Purpose and Scope

The **International Journal of Emergency Mental Health and Human Resilience** provides a peer-reviewed forum for researchers, scholars, clinicians, and administrators to report, disseminate, and discuss information with the goal of improving practice and research in the field of emergency mental health.

The **Journal** is a multidisciplinary quarterly designed to be the premier international forum and authority for the discussion of all aspects of emergency mental health.

The **Journal** publishes manuscripts (APA style) on relevant topics including psychological trauma, disaster psychology, traumatic stress, crisis intervention, emergency services, Critical Incident Stress Management, war, occupational stress and crisis, employee assistance programs, violence, terrorism, emergency medicine and surgery, emergency nursing, suicidology, burnout, and compassion fatigue. The **Journal** publishes original research, case studies, innovations in program development, scholarly reviews, theoretical discourse, and book reviews.

Additionally, the **Journal** encourages the submission of philosophical reflections, responsible speculations, and commentary. As special features, the **Journal** provides an ongoing continuing education series providing topical reviews and updates relevant to emergency mental health as well as an ongoing annotated research updates of relevant papers published elsewhere, thus making the **Journal** a unique and even more valuable reference resource.

International Journal of
EMERGENCY MENTAL HEALTH
—AND HUMAN RESILIENCE—

The *International Journal of Emergency Mental Health and Human Resilience* is a practice-oriented resource for active professionals in the fields of psychology, law enforcement, public safety, emergency medical services, mental health, education, criminal justice, social work, pastoral counseling, and the military. The journal publishes articles dealing with traumatic stress, crisis intervention, specialized counseling and psychotherapy, suicide intervention, crime victim trauma, hostage crises, disaster response and terrorism, bullying and school violence, workplace violence and corporate crisis management, medical disability stress, armed services trauma and military psychology, helper stress and vicarious trauma, family crisis intervention, and the education and training of emergency mental health professionals. The journal publishes several types of articles:

- *Research reports:* Empirical studies that contribute to the knowledge and understanding of traumatic disability syndromes and effective interventions.

- *Integrative reviews:* Articles that summarize and explain a topic of general or specialized interest to emergency medical, mental health, or public safety professionals.

- *Practice guides:* Reports of existing, developing, or proposed programs that provide practical guidelines, procedures, and strategies for working emergency service and mental health professionals.

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- *Book and media reviews:* Reviews of books, films, DVDs, or electronic media of relevance to emergency response and mental health professionals.

- *First person:* Personal accounts of dealing with traumatic stress and crises, either as a victim or caregiver, that provide insight into coping and recovery.

The *International Journal of Emergency Mental Health and Human Resilience* is *your* place to say something that can make a difference in the lives of victims and helpers and have a real-world impact on the daily practice of emergency medical, public safety, and mental health services.

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CRITICAL INCIDENT
STRESS MANAGEMENT (CISM)

Key Papers and Core Concepts in Crisis Intervention and Human Resilience

Editors
George S. Everly, Jr, PhD, ABPP and Jeffrey T. Mitchell, PhD
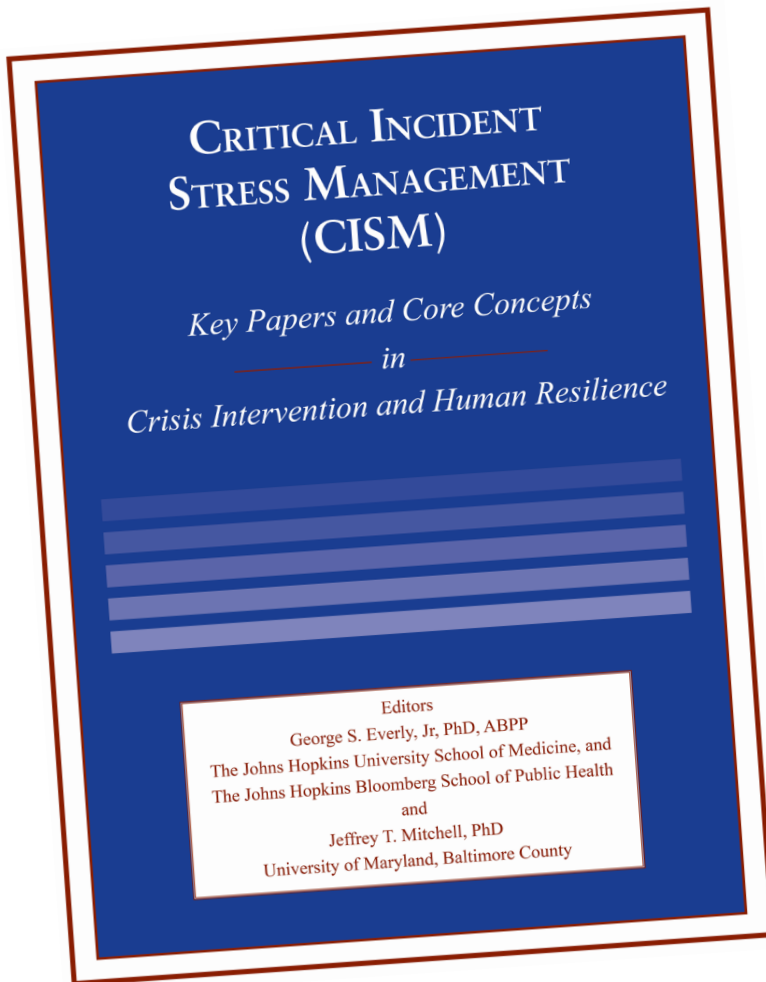
CISM concepts have developed over the last thirty years into a sensible support program that is widely accepted by, among others:

- Educational Institutions
- Businesses
- Fire Services
- Law Enforcement Agencies
- Emergency Medical Systems
- Hospitals
- School Systems
- Community Groups
- The Military
- The United Nations

The success of CISM programs in mitigating distress, encouraging adaptive functions and the identification of individuals who might need more support or a referral for professional care is due, in large part, to the dedication of the thousands of:

- Mental Health Professionals
- Clergy
- Peer Support Personnel

The integrative partnership between these three main support resources is an outstanding hallmark of CISM programs.

The collection of CISM articles, presented in this document, provides the theoretical foundations of the field as well as numerous CISM principles and practical guidelines that are vital to those who provide the many services that are incorporated within the CISM field. 234 pages

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Differences in Mental Health Outcomes by Acculturation Status Following a Major Urban Disaster

Richard E. Adams
Kent State University, Kent, OH

Joseph A. Boscarino
Geisinger Clinic, Danville, PA
Temple University School of Medicine, Philadelphia, PA

Abstract: *A number of studies have assessed the association between acculturation and psychological outcomes following a traumatic event. Some suggest that low acculturation is associated with poorer health outcomes, while others show no differences or that low acculturation is associated with better outcomes. One year after the terrorist attacks on the World Trade Center, we surveyed a multi-ethnic population of New York City adults (N=2,368). We assessed posttraumatic stress disorder (PTSD), major depression, panic attack, anxiety symptoms, and general physical and mental health status. We classified study respondents into "low," "moderate," or "high" acculturation, based on survey responses. Bivariate results indicated that low acculturation individuals were more likely to experience negative life events, have low social support, and less likely to have pre-disaster mental health disorders. Those in the low acculturation group were also more likely to experience post-disaster perievent panic attacks, have higher anxiety, and have poorer mental health status. However, using logistic regression to control for confounding, and adjusting for multiple comparisons, we found that none of these outcomes were associated with acculturation status. Thus, our study suggests that acculturation was not associated with mental health outcomes following a major traumatic event.* [International Journal of Emergency Mental Health and Human Resilience, 2013, 15 (2), pp. 85-96].

Key words*:trauma; mental health; World Trade Center; race; ethnicity.*

Over the past 30 years, efforts to understand the psychosocial origins of mental illness have focused on differential exposure to stressful events as a mechanism to explain the dissimilar rates of psychological and physical problems across different gender, racial, ethnic, and socioeconomic groups (Aneshensel, 2009; Kessler, Sonnega, Bromet, & Hughes, 1995; Kessler, Mickelson, & Williams, 1999; Pearlin, 1989). As a consequence, a research literature has developed linking one's position in society to exposure to both negative life events and traumatic life events and poor psychological outcomes (Adams & Boscarino, 2011a; 2011b; DiGrande, Neria, Brackbill, Pulliam, & Galea, 2011; Galea et al., 2004; Turner, Wheaton, & Lloyd, 1995).

Based on the stress process model (Pearlin et al., 1981; Pearlin, 1999; Thoits, 1995), studies suggest that individuals confronted with a disordered or challenging environment often respond physiologically, through alterations in the neuroendocrine and stress hormone systems (Boscarino, 1996;

1997), and /or psychologically, usually through alterations in executive or cognitive functioning (Bandura, 1986; Thoits, 1995; Turner et al., 1995). Consequently, exposure to major stressor events can result in decreased psychological well-being, often in the form of depression, anxiety disorders, or poorer physical and mental health status (Adams, Boscarino, & Galea, 2006; Adams et al., 2002; Boscarino, 2008; Boscarino & Adams, 2008; Brewin, Andrews, & Valentine, 2000; Galea et al., 2003: Kessler, Sonnega, Bromet, and Hughes, 1995; Roberts, Gilman, Breslau, Breslau, & Koenen, 2011). Furthermore, reviews of disaster studies have concluded that large scale traumatic events significantly increase psychological problems in the short-term and can have long-lasting negative physical and mental health consequences among some individuals (Brewin, Andrews, & Valentine, 2000; Rubonis & Bickman, 1991).

In this study, we assess how acculturation relates to mental and physical outcomes within the context of the World Trade Center (WTC) terrorist attacks on September 11, 2001. By acculturation, we refer to the degree to which members of minority groups are socially integrated into the dominant culture where they reside (Lopez-Class, Castro, & Ramirez, 2011). Research assessing the association between acculturation and well-being has been inconsistent. Some researchers have found that low acculturation is related to poor well-being (Breslau et al., 2007). In contrast, other researchers have reported that acculturation, while a significant predictor of mental and physical health status, is far less important than other demographic variables, such as income, education, and gender (e.g., Boscarino, 1980; Canabal & Quiles, 1995). Lastly, some research has actually shown that low acculturation is associated with better health outcomes (Burnam, Hough, Karno, Escobar & Telles, 1987a; Gorman, Read, & Krueger, 2010).

There are several possible reasons for these inconsistencies. First, studies do not use the same measures for acculturation, which make comparisons difficult (Breslau et al., 2007; Burnam et al., 1987a; Groman et al., 2010). Second, most studies concentrate on only one or two measures of psychological status, rather than a range of outcomes (e.g., Breslau et al., 2007; Galea et al., 2004). Finally, acculturation differences in well-being are rarely assessed within the context of a specific large-scale traumatic event. In the current study, we address some of these limitations and test the hypothesis that there were significant differences in health outcomes by acculturation status, across multiple outcomes, including PTSD, major depression, panic attack, anxiety symptoms, and general mental and physical status. Our analyses focus on whether or not lower acculturation individuals included in a multi-ethnic population study were at greater risk of developing psychological and physical health problems following the World Trade Center terrorist attacks compared to higher acculturation individuals.

Data and Methods

The terrorist attacks in New York City (NYC) on September 11, 2001, resulted in one of the largest death tolls of any disaster in the United States (Centers for Disease Control, 2002). In addition, a large area of lower Manhattan's business district was destroyed, resulting in further social and economic hardships. The scope of the September 11 attacks and their impact on the local community in the months that followed suggested that these events might have significant long-term consequences for mental and physical health (Adams & Boscarino, 2005a; Adams & Boscarino, 2005b; Boscarino & Adams, 2008; Galea et al., 2003; Galea et al., 2002).

