Coping With Vicarious Trauma in the Aftermath of a Natural Disaster

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This study documents the vicarious psychological impact of the 2010 earthquake in Haiti on Haitians living in the United States. The role of coping resources—family, religious, and community support—was explored. The results highlight the importance of family and community as coping strategies to manage such trauma.

Keywords: vicarious trauma, natural disaster, coping

Este estudio documenta el impacto psicológico vicario que tuvo el terremoto de 2010 en Haití sobre los residentes haitianos que viven en Estados Unidos. Se explora el papel de los recursos de afrontamiento—apoyo familiar, religioso y comunitario. Los resultados destacan la importancia de la familia y la comunidad como estrategias de afrontamiento para superar un trauma de esas características.

Palabras Clave: trauma vicario, desastre natural, afrontamiento

Research has shown that natural disasters have an impact on survivors (Benight et al., 1999) as well as those outside of the disaster zone (Shalev, Tuval-Mashiach, & Hadar, 2004). Although less is known regarding those who are not directly affected, the limited research indicates that individuals outside the disaster zone may experience trauma symptoms similar to those reported by individuals who experienced the traumatic event (Everly, Boyle, & Lating, 1999), which may be defined as vicarious trauma (VT). Our article highlights (a) the VT symptoms resulting from one such natural disaster, the 2010 earthquake in Haiti, and (b) the coping strategies used to manage such trauma by Haitians/Haitian Americans.
VT traditionally describes the experiences of therapists or disaster responders who work with traumatized victims; however, the definition more broadly refers to the psychological impact on individuals indirectly exposed to some traumatic event. Overall, VT describes the communal experience after natural disasters and large traumatic events in which populations are collectively affected (Abramowitz, 2005). Previous research used multiple labels for this type of trauma, such as secondary traumatic stress (Creamer & Liddle, 2005), vicarious traumatization (Culver, McKinney, & Paradise, 2011), and collective trauma (Everly et al., 1999). Irrespective of the terminology, however, research shows that indirectly affected individuals develop psychological symptoms similar to those reported by individuals who experienced the traumatic event directly (Everly et al., 1999), including posttraumatic stress disorder (PTSD; Birnbaum, 2008).

**Coping in the aftermath of trauma**

According to Lazarus and Folkman (1984), **coping** refers to a person’s efforts—both cognitively and behaviorally—to manage taxing or stressful events. Coping has two major functions: to regulate stressful emotions and to regulate the problem in the environment causing the conflict. Following natural disasters, individuals may use various coping strategies, such as talking with friends and family and/or engaging religious support or other community resources. Forming closer attachments to family and taking greater responsibility in assuming family roles have also been shown to be important strategies for coping with disaster-related distress. Specifically, emotionally processing with family, finding distraction through play or work, seeking meaning and understanding through religion, and seeking social support were reported most frequently (Salloum & Lewis, 2010).

Little attention has been given to the ways in which cultural factors influence individuals’ responses to traumatic events in the wake of natural disasters. This is a significant shortcoming given that Perilla, Norris, and Lavizzo (2002) indicated that culture frequently influences the definition of what is traumatic, the processes through which traumatic events are experienced, the meaning of the event, and the healing process. Currently, research on the cultural aspects of the coping responses of ethnic minorities and immigrants postdisaster is limited at best (Clauss-Ehlers, Acosta, & Weist, 2004; Kaniasty & Norris, 2000). Thus, there is a need for insight into culture’s role in coping in the aftermath of trauma. Drawing more broadly from literature on culturally specific coping, some studies have shown that effective coping for Black and immigrant populations includes a supportive value system encompassing a strong sense of self, religious beliefs, and responsibility toward one’s family and community (Daly, Jennings, Beckett, & Leashore, 1995). The spiritual, educational, occupational, and familial worlds of people of color often overlap into a collectivist experience with little delineation between the individual,
the family, religious institutions, and community members (Boyd-Franklin, Smith Morris, & Bry, 1997). Given the collective connection and the potential impact of disaster on family, it is essential to evaluate the individuals or entities from whom those experiencing VT are seeking support to cope with the disaster. Our study contributes to this literature by examining the use of coping strategies in response to natural disaster VT for Haitian Americans.

**Present Study**

The 2010 earthquake in Haiti caused the deaths of an estimated 220,000 individuals, left nearly 1.5 million people homeless, and caused immeasurable physical and psychological damage to survivors of this devastation (Pan American Health Organization/World Health Organization, 2011). In addition to those directly affected by this disaster, there is a large Haitian population living in the United States who witnessed the devastation. In this study, we aim to document the vicarious psychological experience of the earthquake on Haitians living in the United States and the relationships between trauma symptoms and the use of coping resources.

