent with that of the broader population at that time (US Census Bureau, 2013), the potential impact of economic factors is limited. Further, given that this study was conducted several months after the hurricane, utility services were restored to the majority of homes by that time. With regards to exclusionary criteria, 41% of contacted individuals (n = 1,708) were excluded because they did not have internet access at home; information regarding those participants who only used cell phones, and thus were not contacted, was not available. However, the impact of these criteria is attenuated, as approximately 3 in 4 US households has internet access (Smith, 2010) and 3 in 4 households has a landline telephone (Blumberg & Luke, 2010).

Conclusions

In sum, this study contributes uniquely to the literature by examining the effects of specific types of loss on post-hurricane distress using a large sample of survivors within the context of Hobfoll's (1989) COR model. Variables related to reported symptoms of PTSD and depression included hurricane-related valued object and condition losses (i.e., sentimental belongings, pet, job), hurricane exposure (i.e., evacuation, exposure to hurricane-force

weather, physical injury, concern for loved ones' safety) and demographic characteristics (i.e., gender, ethnicity, age). These findings underscore the importance of helping survivors prepare for, and adjust to, the potentially devastating effects of hurricane exposure and related losses, and have implications for both the content of these interventions, as well as the populations to whom they are best delivered.

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Table 1

Descriptive statistics.

Categorical	**Yes**	**%**	**No**	**%**
Left home because of Hurricane	929	74%	320	26%
Exposure to Winds and Flooding	621	50%	628	50%
Fear of Physical Injury	32	3%	1217	97%
Unsure of Others' Safety	829	66%	420	34%
Home	958	77%	291	23%
Furniture/Physical Property	448	36%	801	64%
Sentimental Objects	225	18%	1004	82%
Vehicle	253	20%	996	80%
Injury or Loss of Pets	63	5%	1186	95%
Property, Land, or Crops	331	26%	918	74%
Damage to Other Objects	399	32%	850	68%
Loss of Job from Hurricane	202	16%	1047	84%
Continuous	*M*	*SD*		
PTSD	22.71	10.04		
Depression	18.14	4.36		

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Table 2

Hierarchical linear regressions predicting PTSD and depression symptoms.

	PTSD Symptoms			Depression Symptoms		
Variables	**b**	**Std. Error**	**β**	**b**	**Std. Error**	**β**
Block 1	$R^2_\Delta = 0.04^{**}$			$R^2_\Delta = 0.05^{**}$		
Gender	-2.08^{*}	0.56	-1.04^{*}	-1.27^{**}	0.24	-0.14^{**}
Minority Status	3.84^{**}	0.67	0.16^{**}	1.40^{**}	0.29	0.08^{**}
Age	0.06^{*}	0.02	0.11^{**}	0.03^{**}	0.01	0.04
Block 2	$R^2_\Delta = 0.09^{**}$			$R^2_\Delta = 0.06^{**}$		
Left home due to Hurricane	2.71^{**}	0.41	0.12^{**}	1.09^{**}	0.31	0.08^{**}
Exposure to Winds and Flooding	0.48	0.62	0.02	0.60^{*}	0.27	0.05^{*}
Fear of Physical Injury	7.10^{**}	1.75	0.11^{**}	2.78^{**}	0.76	0.08^{**}
Unsure of Others' Safety	4.98^{**}	0.58	0.24^{**}	1.65^{**}	0.25	0.13^{**}
Block 3 (Damage to:)	$R^2_\Delta = 0.17^{**}$			$R^2_\Delta = 0.06^{**}$		
Home	1.40^{*}	0.63	0.06^{*}	0.52	0.29	0.05
Furniture/Physical Property	0.11	0.66	0.01	0.16	0.31	0.02
Sentimental Objects	6.24^{**}	0.81	0.25^{**}	1.61^{**}	0.37	0.14^{**}
Vehicle	−0.14	0.70	0.01	0.18	0.32	0.01
Injury or Loss of Pets	3.22^{**}	1.23	0.08^{**}	−0.13	0.57	−0.01
Property, Land, or Crops	0.43	0.59	0.01	−0.16	0.27	−0.02
Damage to Other Objects	0.46	0.55	0.02	−0.08	0.26	−0.01
Loss of Job from Hurricane	6.99^{**}	1.05	0.22^{**}	1.91^{**}	0.49	0.17^{**}

Note.

$^{*}p < 0.05$.

$^{**}p < 0.01$.