Data for the current study come from a random sample of English or Spanish-speaking adults (18 years old or older) living in NYC at the time of the attacks on the WTC. Using random-digit dialing, we conducted a household survey one year after the attacks. Trained interviewers using a computer-assisted telephone interviewing system conducted the interviews, after obtaining verbal consent and screening out nonresidents and those not in NYC on September 11, 2001. As part of the overall study, we oversampled residents who reported receiving any mental health treatment after the attacks, identified by means of screener questions at the start of the survey. The population was also stratified by the 5 NYC boroughs and sampled proportionately. If more than one eligible adult lived in the household, interviewers selected one for an interview, based on who had the most recent birthday.

Questionnaires were translated into Spanish and then back-translated by bilingual Americans to ensure the linguistic and cultural appropriateness of the survey items. Overall, 2,368 individuals completed the survey. Approximately 7% of the interviews (23% for Hispanic respondents) were conducted in Spanish. Using survey industry standards (American Association for Public Opinion Research, 2008), the estimated cooperation rate was approximately 63%.

Sampling weights were developed to correct for potential selection bias related to the multiple telephone numbers and persons per household, and for the oversample of treatment-seeking respondents. These weights allowed us to treat the sample as representative of the NYC population. Additional descriptions of these data are available elsewhere (Boscarino et al., 2004a; Boscarino et al., 2011a; Boscarino et al., 2011b; Boscarino & Adams, 2008). The Institutional Review Board (IRB) of The New York Academy of Medicine approved the study's original protocols. The Geisinger Clinic IRB currently serves as the IRB of record.

Dependent Variables

In our analyses, we focused on PTSD, major depression, panic attack, anxiety symptoms, and general measures of psychological and physical health. Our PTSD scale was based on the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* (American Psychiatric Association, 1994). This measure was developed for telephone administration and used in previous national surveys (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993), as well as in WTC disaster studies (Boscarino and Adams, 2008; Galea et al., 2002; Galea et al., 2003; Galea et al., 2004). To meet the PTSD criteria on this scale, a respondent had to meet all DSM criteria (A through F) for one or more traumatic events in the past year. The Cronbach's alpha for the symptoms used in this scale was 0.90. We report elsewhere data supporting the validity of this PTSD instrument (Boscarino et al,. 2004a; Boscarino et al., 2004b; Boscarino & Adams, 2009; Boscarino et al., 2011a; Boscarino et al., 2011b; Kilpatrick et al., 1998).

For a diagnosis of major depression, we used a version of the *Structured Clinical Interview for DSM* (SCID) major depressive disorder scale (Spitzer, Williams, & Gibbon, 1987), which also has been used in past population surveys (Adams & Boscarino, 2011b; Boscarino et al., 2004a, Galea et al., 2002; Kilpatrick et al., 2003). Following DSM-IV criteria (American Psychiatric Association 1994), respondents met the criteria for depression if they had five or more depression symptoms for at least two-weeks in the past year (Cronbach's alpha=0.87).

The perievent panic attack measure was similar to the Diagnostic Interview Schedule (DIS) scale for panic attack (Robins et al., 1999), but phrased to assess symptoms that occurred during or shortly following the terrorist attacks and adopted from the DSM-IV panic criteria (American Psychi-

atric Association, 1994). The scale ascertained the presence of 14 panic symptoms in the first few hours after the events of September 11 (Cronbach's alpha=0.85). Respondents who indicated that they had experienced four or more symptoms and that these symptoms reached their peak within 10 minutes after they started, met the criteria for a perievent panic attack in the current study. This scale also was used in other World Trade Center surveys (Adams & Boscarino, 2011a; 2011b; Galea et al., 2002).

We also used a standardized symptom scale for psychological problems: The Brief Symptom Inventory (BSI-18), an 18 item assessment with subscales for depression, anxiety, and somatization (Derogatis 2001). The BSI-18 is a short version of the Symptom Checklist-90, a widely used measure of psychological distress with excellent reported psychometric properties (Derogatis, 2001). The BSI-18 items asked respondents to assess symptoms over the past 30 days. For the present study, we focused on the results for the anxiety and somatization subscale for the BSI-18, since depression was being measured with other scales.

General physical and psychological well-being was assessed using the Short Form-12, version 2 (SF-12-v2). This scale consisted of 12 items scored so that high scores reflect better health (Cronbach's alpha=.87). Following recommended scoring algorithms, the items were converted into standardized T-scores and summed to form two scales (Ware, Kosinski, Turner-Bowker, & Gandek, 2002). In our study, we used the recommended score of less than 35 over the past 30 days to define individuals as unhealthy on these scales for each of these measures (Ware et al., 2002). These measures have been reported to have excellent validity and reliability (Ware et al., 2002; Ware, Kosinski, & Keller, 1996).

Independent Variables

Acculturation Status

We assessed acculturation by coding three variables, including language of interview (English vs. Spanish), immigration status (born in US vs. born in another country), and years living in the US (10 years or more vs. fewer than 10 years), to create an acculturation measure indicating low to high acculturation (range = 0-3). Consistent with previous research, we then coded this variable into low acculturation (scored 0 or 1), moderate acculturation (scored 2) and high acculturation (scored 3) (Breslau et al., 2007; Burnam, Telles, Karno, Hough, & Escobar, 1987b; Ortega, Rosenheck, Alegria, & Desai, 2000).

Demographic Measures

Our analyses included 6 other demographic variables: age, education, gender, marital status, household income, and church attendance. Age was coded to the nearest year. Gender, marital status, and reported church attendance (less than once a week vs. once a week or more) were coded as binary variables, with male, not married, and less than once a week coded as the reference categories. We coded income into 7 categories, including under $20,000, $20,000-$29,999, $30,000-$39,999, $40,000-$49,999, $50,000-$74,999, $75,000-$99,999, and $100,000+ (coded 1-7). Individuals without income data were coded to the mean value of this variable. Educational attainment was coded into five categories: less than high school graduate, high school graduate, some college, college graduate, and graduate work/graduate degree (coded 1-5). In the multivariate analyses, age, educational attainment, and income were treated as interval-level measures. Race/ethnicity was self-identified and classified as follows: non-Hispanic White, non-Hispanic Black or African American, Dominican, Puerto Rican, other Hispanic, Asian, Native American, Pacific Islander/Alaskan Native, and other race/no race given. For the current study, individuals classified as Asian, Native American, Pacific Islander/Alaskan Native, or other race/no race given (n=188), were excluded from our analyses. Consequently, our final study sample included: 1,015 Whites, 606 African Americans, 114 Dominicans, 256 Puerto Ricans, and 189 Other Hispanic respondents (N = 2180).

Stressor and Psychosocial Resource Measures

Our analyses included measures for three stressor variables, two social resource variables, and one pre-disaster psychological status variable. The first stressor was WTC disaster event exposure, which was the sum of 12 possible events (yes; no) that the respondent could have experienced during the World Trade Center attacks (e.g., in the towers when the planes hit, forced to move, lost job as a direct result of the disaster). Due to the skewed distribution, though, we recoded individuals reporting 9 or more events to a score of 8. Second, a negative life event scale was used (Freedy, Kilpatrick, & Resnick, 1993) that was the sum of eight experiences that the respondent could have had in the 12 months before the attacks (e.g., divorce, death of spouse, problems at work). Due to the skewed distribution, we recoded values 6 or higher to 5. The third stressor measure focused on 10 lifetime traumatic events (Freedy et al., 1993),

other than the WTC attacks (e.g., forced sexual contact, being attacked with a weapon, being in a serious accident). Based on a distributional analysis, these items were coded into four categories (0, 1, 2-3, 4 or more events) and treated as an interval measure in the analyses. The social resource variables included self-esteem (Rosenberg, 1979) and social support (Sherbourne & Stewart, 1989). The self-esteem measure was a brief version of Rosenberg's self-esteem scale, with items scored so that high scores reflected high self-esteem (Cronbach's alpha=.73). The social support measure was based on questions about emotional, informational, and instrumental support, coded so that high scores indicated high social support (Cronbach's alpha=.83). Finally, to address the possibility that pre-disaster psychological disorders influenced the post-disaster outcomes, the survey inquired about the age of onset for PTSD, major depression, and panic attacks. If the age of onset for any of these psychological disorders occurred *before* the World Trade Center attacks, the respondent was coded as having a pre-disaster mental health disorder. These stressor and psychosocial resources measures have been described in detail elsewhere (Boscarino et al,. 2004a; Boscarino et al., 2004b; Boscarino & Adams, 2008; Boscarino & Adams, 2009; Boscarino et al., 2011a; Boscarino et al., 2011b).

Statistical Analysis

We first present the acculturation differences by demographic, stress exposure, and psychological status measures (Table 1). Next, we present the bivariate cross-tabular results for acculturation group by our seven outcome measures. Following those analyses, a series of multivariate logistic regressions are estimated to investigate the unique association between acculturation and each health status outcome variable (Table 3). The logistic regression analyses proceeded in several steps to assess how the associations between acculturation and the outcome variables changed as variables are included in the model. In the first step, we estimate the association between acculturation and the dependent variables, without any other variables in the regression model. Since the focus of our study was to test the hypothesis that low acculturated individuals were more likely to experience poorer health outcomes relative to high acculturated individuals, we compare each acculturation group across our 7 health outcomes of interest. In the second step, we include the other demographic characteristics discussed, including race and ethnicity. In the third step, we add the stressor and psychosocial variables to the model, as well as the pre-disaster mental

disorder measure. Thus, the last model tests the hypothesis that lower acculturation individuals have worse post-disaster outcomes, compared to higher acculturated individuals, controlling for potential confounders. It is noted that since we assessed 7 different outcomes in the current study, we lowered our p-value to detect a significant difference from 0.05 to 0.01 (0.05 / 7 = 0.007), in order to account for multiple comparisons. In addition, we used the survey estimation (svy) commands in Stata, version 12 (Stata Corporation 2011) to generate our frequency distributions, cross-tabulations, and logistic regression models. This estimation procedure adjusts the data for our sampling design, which included stratification by city borough and case weights.

As reported elsewhere (Adams & Boscarino, 2005b), we have shown that our population sample for the WTC study did not deviate significantly from the year 2000 NYC Census data in terms of age, gender, race, or borough, which suggests that our sample was not biased by the cooperation rate or by sample selection.

RESULTS

Descriptive statistics by acculturation status are shown in Table 1. These results suggest that the low acculturation group tends to be younger, male, married, have less household income, have less education, and attend church more often compared to the high acculturation group. For the stress exposure and resource variables, low acculturation is related to having more negative life events, fewer traumatic events, lower self-esteem, less social support, and not having a pre-disaster mental health disorder. As expected with this population, the Dominicans and Other Latinos are much more likely to be in the low acculturation group than Whites, African Americans, and Puerto Ricans.

In terms of the outcome measures assessed (Table 2), there were no statistically significant differences for PTSD, depression, BSI-Somatization, or SF-12-physical health status by acculturation status. For perievent panic, BSI-Anxiety, and SF12-mental health, however, there appear to be acculturation differences, with low acculturation persons having poorer well-being relative to high acculturation individuals. More specifically, as acculturation increases the likelihood of meeting criteria for perievent panic decreases. A similar finding is found for BSI-anxiety. For the SF-12 mental health outcome, there appears to be little difference between low and moderate acculturation groups, but a larger difference between these two groups and the high acculturation group.

The advantage in well-being for the higher acculturated respondents is eliminated, however, for most outcomes in the multivariate models (Table 3). Once demographics, stressor, and psychosocial resource factors were controlled, there appear to be no statistically significant differences for acculturation for any of the outcomes assessed. The one exception is for the SF12 Mental Health scale. For this outcome, moderately acculturated respondents appear to have worse mental health than highly acculturated individuals. However, given a p-value adjustment for multiple comparisons proposed, this outcome did not meet the minimum p < 0.01 threshold and, therefore, is not considered statistically significant. Detailed results for the independent variables in these models follow patterns reported in previous papers (Adams & Boscarino, 2005a; Adams et al., 2006; Boscarino & Adams, 2008), and are available upon request from the corresponding author.