**Method**

**Participants**

Data collection began 2 months after the January 2010 earthquake and continued for 2 months. Participants were 471 Haitians residing in a metropolitan area in the southeastern United States. Those who directly experienced the earthquake were excluded from analyses (n = 35). At the time of the survey, nearly all participants (99.4%, n = 468) had family or friends in Haiti, with 88.5% having family in Haiti (n = 417). The mean age of participants surveyed was 44.42 years old (SD = 15.31), with an age range of 18 to 88 years. Additionally, the sample featured a larger number of women (54.1%, n = 255) than men (45.9%, n = 216). The sample predominantly self-identified as Christian, with the top two denominations endorsed being Catholic (47.8%, n = 225) and Baptist (22.7%, n = 107). The majority of participants indicated that they had been in the United States for more than 10 years (58.4%, n = 275). Nearly half of the sample had visited Haiti at some point in the last 5 years. For 18.3% (n = 86), it had been less than 6 months; for 24.2% (n = 114), it had been more than 1 year. Otherwise, participants reported their last visit to Haiti having been more than 5 years (11.3%, n = 53) or more than 10 years (9.1%, n = 43) prior to the earthquake. A small portion indicated that they had never visited Haiti (18.7%, n = 88). Most participants indicated that they spoke and read in Creole and English (71.3%, n = 336). The remaining participants spoke and read Creole only (27.6%, n = 130) or English only (1.1%, n = 5).

**Measures**

There are few validated measures that assess the experiences of Black immigrant populations following a disaster (Kaniasty & Norris, 2000); thus, a
survey was developed with 70 mixed-format questions, including multiple response items, a continuous-scale response format, and open-ended qualitative questions. Questions were developed in consultation with experts in Black immigrant physical and mental health as well as with local community partners, who described the potential issues facing community members. Areas assessed included trauma symptoms, previous stressful life events, earthquake experience, and support resources used. To ensure the comprehension of measures for study participants who spoke both English and Creole, we forward translated and back translated the measures.

Trauma symptoms. Trauma symptoms were measured using a modified version of the PTSD Checklist–Civilian Version (PCL-C; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996), which included 16 of the 17 items from the original scale. One item regarding suppression of memories was excluded because of the small period of elapsed time since the traumatic event. The remaining items were modified to specifically address the earthquake instead of referring to a generic stressful past experience. For example, participants were asked, “In the past month, how much have you been bothered by repeated disturbing memories, thoughts, or images of the earthquake?” This study used a response scale of 1 (not at all) to 5 (extremely), which evidenced internal consistency (α = .96). Findings of a recent study by Conybeare, Behar, Solomon, Newman, and Borkovec (2012) supported the reliability (α = .94) and validity of using the PCL-C with nonclinical populations.

Previous stressors. Stressful life events were assessed using the Social Readjustment Rating Scale (Holmes & Rahe, 1967). Respondents were asked to indicate whether they had experienced specific life events in the year prior to the earthquake (yes, no, don’t know, or refused). With input from community partners, the scale was reduced based on relevance from 43 items to focus on 21 items pertaining to daily social activities and potentially stressful events (e.g., death of a spouse, divorce, change in financial status, access to health care). In reducing the number of items, we included those more pertinent to the study and to the population’s daily life stress (e.g., immigration issues), while excluding others (e.g., judicial issues). Although this may have an effect on the ability for comparison with the original measure, there is evidence for internal consistency with the adapted version in this sample (α = .90). The reliability and validity of using the original measure with this population have not been examined to date; this study found the adapted version to be reliable with this sample.

Support seeking. A measure of support seeking was developed that addressed three areas: behaviors, need to talk to someone, and whom participants sought for support. To address behaviors, we specifically asked participants the following question: “Since the earthquake, when you haven’t felt well, what do you do to make yourself feel better?” Participants were prompted to endorse or deny engaging in a range of support behaviors, such as go to church and pray, read the Bible, talk with friends, talk with family, drink alcohol, and become angry. The items were created based on literature on general coping behaviors and in consultation with community partners’ descriptions of observed practices in
the community. The support-seeking measure also included questions about how much participants felt that they needed someone to talk to about their feelings or concerns, whether they felt that they had someone to talk to, and whom they sought to share their feelings or concerns. Using the recommendations of Boyd-Franklin and colleagues (1997), we categorized participants’ responses to the measure into three groups: family support, community support, and religious support. Coping through family support comprised talking to family in order to feel better since the earthquake and was defined as the number of family members to whom the participant could talk about feelings or concerns after the earthquake (ranging from 0 to 7). Coping through community support comprised talking to friends to feel better since the earthquake and was defined by the number of nonfamily individuals to whom the participant could talk about feelings or concerns after the earthquake (ranging from 0 to 3). Lastly, coping through religious activities was indicated based on endorsing religious activities such as go to church and pray, read the Bible, and pray (ranging from 0 to 3).