DISCUSSION

Similar to our earlier work (Adams & Boscarino, 2005b), and consistent with other work (e.g., Canabal & Quiles, 1995), we did not find higher rates of poor physical and mental health status among survivors of community disasters by acculturation status, once other factors were taken into account. This pattern held for both mental and physical health outcomes. Acculturation is just one of many factors that may influence well-being after a community disaster, however, in the current study, it did not have a unique association above and beyond other influences or other key variables. These findings are in contrast to other research showing a negative association between greater acculturation and well-being (e.g., Gorman, Read, and Krueger, 2010, Burnam et al., 1987a).

There are several possibilities for these differing results. Much of the previous research assumes either a healthy immigrant or the immigration stress perspectives (Breslau et al., 2007). The former assumes that resilient or psychologically hardy individuals are the most likely to migrate from one country to another (Breslau et al., 2007; Burnam et al., 1987a), while the latter assumes that recent immigrants should suffer from worse mental health due to the stressors associated with language barriers, economic issues, and cultural differences. In their analysis of the Epidemiological Catchment Area data, Burnam and her associates (Burnam et al., 1987a) found that the most recent, less acculturated immigrants to California from Mexico reported better mental health than more acculturated Mexican immigrants or

Study Variables	Entire Sample %(n)	Low Acculturation %(n)	Moderate Acculturation %(n)	High Acculturation %(n)	χ2 (p-value)
Age					
18-29	27.0(441)	33.1(66)	18.9(68)	28.3(307)	5.64(.004)
30+	73.0(1710)	66.9(174)	81.1(344)	71.7(1192)	
Gender					
Male	45.5(923)	52.5(110)	40.0(158)	45.8(655)	3.17(.042)
Female	54.5(1257)	47.5(131)	60.0(264)	54.2(862)	
Marital Status					
Not Married	54.1(1333)	48.7(137)	47.1(237)	57.4(959)	5.25(.005)
Married	45.9(847)	51.3(104)	52.9(185)	42.6(588)	
Yearly Household Income					
Less than $30,000	41.2(948)	68.6(172)	44.7(207)	34.6(569)	32.91(.000)
$30,000+	58.8(1232)	31.4(69)	55.3(215)	65.4(948)	
Education					
Less Than College Grad	61.7(1242)	71.0(167)	64.1(257)	59.1(818)	4.48(.011)
College Graduate	38.3(938)	29.0(74)	35.9(165)	40.9(699)	
Church Attendance					
Less Than Once a Week	65.4(1450)	59.0(137)	60.9(256)	68.2(1057)	3.88(.021)
Once a Week or More	34.6(716)	41.0(104)	39.1(161)	31.8(451)	
Race/Ethnicity					
White	43.0(1015)	14.1(38)	25.9(112)	54.1(865)	36.10(.000)
African American	28.8(606)	27.8(66)	34.6(140)	27.2(400)	
Dominican	6.1(114)	18.9(57)	8.0(30)	3.0(27)	
Puerto Rican	11.3(256)	3.9(14)	14.3(73)	11.9(169)	
Other Latino	10.7(189)	35.4(66)	17.2(67)	3.8(56)	
WTC Disaster Event Exposure					
Low/Moderate(0-3)	86.2(1794)	87.5(199)	89.0(351)	85.1(1244)	1.55(.212)
High(4+)	13.8(386)	12.5(42)	11.0(71)	14.9(273)	
Negative Life Events					
None-One	82.5(1679)	72.8(175)	84.2(330)	83.9(1174)	6.93(.002)
Two or more	17.5(501)	27.2(66)	15.8(92)	16.1(343)	
Traumatic Events					
None-three	82.8(1730)	87.4(205)	85.5(344)	81.1(1181)	3.23(.040)
Four or more	17.2(450)	12.6(36)	14.5(78)	18.9(336)	
Self-Esteem					
Low	59.0(1353)	69.6(181)	58.6(261)	57.0(911)	4.26(.014)
High	41.0(827)	30.4(60)	41.4(161)	43.0(606)	
Social Support					
Low/Moderate	72.4(1591)	85.1(205)	76.0(333)	68.7(1053)	9.83(.001)
High	27.6(589)	14.9(36)	24.0(89)	31.3(464)	
Pre-WTC Disaster Mental Health Disorders					
No	71.2(1381)	79.9(182)	73.2(281)	68.9(918)	4.72(.009)
Yes	28.8(799)	20.1(59)	26.8(141)	31.1(599)	
(n=)	(2180)	(241)	(422)	(1517)	

* All percentages are weighted, n's are unweighted.

Table 2.
Association between Study Outcome Variables and Acculturation Status (N=2180)*

Study Outcomes	Entire Sample %(n)	Low Acculturation %(n)	Medium Acculturation %(n)	High Acculturation %(n)	χ2 (p-value)
PTSD Past Year					
No	95.1(2014)	94.9(221)	96.9(396)	95.0(1397)	2.06(.131)
Yes	4.9(166)	7.1(20)	3.1(26)	5.0(120)	
Depression Past Year					
No	87.8(1790)	86.9(198)	90.7(358)	87.1(1234)	1.59(.205)
Yes	12.2(390)	13.1(43)	8.3(64)	12.9(283)	
Perievent Panic Attack					
No	89.4(1977)	82.1(190)	87.2(352)	91.6(1335)	8.48(.000)
Yes	10.6(303)	17.9(51)	12.8(70)	8.4(182)	
BSI-Anxiety					
No	89.6(1825)	83.9(181)	89.4(350)	90.8(1294)	4.76(.009)
Yes	10.4(336)	16.1(58)	10.6(66)	9.2(212)	
BSI-Somatization					
No	89.1(1833)	86.9(185)	90.4(353)	89.1(1295)	0.86(.424)
Yes	10.9(334)	13.1(54)	9.6(66)	10.9(214)	
SF-12-v2 Mental Health					
Healthy	93.5(1911)	91.5(197)	90.9(359)	94.7(1355)	3.92(.020)
Not Healthy	6.5(213)	8.5(34)	9.1(49)	5.3(130)	
SF-12-v2 Physical Health					
Healthy	93.0(1940)	95.2(206)	93.3(377)	92.5(1357)	1.15(.316)
Not Healthy	7.0(184)	4.8(25)	6.7(31)	7.5(128)	
(n=)	(2180)	(241)	(422)	(1517)	

* All percentages are weighted, n's are unweighted.

Table 3.
Logistic Regression Results for Psychological and Physical Health Outcome among
Acculturation Groups, with "High" Acculturation the Excluded Category in Model (N= 2092 to 2180)

Outcome and Covariates in Regression Model	Low Acculturation OR (95% CL)	Moderate Acculturation OR (95% CL)
PTSD Past Year		
No Other Covariates	1.46 (0.74-2.89)	0.62 (0.33-1.14)
+Demographic Variables[†]	1.57 (0.71-3.47)	0.64 (0.33-1.22)
+Stress and Resource Variables[‡]	1.54 (0.67-3.55)	0.67 (0.33-1.37)
Depression Past Year		
No Other Covariates	1.02 (0.64-1.61)	0.70 (0.47-1.02)
+Demographic Variables[†]	1.28 (0.76-2.15)	0.84 (0.57-1.26)
+Stress and Resource Variables[‡]	1.14 (0.60-2.16)	0.87 (0.54-1.41)
Perievent Panic Attack		
No Other Covariates	2.38 (1.51-3.74)***	1.60 (1.08-2.37)*
+Demographic Variables[†]	1.75 (1.05-2.93)*	1.35 (0.88-2.07)
+Stress and Resource Variables[‡]	1.70 (0.99-2.91)	1.48 (0.93-2.36)
BSI-Anxiety		
No Other Covariates	1.90 (1.24-2.90)**	1.17 (0.80-1.72)
+Demographic Variables[†]	1.84 (1.12-3.02)*	1.16 (0.76-1.77)
+Stress and Resource Variables[‡]	1.66 (0.94-2.92)	1.25 (0.78-2.03)
BSI-Somatization		
No Other Covariates	1.23 (0.78-1.93)	0.87 (0.59-1.27)
+Demographic Variables[†]	0.84 (0.50-1.41)	0.59 (0.37-0.94)*
+Stress and Resource Variables[‡]	0.80 (0.47-1.37)	0.62 (0.36-1.06)
SF-12-v2 Mental Health		
No Other Covariates	1.67 (0.97-2.88)	1.80 (1.14-2.82)*
+Demographic Variables[†]	1.71 (0.84-3.48)	1.86 (1.10-3.14)*
+Stress and Resource Variables[‡]	1.33 (0.61-2.87)	1.86 (1.06-3.30)*
SF-12-v2 Physical Health		
No Other Covariates	0.62 (0.35-1.08)	0.88 (0.53-1.48)
+Demographic Variables[†]	0.55 (0,30-1.04)	0.66 (0.38-1.16)
+Stress and Resource Variables[‡]	0.53 (0.27-1.03)	0.70 (0.39-1.26)

* p<.05   ** p<.01 *** p<.001
† Demographic measures controlled: Age, gender, marital status, income, education, church attendance and race/ethnicity.
‡ Stress and psychosocial resource measures controlled: Level of exposure to WTC disaster, negative life events, traumatic events, self-esteem, social support, and pre-disaster mental health disorders.
OR = odds ratio. CL = confidence limit

Mexicans born in the United States. Our study reveals a more complex association, whereby low acculturation is related to lower income and greater negative life events, both of which are associated with poorer mental and physical health (Thoits, 1995; Turner et al., 1995). However, once negative life events and other psychosocial factors are controlled, there are few differences in mental health status by acculturation status. While it may be true that recent immigrants are psychologically healthier and become more like native populations as they learn the language and customs of the receiving culture (the healthy immigrant perspective), the current study suggests that acculturation status is associated with increased chances of experiencing events that have a negative impact on health status. Clearly additional research on how various demographic factors relate to acculturation and well-being is needed to clarify these associations.

Our results need to be considered in the context of the study's limitations and strength. First, we did not include individuals without telephones or those who spoke a language other than English or Spanish in our study. Thus, we are limited in our ability to generalize to other immigrant and language groups living in NYC. Second, given that our outcome measures are based on self-report, there may be some cultural differences in reporting psychological symptoms, which could bias our results. Third, the cross-sectional nature of our data prevents causal ordering. However, we did include a retrospective measure of pre-disaster psychological status, which should make our conclusions about acculturation and well-being stronger. Fourth, we do not have a measure of perceived discrimination, which may be tied to both acculturation and health outcomes. Finally, our measure of acculturation is limited. We did not have measures of participation in culturally relevant activities (e.g., watching Spanish language television) or other situations where the respondent uses Spanish (e.g., with friends, reading books, etc.). Burnam et al., (1987a; 1987b) used a 26-item measure of acculturation in their study of Mexican immigrants. Future studies need a measure of acculturation which captures a better measure of this construct (Lopez-Class, Castro, & Ramirez, 2011).

The strengths of the study include data collected from a large, representative, multi-ethnic sample of New York City residents, the assessment of physical and mental status using well-known and validated measures, a focus on specific events and traumas related to the WTC attacks and other life circumstances, and the use of the stress process model to guide our study design and data analyses. We also controlled for key demographic factors that could have affected our results, including marital status, household income, education level, and church attendance. The study of acculturation within the context of community disasters is rare and we show that it has little association with a range of mental and physical health outcomes experienced. Our previous work on race/ethnicity also revealed weak or non-significant relationships to well-being (Adams & Boscarino, 2005a). It is possible that acculturation and race/ethnicity are tied to more long-term health consequences of community disaster and the continued investigation of these social factors, therefore, seems warranted.

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Relationship Between Posttraumatic Stress Disorder, Resilience, and Religious Orientation and Practices Among University Student Earthquake Survivors in Haiti

Harvey J. Burnett Jr.
Andrews University

Herbert W. Helm Jr.
Andrews University

Abstract: *This study examined the prevalence of PTSD symptoms; the relationship between PTSD and resilience, religious orientation and religious practices; and how gender is associated with these variables among a volunteer sample of 140 students attending a Christian university in Haiti approximately four months after the January 2010 earthquake. Using the PTSD Checklist-Civilian (PCL-C), the Resilience Scale (RS), and the Religious Orientation Scale (ROS) found no significant relationship between PTSD, resilience, religious orientation and religious practices. Results did indicate that 34% of the sample had PCL-C scores indicative of PTSD; female participants had higher PTSD symptoms than males; higher levels of intrinsic religious orientation were associated with more religious practices than extrinsic religious orientation; and males with higher PTSD symptoms were associated with lower levels of attending church-sponsored social events, while females with higher levels of resilience were more associated with church attendance and attending church social events.   Mental health providers should develop more comprehensive disaster mental health services that build trust and are culturally sensitive to the post-trauma needs of the Haitian people. [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(2), pp. 97-104].*

Key words: *posttraumatic stress disorder, resilience, religious orientation, gender*

On January 12, 2010, the southern region of Haiti experienced a magnitude 7.0 earthquake that killed an estimated 316,000 people, caused massive property damage, and displaced thousands (USAID, 2011). It is not uncommon for children and adults to exhibit Posttraumatic Stress Disorder (PTSD) symptoms after experiencing a traumatic event (Bal & Jensen, 2007; Breslau, 2002; Norris, Friedman, Watson, Byrne, Diaz, & Kaniasty, 2002).

PTSD is classified as an anxiety disorder which has an original traumatic event and is followed by the symptoms of *re-experiencing*, *avoidance/numbing,* and *hyperarousal/ hypervigilance*. The symptoms need to be of sufficient severity to interfere with the person's life. For PTSD to be diagnosed, at least one aspect of re-experiencing must occur, of which flashbacks is the most common. Three or more aspects of avoidance/numbing need to be present and two or more aspects of hyperarousal/hypervigilance. PTSD also has considerable overlap with various mood disorders (Vieweg, Julius, Fernandez, Beatty-Brooks, Hettema, & Pandurangi,

Harvey J. Burnett, Jr., PhD, is an Assistant Professor of Psychology in the Behavioral Sciences Dept. at Andrews University in Berrien Springs, Michigan. Herbert W. Helm, Jr., PhD, is a Professor of Psychology in the Behavioral Sciences Dept. at Andrews University in Berrien Springs, Michigan. Correspondence concerning this article should be directed to Harvey Burnett, E-mail: harveyb@ andrews.edu

2006). Research conducted by Ozer, Best, Lipsey and Weiss (2003) found seven predictors of PTSD which included: prior trauma, prior psychological adjustment, family history of psychopathology, perceived life threat during the trauma, posttrauma social support, peritraumatic emotional responses, and peritraumatic dissociation.

A meta-analysis of the prevalence of PSTD in adults puts it at roughly 7%, this despite an over 50% lifetime prevalence of exposure to a traumatic event (Ozer et al., 2003). This is in the middle of the range that the *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition* (1994) has for lifetime prevalence of PSTD, ranging from 1% to 14%. Tolin and Foa (2006) reviewed 25 years of research in sex differences with PTSD. In general, they found that regardless of the type of study, females were more likely to meet the diagnostic criteria for PTSD than were males. Giaconia, Reinhertz, Silverman, Pakiz, Frost, and Cohen (1995) specifically looked at older adolescents and found that, by age 18, more than two-fifths had experienced a trauma, with 14.5% of those developing PTSD (6.3% of the total sample). Females in their sample were six times more likely to develop PTSD.

While on one hand, people can experience distress from disturbing events, Bonanno (2008) noted that large numbers of people are able to manage loss or potentially traumatic events in their lives with no real noticeable affect to their relationships or work. Similarly, it is noted that the way in which people process their stressors is critical in determining the experience of trauma (Peres, Moreira-Almeida, Nasello, & Koenig, 2007). The data by Boals and Schuettler (2009) suggested that the symptoms of PTSD are associated with an individual's response to the event and not the nature of the event. Furthermore, literature makes a distinction between recovery and resilience. In recovery you have normal functioning which gives way to some type of psychopathology, such as PTSD, and then, over a period of months or years, the individual gradually returns to the previous level of functioning. In resilience, the stable level of functioning is relatively maintained even though the individual has experienced a disruptive event (Bonanno, 2008). Furthermore, Bonanno (2008) suggested that resilience (the ability to remain stable and function psychologically and physically) after exposure to a violent or life-threatening event is what contributes to fewer reports of PTSD symptoms.

Religion is an area of functioning which has been implicated both as an outcome and means of coping to a traumatic event (Harris, Erbes, Engdahl, Olsen, Winshowski, & Mc-Mahill, 2008). For example, Schuster, Stein, Jaycox, Collins, Marshall, Elliot, Zhou, Kanouse, Morrision and Berry (2001) found that, after the September 11, 2001 terrorist attacks, most Americans turned to religion and social support as a way of response. Chen and Koenig (2006) did a review of studies that had looked at the relationship between PTSD and religion/spirituality and concluded that:

> *"Despite of the close conceptual link between religion and traumatic stress, empirical s t u d i e s investigating the potentially bi-directional relationship only began to emerge in the last decade, with an increasing number of studies within the last three years. Although this growing literature is yet to form a trend in any one direction, all but one of the studies reviewed in this paper reported significant associations between religion and PTSD. The mixed findings among these studies may be reflective of diversity in measurement and sampling, and are encouraging in identifying an association between religion and trauma"* (p. 378).

In looking at religion/spirituality and posttraumatic growth, Shaw, Joseph, and Linley (2005) noted that a clear distinction between religion and spirituality in this topic has not been defined and that it may be an important distinction. Harris and colleagues (2008) felt that the more appropriate question was not whether religion's relationship to mental health is positive or negative, but which aspects of religion have a positive or negative relationship with which components of mental health.

Little has been done on PTSD and the Caribbean. Generally, people residing in the Caribbean lack acceptance of mental health professionals and psychotherapy. This may be due to the lack of exposure to the field of mental health, or that they have an internal approach to solving problems. The view that only "crazy" people need psychotherapy, gives it a social stigma. The outsiders who may be permitted in are ministers or priests. The church may give emotional support, or reaffirm that God will work things out at the right time (Gopaul-McNicol, 1998). In the Caribbean, physical complaints are not only more acceptable than psychological ones, but they may also elicit more compassion. For men in particular, psychological complaints may be sensed as failure or weakness (Friedman, 1997).

At present, there are no studies that provide data on how the 2010 earthquake in Haiti has affected the surviving

population. This study investigated the prevalence of PTSD in a sample of students attending a Christian university approximately four months after the earthquake. Specifically, this study: (a) examined the prevalence of PTSD symptoms; (b) explored the relationship between PTSD, resilience, and religious orientation and behaviors; and (c) explored how gendered is associated with these variables.

METHOD

Participants

Participants consisted of 140 students from a Christian university in Haiti who had experienced the January 11, 2010 earthquake in Haiti. The subjects who volunteered to participate in the study completed a questionnaire packet immediately after attending one of several one hour educational forums on critical incident stress between May 16, 2010 and June 6, 2010. The study was granted approval for research involving human subjects by the Andrews University Institutional Review Board prior to conducting the study.

Of the 140 participants, 55% were female and 45% were male. The mean age was 23.7 years (SD = 5.05). Approximately 93% were students; 7% were classified as either faculty or "other." Seventy-six percent were Seventh-day Adventist; 18% were Protestant; 2% were Catholic; 1% was Muslim; 2% were classified as "other;" and 1% provided no information regarding their religious affiliation.

Measures

The measures used in this study included the PTSD Checklist-Civilian (PLC-C), the Resilience Scale (RS), and the Religious Orientation Scale (ROS).

The PLC-C developed by Weathers, Litz, Herman, Huska, and Keane (1993) is a 17-item self-report measure that assesses 17 PTSD symptoms on a five-point Likert scale. Participants were asked to rate on a scale from 1 (not at all) to 5 (extremely) the degree to which they had been bothered by a particular traumatic event (Criterion A) during the past month. Each of the 17 items corresponds to one of the three PTSD diagnostic criterion cluster of symptoms. For example, Criterion B is related to re-experiencing symptoms (i.e., intrusive recollections of the event, flashbacks, and recurrent distressing dreams of the event); Criterion C is related to avoidant/numbing symptoms (i.e., physical reactions to reminders of the event, avoiding thoughts and reminders to

the event, psychogenic amnesia, anhedonia, estrangement from others, psychic numbing, and a sense of a foreshortened future); and Criterion D is related to hyperarousal symptoms (i.e., sleep difficulty, irritability and anger, impaired concentration, hypervigilance, and exaggerated startle response) as established by the DSM-IV. A score of 44 or higher is indicative of probable PTSD. Internal consistency coefficient alphas are reported to be .90 for Criterion B symptoms, .89 for Criterion C symptoms, .91 for Criterion D symptoms, and .97 for the overall scale. Item total correlations ranged from .62 to .80. Test-retest reliability was good (r = .96). The PCL correlates strongly with other measures of PTSD such as the Mississippi Scale, the PK scale of the MMPI-2, and the Impact of Event Scale.

The Resilience Scale (RS) was originally developed by Wagnild & Young (1993) as a 25-item self-report questionnaire that measures five resilience themes using a 7-point Likert scale ranging from 1 (agree) to 7 (disagree). However, for the purposes of this study, the 15-item version of the RS as researched by Neill and Dias (2001) was used. Based on the findings of their exploratory factor analysis on the original scale, they found the 15-item RS a shorter and more reliable measure of global resilience. Cronbach's alpha was reported to be .91. Higher scores on the RS represent higher resilience. Wagnild and Young (1993) indicated that concurrent validity has been supported by significant correlations between RS scores and measures of morale, life satisfaction, and depression.

The Religious Orientation Scale (ROS) was originally developed by Allport and Ross (1967) as a 20-item self-report instrument that measures intrinsic/extrinsic religious orientation using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). However, for the purposes of this study, the 15-item version of the ROS as researched by Leong and Zachar (1990) was used. Based on the findings of their factor analysis on the original scale, the 15-item ROS was found to be more reliable psychometrically. Cronbach's alpha for the scales was .87 in the American sample and .90 in the Australian sample.

Data Analysis

Chi-square tests analysis was used to explore the differences between PTSD cluster symptoms and gender. The relationship between PTSD, resilience, religious orientation and practices were analyzed using the Spearman correlation.

Relationships were considered statistically significant below a *p* value of .05.

RESULTS

An analysis to examine the prevalence of probable PTSD among participants was conducted. PCL scores ranged from 18 to 79 with a mean of 39.4 ($SD = 13.9$), with males having a mean of 35.7 ($SD = 13.2$) and females having a mean of 42.9 ($SD = 13.7$). An independent-samples t-test was conducted to compare the PCL scores for males and females. There was a significant difference in scores for males and females; t (108) = -2.75, $p = .00$ (two-tailed). The magnitude of the differences in the means (mean difference = -7.07, 95% CI: -12.2 to -12.2 to -1.98) was moderate (eta squared = .065). Research conducted by Blanchard, Jones-Alexander, Buckley, and Forneris (1996) suggested that for diagnostic efficiency (in the screening mode) PCL scores of 44 or higher are indicative of probable PTSD. Twenty-one percent of the 140 subjects had missing data in this section and could not be analyzed. Of those with completed data in this section, 34.5% had scores high enough to consider a diagnosis.

A Chi-square test for independence (with Yates Continuity Correlation) indicated a significant association between PTSD symptom criterions B (reexperiencing symptoms) and gender, χ^2 (1, $n = 140$) = 4.35, $p = .04$ phi = .19. This would suggest that PTSD re-experiencing symptoms were more associated with women earthquake survivors than male survivors. The same statistical procedure further indicated a significant association between PTSD symptom criterion D (hyperarousal symptoms) and gender, χ^2 (1, $n = 140$) = 4.35, $p = .04$, phi = .19. Based on this result, PTSD hyperarousal symptoms were more associated with women earthquake survivors than male survivors. There was no significant association between PTSD symptom criteria C (avoidant/numbing symptoms) and gender, χ^2 (2, $n = 140$) = 3.08, $p = .25$, phi = .13.