PROCEDURE

Our study was initiated through the request and efforts of community leaders and stakeholders who are members of Patnè en Aksyon (Partners in Action), an established, collaborative partnership between the University of Miami and a predominantly Haitian community in the southeastern United States. Study design and implementation followed the Culturally Authentic Scaling Approach (Nicolas, DeSilva, Houlahan, & Beltrame, 2009), a culturally informed, community-based model used to ground research methodology, implementation, and dissemination.

The institutional review board approved this study prior to data collection. Surveys were collected using a single-time-point research design. Creole-speaking volunteers were recruited from the community and trained in Haitian-specific, culturally valid interview techniques during an all-day training conducted by the ninth and eleventh authors. Training focused on psychological first aid after disasters, background information on the Haitian diaspora, confidentiality, and data handling. Participants were recruited from local churches, health fairs, self-service laundries, beauty salons, health clinics, supermarkets, and other community venues. To be a participant, an individual had to be 18 years or older and residing in the United States at the time of the earthquake. Once informed consent was obtained, volunteers verbally administered the measures in an interview format, with interview times ranging from 1 to 4 hours. Interviewers approached potential participants in Creole; the interview was conducted in English if the participant indicated preference for this. Upon completion, participants were compensated with a $20 gift card and provided a mental health resource guide and a debriefing letter with contact information for further services if needed.

Results

Ninety-seven percent of participants reported worrying that family members and close friends were seriously injured, and 95.9% feared that loved ones may have
died. Of the 471 participants surveyed, 65% reported the death of a close friend or family member, and 65.6% reported that a family member or close friend was injured. With regard to surviving family members and close friends living in Haiti, 80.7% reported that they knew of those left without adequate shelter, 83.9% knew of those who did not have enough to eat or drink, and 69.8% reported having family and close friends who had lost their jobs. Overall, nearly 31.2% of respondents reported being very worried or upset, and 48.4% reported being extremely worried or upset about family members and close friends who remained in Haiti, with many fearing that others would be seriously injured (78.8%) or die (63.8%) in the weeks following the earthquake.

**PSYCHOLOGICAL EFFECT OF THE EARTHQUAKE**

Many respondents reported symptoms of posttraumatic stress (M = 41.94, SD = 21.19), with 12% of participants endorsing the highest level of distress (a score of 80) for all posttraumatic stress symptom items. Group differences in trauma symptoms were assessed using analysis of variance. There were significant gender-based differences on reported symptoms of posttraumatic stress, with women significantly more likely to report more severe symptoms, F(1, 420) = 7.64, p = .006 (see Table 1). Similarly, there were significant education-based differences on reported symptoms of traumatic stress, F(9, 412) = 6.52, p ≤ .001. Post hoc comparisons using Tukey’s honestly significant difference test indicated that the mean symptom levels for those completing some high school (M = 50.97, SD = 23.33) were significantly higher than the mean symptom levels for those completing high school or a general equivalency diploma, as well as those completing some college. Age also emerged as an important variable given that there were significant age-based differences on reported symptoms of traumatic stress, F(2, 419) = 5.70, p = .004. We found that the older the participants were, the more traumatic symptoms they reported.

**SUPPORT RESOURCES**

The hierarchical multiple regression procedure was used to examine the relationship among types of support sought and symptoms of posttraumatic stress.

**TABLE 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>F</th>
<th>M</th>
<th>SD</th>
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<td>Posttraumatic stress symptoms</td>
<td></td>
<td></td>
<td>41.94</td>
<td>21.19</td>
</tr>
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<td>Gender</td>
<td>1, 420</td>
<td>7.64**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td>44.95</td>
<td>21.18</td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td></td>
<td>40.52</td>
<td>21.52</td>
</tr>
<tr>
<td>Age</td>
<td>2, 419</td>
<td>5.70**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>9, 412</td>
<td>6.52**</td>
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<td></td>
</tr>
<tr>
<td>Birth country</td>
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<td>25.36**</td>
<td></td>
<td></td>
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<td>Years in the United States</td>
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<td>2.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender × Years in the United States</td>
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<td>0.80</td>
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</tr>
<tr>
<td>Birth Country × Years in the United States</td>
<td>3, 373</td>
<td>2.30</td>
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</table>