Individual RS scores ranged from 21 to 105 with a mean score of 80.9 ($SD = 16.6$), with males having a mean of 80.3 ($SD = 15.6$) and females having a mean of 81.6 ($SD = 17.7$). There was no significant difference for males and females on these scores. Higher RS scores suggest a better ability to respond to adverse events with resilience. While these scores are slightly higher than the reported mean of 72.9 for ages 18-29, they are still within the first standard deviation for this age group, SD = 14.2 (Wagnild, 2010)

Individual ROS scores ranged from 17 to 34 for the extrinsic items with a mean score of 27.4 ($SD = 3.87$). There was no statistically significant difference between genders, with males having a mean of 27.2 (SD = 3.96) and females having a mean of 27.6 (SD = 3.81). For the intrinsic items the scores ranged from 23 to 45 with a mean score of 37.5 (SD = 3.78). Again there was no statistically significant difference between genders, with males having a mean of 37.6 (SD = 3.67) and females having a mean of 37.5 (SD = 3.91).

The relationship between PTSD (as measured by the PCL) and resilience (as measured by the RS) and intrinsic and extrinsic religious orientations (as measured by the ROS) was investigated using Spearman's rho correlation coefficient. The results indicated that there was no correlation, or significance, between PTSD and resilience ($r_s = -.02$, $n = 80$, $p = .88$). The results were still non-significant when viewed by gender (males: $r_s = -.03$, $n = 41$, $p = .84$; females: $r_s = .00$, $n = 39$, $p = .99$).

The relationship between PTSD and religious orientation (intrinsic and extrinsic) was non-significant for both intrinsic ($r_s = -.04$, $n = 95$, $p = .70$) and extrinsic ($r_s = .01$, $n = 94$, $p = .91$). The results were still non-significant when viewed by gender (males, intrinsic: $r_s = .06$, $n = 48$, $p = .69$; females, intrinsic: $r_s = -.11$, $n = 47$, $p = .45$; males, extrinsic: $r_s = .24$, $n = 48$, $p = .10$; females, extrinsic: $r_s = -.23$, $n = 46$, $p = .12$).

The relationship between resilience and religious orientation (intrinsic and extrinsic) was non-significant for intrinsic ($r_s = .18$, $n = 79$, $p = .10$), but significant for extrinsic ($r_s = .25$, $n = 83$, $p = .03$). When viewed by gender, resilience was significant for males on both the intrinsic and extrinsic scales (males, intrinsic: $r_s = .34$, $n = 41$, $p = .03$; males, extrinsic: $r_s = .34$, $n = 43$, $p = .03$). Females were non-significant for both the intrinsic and extrinsic scales (females, intrinsic: $r_s = -.03$, $n = 38$, $p = .85$; females, extrinsic: $r_s = .10$, $n = 40$, $p = .54$).

The relationship between PTSD, resilience, intrinsic and extrinsic religious orientation, and seven religious practice behaviors were analyzed. The seven religious practices included: attend church services, personal prayer, read the Bible, family worship, attend Sabbath School, read Seventh-day Adventist literature, and attend church-sponsored social events. PTSD was not significantly related to any of the religious practice variable. It did come close to significance with "attend church services" ($r_s = -.19$, $n = 103$, $p = .06$). Resilience was only statistically significantly related to "attend church services" ($r_s = .29$, $n = 95$, $p = .01$). Intrinsic re-

ligious orientation was statistically significant with "personal prayer" ($r_s = .21$, $n = 112$, $p = .02$), "read the Bible" ($r_s = .38$, $n = 113$, $p = .001$), "attend Sabbath School" ($r_s = .27$, $n = 110$, $p = .005$), and "read Seventh-day Adventist literature" ($r_s = .19$, $n = 108$, $p = .05$). It was also close to significance with "family worship" ($r_s = .19$, $n = 110$, $p = .051$). Extrinsic religious orientation was statistically significant with "read the Bible" ($r_s = .21$, $n = 115$, $p = .03$), see Table 1.

DISCUSSION

The current study attempted to examine the relationship between PTSD, resilience, religious orientation and practices, and gender among a sample of subjects who survived the 2010 earthquake in Haiti. The results of this study were varied.

The study attempted to examine the prevalence of PTSD among its participants. The results indicated that ap-

Table 1.
Relationships between Religious Practices and PTSD, Resilience,
and Intrinsic and Extrinsic Religious Orientation

Religious Practices	PTSD	Resilience	Intrinsic	Extrinsic
Attended church services		F	M	
Personal prayer			T, M	
Read the Bible			T, M, F	T, F
Family worship				
Attended Sabbath School			T, M	
Read Seventh-day Adventist literature			T, F	
Attended church-sponsored social events	M	T, F		

Note. T= statistically significant for total sample, M= statistically significant for males,
F= statistically significant for females.

The above variables were then run by gender. For males, there was a statistically significant correlation between PTSD and "attend church-sponsored social events" ($r_s = -.29$, $n = 51$, $p = .04$). Resilience was not statistically significant with any of the seven religious practices. Intrinsic religious orientation was statistically significant with "attend church services" ($r_s = .34$, $n = 55$, $p = .01$), "personal prayer" ($r_s = .35$, $n = 55$, $p = .01$), "read the Bible" ($r_s = .44$, $n = 54$, $p = .001$), and "attend Sabbath School" ($r_s = .36$, $n = 53$, $p = .01$). Extrinsic religious orientation was not statistically significant with any of the seven religious practices.

For females, PTSD was not statistically significant with any of the seven religious practices. Resilience was statistically significant for "attend church services" ($r_s = .34$, $n = 46$, $p = .02$) and "attend church-sponsored social events" ($r_s = .44$, $n = 47$, $p = .01$). Intrinsic religious orientation was statistically significant with "read the Bible" ($r_s = .33$, $n = 59$, $p = .01$) and "read Seventh-day Adventist literature" ($r_s = .28$, $n = 56$, $p = .04$). Extrinsic religious orientation was statistically significant with "read the Bible" ($r_s = .28$, $n = 60$, $p = 03$), see Table 1.

proximately 34% of participants met the screening criteria for a possible diagnosis of PTSD. Unfortunately, there are no present studies that provide comparable data in helping researchers and clinicians understand the prevalence of PTSD among the Haitian population following a traumatic event. However, as mentioned earlier, a meta-analysis by Ozer et al. (2003) suggests that 7% of adults exposed to a traumatic event meet the diagnostic criteria for PTSD despite having a 50% lifetime prevalence of exposure. Gopaul-McNicol (1993, 1998) has indicated that anxiety disorders and mood disorders are more prevalent and accepted in the Caribbean. More research is needed in this area in order to provide a more consistent PTSD prevalence rate for the Haitian population.

The study also examined the relationship between gender and PTSD. The results would suggest that the females who participated in this study had higher PTSD symptoms on the PCL than male participants. This data tends to support research conducted by Fairbank, Schlenger, Saigh, and Davidson (1995) on pre-traumatic risk factors which suggested that women are twice as likely as men to develop PTSD at some point in their lifetime. An important implication that

can be drawn from this data is that the PTSD screening process should consider gender as a major factor as it progresses toward treatment modalities.

When the study examined the issue of resilience and PTSD symptoms, no relationship was found between these two variables. These results are contrary to Bonanno's (2008) study which suggested that resilience may be a factor that lowers PTSD symptoms among individuals exposed to such events. However, the present study did find that, for females, high levels of resilience are associated with high levels of behaviors involving attending church services and church-sponsored social events. A possible implication from this finding is that, for women, involvement in religious services and religious social activities may be a protective factor that is related to their ability to function and remain stable after exposure to a traumatic event.

The study then explored the issue of religiosity and PTSD. We found that there was no significant relationship between PTSD and any religious practice behaviors. However, as expected, the study did find that higher levels of intrinsic religious orientation were associated with more religious behaviors than was an external religious orientation. When specifically looking at males, the study found that higher levels of PTSD symptoms were associated with lower levels of attending church-sponsored social events.

Chatters, Taylor, Jackson, and Lincoln (2008) cited several sources in literature that suggest that religious practices and behaviors are important ways to cope with problematic life events and situations. In comparison to resilience, which is considered more of a personality characteristic that helps moderate negative stress and promote adaptation (Wagnild & Young, 1993), religious coping refers to various cognitions and behaviors used to manage reactions to an undesirable or threatening situation (Taylor, Chatters, & Levin, 2004). Hence, religious coping may tend to be more common in dealing with negative life events than resilience (Pargment, 1997).

Spirituality and religiosity are key aspects of Caribbean culture, with most of the population identifying themselves as Christian, practicing their Christianity alongside traditional beliefs from Vodoun, especially in Haiti (Dudley-Grant, & Etheridge, 2008). Gopaul-McNicol and Brice-Baker (1997) have noted that among Caribbean culture, religion is the preferred method of coping with mental health issues. This is supported by an interview with a Haitian licensed Master's level social worker (P. Y. Fausner, personnel communication, October 9, 2011) who indicated that Haitian people will turn to a Vodoun leader or a church pastor for psychological health concerns before seeking assistance from a trained mental health professional. In fact, research by Chatters and colleagues (2008) found that Black Caribbean women were more likely to utilize religious coping than men. This finding is similar to our finding in that Haitian women had a higher association between their level of resilience and church attendance and attending church social events. However, for the males in this study, higher levels of PTSD symptoms were associated with lower levels of church social events, suggesting that gender differences do exist as it pertains to how people deal with traumatic events.

P.Y. Fausner (personal communication, October 9, 2011) shared that Haitians are a strong people but have numerous problems as they pertain to living in extreme poverty. As a result of living in such arduous economic conditions and not knowing what the future may bring, Haitians have developed, over time, a high level of resilience to cope with their life circumstances. Fausner indicated that Haitians tend to internalize the problems they encounter and rely mostly on themselves and their immediate family to bring resolution before seeking any form of professional support. This may explain why the present study was unable to find a relationship between PTSD and resilience.

Fausner went on to state that after the earthquake, many Haitians were affected and did exhibit posttraumatic stress reactions but there were no resources available to help provide treatment. However, Haitian culture tends to mistrust outsiders (Dudley-Grant, & Etheridge, 2008) which may have, to some degree, contributed to the varied results found in this study. A major implication is that the ability to provide disaster mental health services to many of the Haitian people may be a challenge. On a more positive note to this challenge is the fact that education is valued throughout Caribbean society (Dudley-Grant, & Etheridge, 2008). Education is a key component for providing a comprehensive disaster mental health intervention system (Myers, & Wee, 2005). It is hoped that study will encourage further PTSD research among the Haitian people, as well as, encourage the development and implementation of disaster mental health services that build trust and are cultural sensitive to their present and future post-trauma needs.