**p < .01.**

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stress. On average, participants endorsed six stressful previous life events prior to the earthquake (M = 6.04, SD = 4.03). In Model 1, previous life stressors emerged as a statistically significant predictor of posttraumatic stress symptoms, accounting for 1% of the variance, $R^2 = .01, F(1, 398) = 4.17, p = .042$ (see Table 2). In Model 2, the addition of gender and age into the model accounted for a small but significant increase in variance explained, $\Delta R^2 = .04, F(2, 396) = 9.32, p < .001$. In Model 3, religious support, family support, and community support were entered into the third step and accounted for an additional 8% of variance in posttraumatic stress symptoms explained, which represents a meaningful and statistically significant increase after controlling for Model 1 and Model 2, $\Delta R^2 = .08, F(3, 393) = 12.63, p < .001$. Whereas gender and age remained significant predictors of posttraumatic stress symptoms in Model 3, previous life stressors were no longer significant after controlling for the influence of gender, age, religious support, family support, and community support, $B = 0.43, t(393) = 1.65, p = 1.00$. Religious support and family support emerged as the only statistically significant coping predictors of posttraumatic stress symptoms after controlling for the influence of previous life stressors, gender, and age: religious support, $B = 6.45, t(393) = 4.70, p < .001$; family support, $B = -3.17, t(393) = -3.64, p < .001$; and community support, $B = 1.45, t(393) = 0.99, p = .321$ (see Table 2). These findings suggest that there is decreased posttraumatic stress symptomatology associated with individuals seeking additional sources of family support. However, higher levels of posttraumatic stress symptoms were associated with individuals engaging in multiple religious support-seeking behaviors.

**Discussion**

Our study’s primary focus was to extend and provide empirical support for the existing literature on VT. Results support the hypothesis that VT occurred

**TABLE 2**

**Hierarchical Multiple Regression Analysis for Variables Predicting Posttraumatic Stress Symptoms**

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$\beta$</th>
<th>$B$</th>
<th>SE $B$</th>
</tr>
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<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Previous life stressors</td>
<td>.01*</td>
<td>.01*</td>
<td>.10*</td>
<td>0.56*</td>
<td>0.28*</td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous life stressors</td>
<td>.06**</td>
<td>.04**</td>
<td>.10*</td>
<td>0.54*</td>
<td>0.27*</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious support</td>
<td>.14**</td>
<td>.08**</td>
<td>.08</td>
<td>0.43</td>
<td>0.26</td>
</tr>
<tr>
<td>Family support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community support</td>
<td></td>
<td></td>
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</tbody>
</table>

*p < .05. **p < .01.
in the current sample, drawn from Haitians who had not experienced the earthquake directly. The findings suggest that there is a need to assess VT and to better understand effective coping techniques in diverse populations following traumatic events such as natural disasters.

VT

Approximately six out of every 10 participants reported that a loved one had died or been injured as a result of the earthquake, whereas approximately eight out of 10 indicated that loved ones did not have access to food and shelter. The sample had a mean score of 41.94 on the PCL-C, which can be compared with the recently recommended cutoff score of 44 to qualify for a diagnosis of PTSD (Brewin, 2005). It is important to note that the current study excluded one question, and therefore the mean score should be interpreted differently, with a range of 16 to 80 (rather than 17 to 85). Even taking these factors into consideration, the overall mean score among those who did not experience the earthquake firsthand is indicative of VT. Moreover, 12% of participants reported the highest level of distress (a score of 80), indicating a high level of trauma symptoms.

Participant demographics were also related to levels of posttraumatic stress symptoms. In accordance with existing literature on PTSD in other American-based populations (Stuber, Resnick, & Galea, 2006), Haitian women in the sample reported more psychological stress than men. These findings could signify that women take on more family stress in the matriarchal Haitian family structure (Nicolas et al., 2009) and represent an important future direction for research and discussion on clinical treatment and intervention with this group.

Participant age was related to levels of posttraumatic stress symptoms on the PCL-C, with adults above 60 years old reporting more trauma symptoms. Older adults in the sample may be more likely to have suffered previous trauma because they had more life experiences, which could have increased their reporting of symptoms. Given that only life stressors in the year prior to the earthquake were assessed, chronic life stressors prior to 2009 were not accounted for in the statistical analysis.

Regardless of the amount of time spent in the United States, on average, Haitian-born participants reported significantly higher levels of psychological trauma symptoms than did those born in the United States. This may reflect a closer bond to friends and family in Haiti, more memories to cue emotions, or simply a strong psychological attachment to the country given that 89.6% of this sample was born in Haiti. However, the amount of time spent in the United States did not have a relationship with levels of posttraumatic stress.

COPING WITH TRAUMA

Our findings indicate that support from family, such as a spouse or partner, was associated with lower psychological trauma symptoms. Among Haitian immigrants, close ties are often maintained with extended kinship networks, including those who remain in Haiti (Nicolas, DeSilva, & Donnelly, 2011). Although it is not possible to determine conclusively, the family-oriented
nature of Haitians may have served as a protective factor in the aftermath of the earthquake. Historically, however, little research has specifically focused on how families of color support each other after natural disasters, and even less is known about the VT experienced by ethnically diverse families. Our study provides initial support for the role of the family as an effective coping strategy for individuals who are dealing with VT.

Contrary to hypotheses, community support did not account for any significant amount of variance in psychological trauma symptoms. This lack of significant findings may indicate that the other coping factors assessed—family support and religion—are more prominent after a disaster or in times of increased stress. Although Haitian immigrants are less likely to share geographic proximity with their community of origin, shared language, nativity, and immigration experiences provide important social and emotional resources (Nicolas et al., 2011). At the same time, the interconnected and collectivist nature of the Haitian diaspora may mean that the ramifications of loss and traumatic experience extend across many layers of the Haitian community. Given the limitations of assessing community support within this study, more research is needed regarding the role of community for individuals coping with natural disasters experienced vicariously.

The endorsement of religious coping practices was positively associated with reporting increased psychological trauma symptoms; however, the specific nature of the effect of religion on mental health is difficult to determine because of the overwhelming majority of the sample endorsing some form of religious coping (e.g., 94% endorsing the use of prayer). The findings underscore the multidimensional nature of religious coping that included both positive and negative coping, as outlined by Pargament et al. (1988). Level of religiosity notwithstanding, participants who reported more symptoms may have used religious coping more frequently, which may have exposed them to other VT stimuli, such as seeing others mourning and/or experiencing distress. Additionally, if religious outlets were overwhelmed, this may have disheartened and taxed the individuals in the study. Taken together, the findings and discussion indicate that religion and spirituality need to be studied further given that they can serve as a protective force providing individuals with a sense of community and a support network (Nicolas, DeSilva, Bejarano, & Desorsiers, 2007) or can be associated with poorer physical health, negative emotions, and reduced well-being (Ai, Tice, Peterson, & Huang, 2005).

**IMPLICATIONS FOR COUNSELORS**

In the aftermath of a natural disaster, counselors must be conscious of how clients who are not directly influenced by the disaster may be affected vicariously. Clients may be significantly disturbed by the natural disaster’s direct impact on family members or may exhibit their own trauma symptoms in response to media images or a collective sense of loss. Counselors have an ethical responsibility to assess for trauma symptoms even for those individuals who may not have been directly involved in the disaster event. As a result,
counselors may work in their local communities to provide services, for instance, to the diaspora who may be suffering from VT.

**LIMITATIONS AND FUTURE DIRECTIONS**

This sample was limited to a single time-point snapshot of the use of family, community, and religious support as coping responses following a particular disaster event. The evaluation of traumatic symptomatology was based on a single measure; no clinical interview for diagnostic evaluation was given. Furthermore, this study was conducted within 5 months of the disaster, which does not allow for evaluating the long-term effects of coping. The similarities in the response pattern across participants, especially with respect to religious coping, limit more nuanced analyses and interpretation of the data. The use of the adapted Social Readjustment Rating Scale and development of items to assess support seeking and experiences of Black immigrants limit generalizability of the study and underscore the need for the development of measures that effectively capture the experiences of this population. Finally, feedback from survey collectors indicated that a number of participants thought that expressing satisfaction with community support might decrease the amount of support and services provided for the community in general, thus decreasing the likelihood for participants to endorse these items. Underreporting may affect the results of this study given that community support did not account for variance in trauma symptoms.

Nevertheless, the levels of VT found in the sample underscore the need for new approaches to intervention for this population, including family and community approaches. Although additional factors, such as the role of social status/class, education level, attachment, and a stronger measure of acculturation, were beyond the scope of this study, they should be examined in future lines of research. Finally, we were not able to follow up with participants to track long-term mental health implications and to determine the success of coping techniques over time. Longitudinal studies may assist to inform effective psychological treatment.

When working with individuals who directly or vicariously experience a disaster or other traumatic event, counselors should incorporate cultural strengths to help remediate psychological difficulties. It is apparent from both the literature and the current study that Haitians turn to family and other community members for support, which functions as an effective coping mechanism. The emphasis on family and community underscores a key area of consideration for the design and implementation of culturally informed interventions when working with Haitians following natural disasters and other traumatic events.

**references**