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EAP-Based Critical Incident Stress Management: Utilization of a Practice–Based Assessment of Incident Severity Level in Responding to Workplace Trauma

Gary. S. DeFraia
Magellan Health Services

Abstract: *Central to the field of trauma psychology is assessment of the impact of critical incidents on individuals, as measured by individual symptoms of stress. Accordingly, the trauma literature reflects a proliferation of clinical impact of event scales. Workplace incidents however, affect not only individual employees, but also work organizations, requiring a multi-level response. Critical incident stress management (CISM) is the most prevalent multi-level incident response strategy utilized by organizations, often through specialized CISM units operating within their employee assistance programs (EAPs). While EAP-based CISM units seeks to support both individuals and organizations, studies focused on individual stress dominate the literature, mirroring assessment scales that tend to emphasize clinical as opposed to organizational practice. This research contributes to less-prevalent studies exploring incident characteristics as disruptive to organizations, rather than clinical symptoms as disruptive to individuals. To measure incident disruption, an EAP-based CISM unit developed a critical incident severity scale. By analyzing this unit's extensive practice database, this exploratory study examines how critical incident severity level varies among various types of incidents. Employing the methodology of clinical data mining, this practice-based research generates evidence-informed practice recommendations in the areas of EAP-based CISM intake assessment, organizational consultation and incident response planning. [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(2), pp. 105-122].*

Key words: *critical incident severity index scale; workplace trauma; critical incidents; critical incident stress management; employee assistance programs; clinical data mining; practice-based research*

In recent years tragic school shootings (Sandy Hook Elementary School, Virginia Tech) and massive devastation from natural disasters (Hurricanes Sandy and Katrina) have raised public awareness about psychological trauma. The impact of the wars in Afghanistan and Iraq on returning service members and their communities will likely serve to maintain or increase this awareness. Incidents potentially traumatizing to individuals are ubiquitous in society. The PTSD Alliance (2006) estimated that as high as 70% of adults in the United States have experienced a potentially traumatic event at least once in their lives. Potentially traumatic events occurring within the workplace, better known as critical incidents, are similarly increasingly prevalent (Chan, Chan, & Kee, 2012; Fairris & Brenner, 2001), resulting in significant disruption for work organizations (Bureau of Labor Statistics, 2010; Federal Bureau of Investigation, 2008, OSHA, 2007). The

Gary. S. DeFraia, Ph.D. is with Magellan Health Services. Correspondence regarding this article should be directed to Dr. DeFraia at gdefraia@hvc.rr.com

most prevalent strategy utilized by organizations to respond to incidents is critical incident stress management (CISM) (Everly & Mitchell, 1997; Flannery, 1998). This exploratory study reports on the work of a major EAP-based CISM unit operating within Magellan Health Services. It first details the ways traumatic stress symptoms present in the workplace and reviews the prevalence of CISM as the response strategy of choice within EAPs. Subsequent sections discuss how CISM situates within EAP settings, identifies challenges and constraints for EAP-Based CISM units and describes how the unit in the study addresses them. Next the article introduces a critical incident severity scale developed by the unit and reviews various types of incidents and their subtypes. The study's objective is to capitalizing on potential discoveries within the units' extensive practice database. Practice-based clinical data mining (CDM) is presented as adjunctive research methodology to university-based, controlled studies. Following presentation of results, the study closes with implications for CISM practice and recommendations for further research.

Expressions of Traumatic Stress in the Workplace

Across all occupational groups, a significant number of individuals in the workforce will experience trauma, which can lead to symptoms that meet criteria for a diagnosis of Acute Stress Disorder (ASD) or Post Traumatic Stress Disorder (PTSD) (Brewin, Andrews, Rose, & Kirk, 1999). Critical incidents cause physical, emotional, cognitive and behavioral stress symptoms. Physical symptoms can include fatigue, restlessness, insomnia, nausea, loss of appetite, and gastro-intestinal disturbances. Emotional reactions often reflect anxiety, grief, detachment, guilt, agitation or depression. Cognitive impairments, such as intrusive images, racing thoughts, poor concentration, despair and disbelief, are common as well. Finally, several behavioral expressions of traumatic stress include crying, neglecting basic needs, blaming self or others, poor decision making, social withdrawal, hypervigilance or substance abuse. These symptoms in turn compromise occupational functioning, presenting in the workplace as absenteeism, poor presenteeism (attending work, but in a highly distracted state), reduced productivity, increased work conflicts, diminished morale and loss of motivation. Employees may socially isolate themselves as a means of avoiding talking or thinking about the incident. Anxiety and depression can impair cognitive functioning

required for work tasks. Arousal symptoms create difficulties with sleep, resulting in tardiness and absenteeism, poor concentration on tasks or irritability with co-workers. An employee may become distressed merely at the thought of entering the workplace (Bolton et al., 2004). Kleinberg (2005) writes about "worker's block", the application of symptoms of PTSD to the workplace, particularly those that relate to avoidance of stimuli, numbing, diminished interest in activities, detachment and estrangement from others. He defines workers block as a vocational impairment, an emotional, attitudinal and relational disengagement from the job. To the uniformed manager, the employee may appear distracted, unmotivated or irresponsible. Clearly, workplace expressions of traumatic stress greatly affect both employee and organization. As employers assumes a central role in responding to workplace crises and disasters, it created the need for a work-based, comprehensive crisis response strategy (Everly & Mitchell, 1998).

Critical Incident Stress Management (CISM)

CISM (Mitchell, 2004) represents a comprehensive, integrative, multi-phased approach to crisis response incorporating several service components (Everly & Mitchell, 1997; Flannery, 1998). Components include pre-crisis preparation, small-group interventions, organizational consultation, referral and follow-up. On-site interventions frequently utilized as part of CISM include psychological first aid – PFA (Brymer et al., 2005; Everly, Barnett, & Links, 2012; Everly, Smith, & Lating, 2009; Weinberg, Nuttman-Shwartz, & Gilmore, 2005), critical incident stress debriefing – CISD (Everly & Mitchell, 1997, 1998; Mitchell, 1983, 1986, 2004; Mitchell & Everly, 1995) or trauma-focused cognitive behavioral therapy – TFCBT (Blanchard et al., 2003; Foa, Hearst-Ikeda, & Perry, 1995). Many critical incident teams coordinating these response activities register with and adhere to standards set by the International Critical Incident Stress Foundation (ICISF, 2013). CISM teams operate within government entities, community agencies, law enforcement, emergency services, unions, airlines, banks, retail stores, schools - and EAPs.

EAP-Based CISM

EAPs provide a wide range of worksite-based services to increase worker health and wellness, assist employees in resolving problems that negatively affect job satisfaction and

productivity and support organizational development. EAP's core services include confidential short-term counseling for employees, c*onsultation for managers on improving performance* and training programs for management and employees (Barker, 2003; Heery & Noon, 2001; IFEBS, 2008; NBGH, 2008). EAPs also provide specialized CISM services for client organizations. EAPs and organizations that sponsor them understand that workers are most productive when they are motivated, healthy and adapt constructively to stress, whether generated from day-to-day work situations or from the extraordinary challenges that follow critical incidents. While general EAP services address everyday workplace challenges, the acute needs of individuals and organizations post-incident are best addressed by specialized EAP-based CISM units.

Challenges and Constraints for EAP-Based CISM Units

EAP-Based CISM units face several challenges, summarized briefly here and discussed further below. Contrary to what is feasible in clinical practice settings, the workplace does not easily accommodate pre-screening of employees to identify which workers exhibit resistant, resilient or problematic stress responses (Nucifora, Langlieb, Siegal, Everly, & Kaminsky, 2007; Nucifora, Subbarao, & Hsu, 2012). While EAP-based CISM staff is largely unaware whether individual workers are at risk for a trauma disorder, due to employer demands that support groups be delivered immediately post-incident, interventions are generally delivered to workers whose levels of stress or risk factors are largely unknown. This requires on-site interventions to be appropriate for all levels of stress response. Finally, since critical incidents affect not only individuals but also work organizations, intake assessment and response planning need to accommodate organizational level needs.

Impact of Event Scales and Range of Stress Responses

Central to the field of trauma psychology is measurement of the impact of traumatic events on individuals. Accordingly, the trauma literature reflects a proliferation of scales clinically measuring symptom severity (Davidson et al., 1997; Derogatis, 1983; Devilly & Hutchings, 2004; Elklit, 1993; Foa, Riggs, Dancu, & Rothbaum, 1993; Goldberg, 1971; Hammerberg, 1991; Horowitz, Wilner, & Alvarez, 1979; Newman, Kaloupek, & Keane, 1996; Tehrani, Cox, & Cox, 2002; Weiss & Marmer, 1997). Within clinical practice

settings, it is feasible to employ such scales to inform trauma-focused interventions for individuals, who react with a range of stress responses. Individual stress response can range from resistant to resilient to requiring recovery. Resistance is a form of immunity, the ability to withstand the initial distress an incident causes. Resilience is the capability to quickly regain equilibrium after some level of distress. Recovery applies to those who do not regain functioning and require trauma-focused treatment (Nucifora et al., 2007; Nucifora et al., 2012). An estimated 86% of those exposed to traumatic stimuli are likely to exhibit resistance or resiliency and will not develop symptoms meeting criteria for ASD or PTSD (APA, 2000; Harvey & Bryant, 1998; Kessler, Chiu, Demler, & Walters, 2005; NIMH, 2006; PTSDA, 2006). While all stress responses justifiably warrant attention, sometimes overlooked is the high probability that the majority of those exposed exhibit normal reactions and will resume prior functioning without complication. Screening of exposed workers to determine their specific level of stress response would substantially informs response planning. However, in the aftermath of a workplace incident, there are multiple barriers to accessing individuals.

Clinical Screening Post-Incident: Universally Applicable Interventions

In the post-incident environment, systematic screening for risk factors, protective factors, resistance, resiliency or a stress disorder is generally not feasible. Due to the workplace requirement to provide a rapid response within a few days, or in some cases, within a few hours, the time available between incident and intervention is generally inadequate for scheduling and conducting interviews or administering assessments. Additionally, since in most circumstances attendance is voluntary, CISM providers rarely know which employees will attend a group or individual session ahead of time. Further, the post-incident work environment may be unsafe, unsecured or chaotic, which can compromise logistics. Finally, workers may not be available to provide advanced consent or may not be in a mental or emotional state conducive to participate in an assessment. Due to the demand to respond rapidly, on-site providers often deliver interventions with no understanding of whether an incident is clinically traumatizing, or for whom. As a consequence, in the context of EAP-based CISM practice, workplace interventions need be safe and effective for all recipients – resistant and resilient employees as well as those with clinical symptoms of ASD

or early symptoms of PTSD. This contrasts sharply with screening capabilities in a clinical practice setting and the ability to target intervention to fit individual stress response.

Organizational Level Response Planning

Despite these challenges, EAP-based CISM units need to devise an incident response plan at intake and deliver services appropriate for all levels of stress response. They additionally have to quickly assess the nature of the incident and its potential impacts on the organization. This multi-level objective to support employees and organizations is consistent with the EAP principle historically referred to as the "dual client relationship" (EAPA, 2009). Supporting management in restoring critical organizational functioning and assisting employees with stress symptoms are equally important objectives of EAP-based CISM practice.

An EAP-Based, CISM Unit's Approach: Incident Severity vs. Symptom Severity

Responding to more than 3,000 critical incidents each year, the EAP-based CISM unit in this study coordinates various services, including pre-incident training, intake assessment, consultation, response planning, delivery of on-site interventions and follow-up. To operate within constraints on pre-screening workers while providing an intervention appropriate for all levels of stress, the unit relies on PFA as its most commonly delivered on-site intervention. For intake assessment, in place of pre-screening for worker stress levels, the unit focuses on assessing what is readily observable – the nature of an incident itself and its potential to disrupt organizational functioning. To accomplish this, they sought an instrument to determine incident severity level. To be practical in the unit's high volume CISM environment, the instrument needed to be quickly and easily administered at intake and unobtrusive to callers in distress. Due to their inability to find such a scale, the unit developed internally a scale for their own use. The result was a Critical Incident Severity Index Scale (CrISIS). In contrast to clinical impact of event scales measuring symptom severity for individuals, CrISIS measures incident characteristics. The scale is based on the theory that extent of organizational disruption depends on variation among specific incident characteristics. Minor incidents will minimally impact organizations while major incidents can be disruptive to such an extent that the organization ceases operation for a time. The unit employed

their scale to inform organizational consultation and incident response planning.

Critical Incident Severity Index Scale - Revised (CrISIS-R)

Based on their extensive practice observations of thousands of incidents and their disruptive impact on organizations, the unit designed their original scale to include nine indices, each corresponding to an incident characteristic (McCullough et al., 2005). The original indices included 1) the portion of employees involved; 2) types of employee exposure; 3) level of violence; 4) impact on attendance; 5) level of threat; 6) amount of media exposure; 7) level of worker injury; 8) workgroup history of prior trauma: and 9) extent of advance notice of event. To test scale reliability for this study a Cronbach's Alpha was conducted. Three original incident characteristics, (level of worker injury, workgroup history of prior trauma and extent of advanced notice of event) thought to inform incident severity level, compromised scale reliability. While these characteristics inform planning and services, they were empirically unrelated to incident severity level as measured by CrISIS. Based on results, the scale was reduced to include six remaining indices (CrISIS-R), which has an Alpha of .7. Table 1 presents a description of the six indices.

Descriptive Aanalysis of a Critical Incident Database

CrISIS-R-Scores

Each of the six indices is rated on a Likert scale with a maximum rating of five, allowing for a maximum combined incident severity score of 30. From 2006 to 2008, the CISM unit administered the CrISIS-R scale at intake for 5,181 incidents. The mean score is 12.21. The standard deviation is 5.64. The score range is 26 and the median score is 13. Figure 1 displays the overall scale score distribution graphically.

A bi-modal pattern is evident, with spikes for mild and severe incidents. This is consistent with two general classifications of events generating requests for assistance – traditional critical incidents vs. less severe organizational incidents – discussed further below. To further analyze incident severity, the unit created five incident severity categories ranging in impact from low to catastrophic. Each category encompasses a range of six CrISIS-R scores. Severity categories, score ranges and distribution of incident scores are presented in Table 2.

Table 1. CrISIS-R Scale Indices	
Index	**Description**
Portion of Employees Involved	Portion of employees directly vs. indirectly involved in an incident relative to the total employees at the site where the incident occurred. The greater the portion of both combined, the higher the index score.
Employees' Exposure Type	Extent to which employees directly witness the incident vs. indirectly encountering the incident or reacting to others who witnessed it. The more direct exposure, the higher the index rating.
Violence Level	A hierarchy of escalating external force from minimal (earning a lower rating) to bodily harm and weapons involvement (earning higher ratings).
Attendance Impact	Length of time workers are unable to return to work post-incident, with score increasing progressively with longer durations of work shut down.
Threat Level	Employees' appraisal of threatening stimuli and the level of subsequent arousal accompanying it. Higher levels of perceived threat receive a higher score.
Media Exposure	Level of internal and external publicity surrounding an incident, whether organizational communications or local, statewide, national or international news. The more extensive the coverage the higher the rating.

Catastrophic and severe incidents, corresponding to a severity score of 19 or higher, represented a combined 728 incidents (14%). Most incidents however, were moderate to low in impact. Incident frequency within these categories includes: moderate impact (37%), mild impact (30%) and low impact (19%).

Critical Incidents vs. Organizational Incidents

EAP-based CISM units often serve employers in a manner broader than typical of traditional CISM services. Many employers expect their EAP-based CISM services to address a continuum of workplace events, from every day work stress to potentially traumatic incidents. As a result, incidents for which organizations sought assistance from the unit divide into two broad classifications – traditional critical incidents, which are potentially traumatic vs. organizational incidents, which rarely traumatic. Critical incidents are unpredictable, severely stressful and outside of normal experience, including events such as disasters and criminal acts. Organizational incidents, while also disruptive, reflect situational stress endemic in the workplace. Organizational incidents can include large scale events such as a downsizing, site closing

or a facility relocation, or smaller scale, isolated incidents, such as a distressed individual worker, peer conflicts or inter-departmental crises. Out of 5,181 incidents for which the unit administered CrISIS-R, 4,532 incidents (87%) were classified as critical and 649 (13%) were classified as organizational.

Critical Incidents: Types and Subtypes

The CISM unit divides critical incidents into five overall types – disaster, criminal act, accident, death and illness. They further divide each overall critical incident type into subtypes.

Disasters

Disasters are large scale, natural or industrial events. While infrequent (representing only 2% of incidents in the database), disasters can be devastating to a large area, including thousands of employees (Hillenberg & Wolf, 1988). The most common subtype of disasters in the database is hurricanes (39% of disasters). The 2008 season was the most active with 5 major hurricanes, including the very destructive Hurricane Ike. Explosions were the next most frequent subtype (17%). Other subtypes of natural disasters can include wildfires,

Figure 1. Distribution of CrISIS-R Scores (2006 – 2008)
N = 5,181
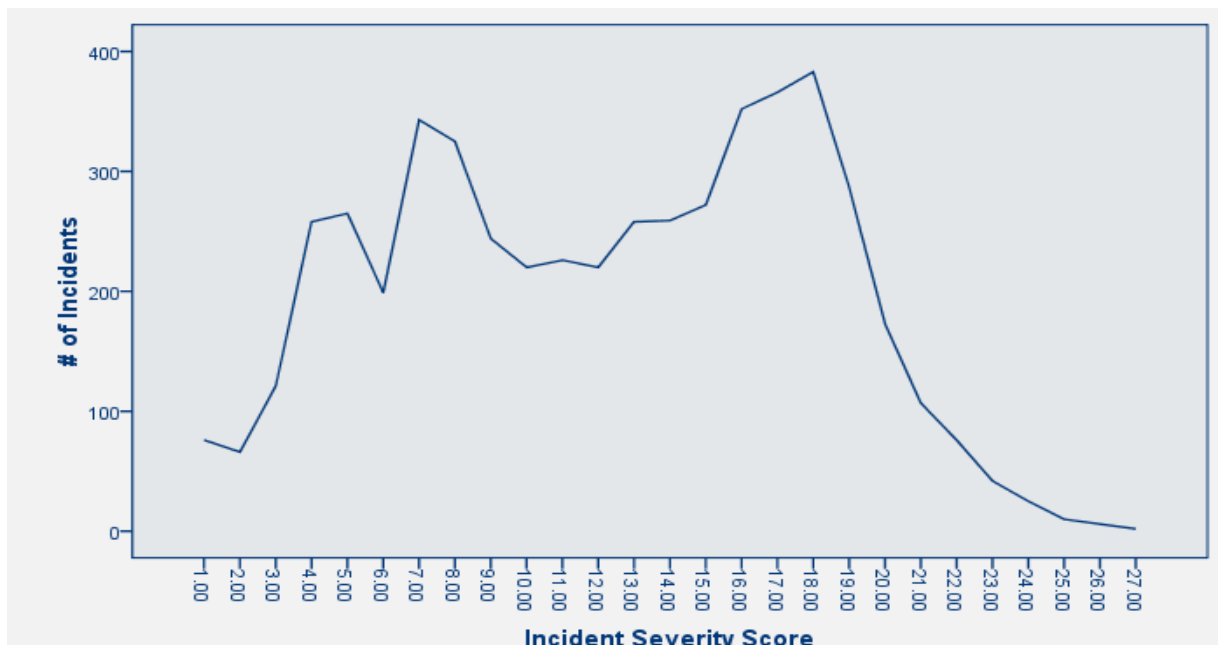
floods, tornadoes and earthquakes. Additional subtypes of industrial disasters are chemical fires, chemical spills and toxic exposure. Man made disasters and toxic exposures are increasing (Flannery, 1996). As society becomes more technologically complicated, mechanical parts' fatigue, human error and negligence result in large scale, catastrophes that cause psychological trauma (Lloyd & D'Antonio, 1992). In 1984, Union Carbide's massive, toxic gas leak in Bhopal, India, frequently cited as the world's worst industrial disaster, resulted in more than 20,000 deaths (Eckerman, 2005). Not only are disasters disruptive psychologically and injurious physically, they can destroy infrastructure, communications and transportation and separate coworkers, family and friends. Widespread destruction compromises emergency response and delays interventions, increasing traumatic stress (NASW, 2006).

Accidents

In 2008, the Bureau of Labor Statistics (2010) recorded 4.6 million non-fatal accidental injuries. Lester et al. (2001) note that 6.1 million employees experienced accidental injuries on the job in a given year, many under dramatic conditions such as amputations, burns or severe head trauma. Injuries from transportation accidents occur while traveling by train, bus or car. Manufacturing and construction workers

risk injury from equipment malfunctions or unsafe working conditions. Health care staff is particularly vulnerable to injury (Antai-Otong, 2001). However, despite their frequency in the workplace generally, accidents rarely triggered requests for assistance from the unit, comprising only 2% of incidents within the study period. Among accidents in the database, the most common subtype is accidental injury (71% of accidents), followed by motor vehicle accidents (22%).

Criminal Acts

As violence increases in society in general, it increases in the workplace (Blair, 1991; Gwaltney, 1987; Mantell & Huntting, 1987; Walsh & Rue, 1987). Criminal acts were the second most prevalent overall incident type in the unit's database, representing 38% of incidents. Among subtypes of criminal acts, robbery represented 91%, consistent with the frequency with which robbery occurs in the workplace (Bradit & Normandeau, 1987). In 2008, law enforcement recorded 5,682 bank robberies (Federal Bureau of Investigation, 2008). Other criminal subtypes, much less prevalent in the database, include criminally threatening behavior, abuse or assault. While fewer in occurrence, criminal acts involving sexual or physical assault are severely traumatic. Flannery (2001) and Bell (1995) have written extensively about assaults, citing their "human intentionality" (the intentional action

Table 2. Distribution of CrISIS-R Scores by Severity Category				
	Scores Range	Frequency	Percent	Cumulative Percent
Catastrophic Impact	25 to 30	18	0.3%	0.3%
Severe Impact	19 to 24	710	13.7%	14.1%
Moderate Impact	13 to 18	1890	36.5%	50.5%
Mild Impact	7 to 12	1578	30.5%	81.0%
Low Impact	0 to 6	985	19.0%	100.0%
Total		5181	100%	

of another person specifically to do one harm) as increasing traumatic stress. Disgruntled co-workers and customers assault employees or managers (Blair, 1991; Flannery, 1996; Mathews, 1994). Health care staff is particularly vulnerable to assaults by clients (Antai-Otong, 2001).

Workplace Death

In 2008, there were 5,051 workplace deaths nationwide (Bureau of Labor Statistics, 2010) and over the study period employee death was the most common overall incident type for which the units' client organizations sought assistance (44%). The subtype of death by natural causes represented the majority of deaths (45%), followed by subtypes of accidental death (27%), suicide (15%) and homicide (13%). Natural employee deaths can occur at work, home or in a hospital, but even off-site co-worker deaths can still have a dramatic impact on the workplace. Accidental loss of life occurs when emergency workers respond to disasters, when firefighters are lost in a rescue attempts or when heavy equipment malfunctions. The subtype suicide is particularly stressful for the workplace, and in 2008 workplace suicides rose 28% over the previous year (Bureau of Labor Statistics, 2010). Suicide, whether occurring visibly in the workplace (Bolton et al., 2004) or unobserved off-site (Pennebaker & O'Heeron, 1984) can be a traumatic experience for co-workers. Homicide may occur as an employee is murdered performing his or her job functions (Castillo & Jenkins, 1994; Pulley, 2005). Line of duty homicide examples include police officers killed, lawyers murdered for retribution, disgruntled employees killing managers, colleagues murdered by co-workers or retail or health care staff fatally attacked by aggressive clients. Work-

ers in retail sales and service industries are at the highest risk for workplace homicide (Bradit & Normandeau, 1987; Jenkins, Layne, & Kisner, 1992; Keim, 1999; Toscano, 1995; Yang & Lester, 1988). In 2006, workplace homicide was the leading cause of death in working women and the second leading cause of workplace death in men (OSHA, 2007).

Illness

Health care staff risks illness from needle pricks and a myriad of infectious diseases. Large-scale infectious epidemics, such as bird flu, or their threat, can create significant workplace stress. In the sample, however, illness was rarely a precipitant for a client organization to contact the unit, representing only 2% of incidents. Among those incidents, the unit assisted with two illness subtypes – terminal (52% of illnesses) vs. non-terminal (48%). Whether occupational in etiology or occurring naturally, illness can be debilitating to an afflicted employee and detrimental to the organization. Bolton et al. (2004) note that observing a life-threatening illness can trigger stress in co-workers. Gluhoski and Wortman (1996) discuss the repercussions of non-terminal illness on the affected worker and organization.

Organizational Incidents: Types and Subtypes

The unit divides the classification of organizational incidents into two overall incident types – employee stress vs. organizational stress. Each further subdivides into subtypes. While assisting workers and organizations with employee and organizational stressors is normally accomplished by off-site

EAP management consultations and EAP counseling (Van Den Bergh, 2000), when these situations escalate to a level disruptive to the workplace, or there is anticipation they will escalate, organizations approach the CISM unit for on-site assistance.

Employee Stress

The National Institute for Occupational Safety and Health defines work stress as a conflict between work demands and the capabilities, resources or needs of workers (NIOSH, 2009). Several authors investigated factors associated with employee stress (House, 1981; Karasek, 1979; Karasek & Theorell, 1990; Lerner, 1985; McGrath, 1970). Azaroff et al. (2010) cite various sources of work stress, including role change, role tension, time pressure, conflicting directives and inadequate autonomy. Additional examples of work stress include strained manager-employee relations, frustrating administrative procedures, multi-tasking, demanding workloads and deadlines, shift duties and limited resources. Work-induced stress is inherent in today's workplace (McFarlane & Bryant, 2007; Tesh, 1988) and work stress-related disorders are a growing concern. In 2009, NIOSH (2009) cited one third of employees reported high levels of work stress. Dewy (1991) reported 70% of workers stated work stress caused frequent health and productivity problems and 33% considered resigning from their jobs. Despite the prevalence of work stress generally, employee stress, represents only 3% of all incidents, suggesting that EAP management consultation and employee counseling address most routine causes of work stress. While very few instances of employee stress escalated to a level triggering a call to the CISM unit, among subtypes addressed the most common were conflict resolution (27% of employee stressors) and general job-related stress (24%).

Organizational Stress

While rarely traumatic to individual workers, organizational stressors can stress a large portion of a workforce. Representing 9% of all incidents in the database, organizational stress was the third most frequent overall type. Organizational stressors include major technological change, change in job tasks, culture shift, merger or acquisition, bankruptcy or outsourcing – events which can create significant distress for employers, employees and their families (Bargal & Karger, 1991; Johnson, 1995; Mor-Barak & Bargal, 2000;

Rabner, Hawkins, & Hawkins, 1995). Also intrinsic in today's workplace is large scale job insecurity. Even during times of strong economic growth, job security is threatened by outsourcing and globalization. Consistent with this trend the database shows reduction in force as the most prevalent subtype of organizational stressors (69%). The next most common is a site closing or relocation (16%), followed by termination of employees with high organizational visibility (11%) and reorganization (4%). While such incidents are not as stressful as critical incidents, they can still be disabling to organizations and workers and therefore warrant intervention to ameliorate them.

Incident Categorization Scheme

In summary, the unit's incident categorization scheme accommodates three levels: a broad classification (critical vs. organizational incident), overall incident type (disasters, criminal acts, organizational stress, etc.) and incident subtype. For example, in the unit's categorization scheme for a workplace murder the classification is critical incident and the incident type and subtype are death and homicide. For a dispute between co-workers the classification is organizational incident and the type and subtype are employee stress and conflict resolution.

Research Setting

The research setting is Magellan Health Services, a large, national EAP. During a three-year period this EAP served over 1400 client organizations. Over 43 million individuals (one out of every six Americans) were eligible for its services. The EAP's CISM unit responded to more than 3,000 incidents each year. Due to the volume of requests for assistance, the EAP maintains a dedicated and specialized CISM unit to respond to workplace incidents. Two characteristics therefore positioned this program as an ideal setting for a practice-based CISM study. The unit is the highly experienced and one of the largest of its kind, an exemplar in the field, and it maintains a large database of computerized practice records, a rich source of data unprecedented in size and well suited for quantitative research (DeFraia, 2011; Epstein, 2009). Since the early 1990s, this unit collected extensive data on over 60,000 workplace incidents, presenting a unique opportunity to conduct practice-based research examining the severity level of critical incidents.

CISM Unit: Structure, Services and Data Collection

The CISM unit consists of three specialized teams – an intake team, a coordination team and a follow-up team. Intake consultants conduct an incident assessment, gather details about the event and identify workgroup and organizational needs and expectations. The intake team provides immediate telephonic consultation, sends educational materials for employees and management and delivers communications promoting the EAP as a resource to support affected workers. They also provide guidance on developing an overall response strategy. As part of the response plan, the intake team offers telephonic follow-up services. Follow-up includes additional consultation, monitoring workgroup and organizational recovery and determining need for additional services. Over the three-year period, the intake team received 9,768 requests for assistance. Organizations involved in 4,497 incidents (46%) declined follow-up and these incidents were closed. Those organizations accepting follow-up (5,181, 54%) were administered the CrISIS-R. The intake team hands off these incidents to a coordination team. To supplement initial telephonic assistance, coordination staff offers services on-site (group sessions, individual counseling and management consultations). The majority of organizations (4500, 87%) elected to provide on-site services while 681 (13%) declined them. Somewhat fewer organizations followed through with delivering on-site services (4337, 84%). After services are scheduled, a follow-up team takes over the incident, making multiple outreaches to the organization at regular intervals.

Research Objective

Considering the EAP-based CISM unit in this study is only one of literally hundreds that provide CISM services, the role of EAP-based CISM in responding to workplace trauma is extensive. Despite widespread reliance on EAP-based units to address workplace trauma and the massive amounts of practice data they collect, there are few published research studies capitalizing on the potential insights that existing CISM practice data may provide. The research question posed is whether a relationship exists between incident types and incident severity level. Insight into this association would be of value to CISM practitioners in intake assessment, consultation and response planning.

METHODOLOGY

An anecdotal scan of articles in professional journals generally shows university-based research outnumbers practice-based research. University studies have many advantages, including a primary focus on research, access to funding and resources, the ability to conduct controlled studies and the leadership of premier trauma researchers. While the contribution of university-based studies to the field is invaluable, practice-based research, as a complementary alternative, offers unique advantages. Practice-based studies generate "evidenced informed practice" (DeFraia, 2010; Epstein, 2009; McNeill, 2006). Findings based on practice data are immediately relevant to practice, eliminating the need to address translational issues between research and practice settings (Epstein, 2009). While random, controlled studies are sometimes feasible within practice settings, in many programs the protocols, time and resources required to conduct them are not. An alternative to controlled research is the methodology of CDM. Advantages of CDM are its reliance on readily available and relevant practice data and its ability to inform practice unobtrusively (Epstein & Blumenfield, 2001). CDM research does not disrupt day-to-day processes of a unit and its interactions with client organizations. Reflecting this approach, this study is practice-based, retrospective and exploratory, employing the methodology of CDM to examine data produced by a single EAP-based CISM program. To explore the role of incident severity level in CISM practice, bivariate analyses were conducted to test whether certain incident types and subtypes reflect significant differences in CrISIS-R scores. The statistical test employed was Analysis of Variance (ANOVA). As an exploratory study, the level of statistical significance set was $p < .05$. Effect size was measured by eta squared.

RESULTS

CrISIS-R Score and Overall Incident Type

Incident types vary in their association with incidences of traumatic stress disorders (Antai-Otong, 2001; Elklit, 2002; Flannery, 1996; Gluhoski & Wortman, 1996; Green et al., 1990; Lloyd & D'Antonio, 1992; Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992; Toscano, 1995). This analysis explores the related question of whether incident types also

associate with different levels of incident severity as measured by CrISIS-R. Table 3 details ANOVA results.

Findings

The effect of overall incident type is significant for mean severity score, $F(6, 5174) = 869.395, p = .000, \acute{\eta}^2=.502,$ with a medium effect size. The highest mean CrISIS-R score is seen for disaster (17.59), followed by criminal act (17.00), accident (13.89), employee stress (9.69), death (9.05), illness (8.74) and organizational stress (7.77).

DISCUSSION

Differences in mean severity score among incident types seem consistent with the amount of organizational disruption associated with specific incidents. Disasters, which are destructive on a large scale, have the highest mean incident severity score. Criminal acts have the next highest mean score, suggesting their "human intentionality" may create as much distress for organizations as it does for individuals. Accidents are fairly disruptive as well, which fits with their unpredictability and potential for severe injury. The lower mean CrISIS-R score for employee stress is consistent with its typically isolated impact. While the score differences between employee stress, illness and death are not meaningful, it is surprisingly that employee stress (an organizational incident) scores higher than both illness and death (critical incidents).

This runs counter to the assumption that critical incidents are generally more severe than organizational incidents. An explanation may be that all three incidents share the characteristic of limited scope of organizational impact. Organizational stresses earned the lowest mean score, consistent with their unique "organizational intentionality" - meaning their occurrence is the often the result of intentional management decisions. Mergers, reorganizations, facility closings or lay offs are often announced ahead of time. While stressful, predictability of such events may account for a lower incident severity score.

CrISIS-R Score and Incident Subtype

Table 4 displays ANOVA results for an association between incident subtype and mean CrISIS-R Score.

Findings

The effect of incident subtype is significant for mean incident severity score, $F(34, 5146) = 207.161, p = .000, \acute{\eta}^2=.578,$ with a medium effect size. For disaster subtypes, the highest mean CrISIS-R scores are observed for hurricanes (20.49), tornados (18.89), and explosions (16.58). For criminal subtypes, robberies were the most severe (17.10) followed by assaults (16.65). Among accident subtypes, accidental injuries were the highest scoring incidents (14.73). Job stress (11.13) and conflict resolution (9.30) scored highest among

Incident Type	N	%	M	SD
Disaster	111	2%	17.59	5.83
Criminal Act	1950	38%	17.00	3.09
Accident	109	2%	13.89	4.71
Employee Stress	163	3%	9.69	4.45
Death	2258	44%	9.05	4.43
Illness	104	2%	8.74	3.83
Organization Stress	486	9%	7.77	4.16
Total	5181	100%	12.22	5.64

Table 3.
Mean Incident Severity Score:
Association with Incident Type
ANOVA

$F(6, 5174) = 869.395, p = .000, \acute{\eta}2= .502$

Incident Type	Subtype	N	% of Type	M	SD
Disaster	Other Industrial Disaster	3	2.7%	21.33	4.51
	Hurricane	43	38.7%	20.49	4.56
	Tornado	9	8.1%	18.89	2.93
	Explosion	19	17.1%	16.58	6.62
	Electrocution	8	7.2%	16.38	2.56
	Biochemical Accident	1	0.9%	16.00	0.00
	Flood	6	5.4%	15.33	2.88
	Industrial Fire	14	12.6%	15.00	5.17
	Natural Fire	5	4.5%	13.00	6.75
	Earthquake	3	2.7%	3.00	3.46
Criminal Act	Robbery	1780	91.3%	17.10	2.96
	Assault	55	2.8%	16.65	4.50
	Abuse/Neglect	3	0.2%	16.33	1.53
	Other Criminal Act	47	2.4%	15.85	3.95
	Threat of Violence	65	3.3%	15.45	3.87
Accident	Accident - Other	5	4.6%	15.60	5.59
	Accidental Injury	77	70.6%	14.73	4.03
	Accidental Fire	3	2.8%	12.33	7.77
	Motor Vehicle Accident	24	22.0%	11.04	5.28
Employee Stress	Job-related Stress	40	24.4%	11.13	4.87
	Multiple Stressors	21	12.8%	10.90	4.32
	Peer Impact	24	14.6%	10.38	3.84
	Conflict Resolution	44	26.8%	9.30	3.44
	Other Employee Incident	12	7.3%	9.17	3.35
	Individual Crisis	23	14.0%	6.30	5.00
Death	Homicide	294	13.0%	12.91	5.29
	Accidental Death	619	27.4%	10.60	4.33
	Suicide	334	14.8%	8.72	3.56
	Natural Death	1011	44.8%	7.09	3.21
Illness	Non-Terminal Illness	50	48.5%	10.16	4.02
	Terminal Illness	53	51.5%	7.43	3.17
Organizational Stress	Site Closing or Relocation	77	15.8%	8.75	3.44
	Reduction in Force	333	68.5%	7.90	4.12
	Reorganization	23	4.7%	6.57	4.43
	Termination of Employees	53	10.9%	6.04	4.68
Total		5181		12.22	5.64

Table 4.
Mean Incident Severity Score:
Association with Incident Subtype
ANOVA

F(34, 5146) = 207.161, p = .000, ή2= .578

employee stressors. Among subtypes of death, homicide (12.91) and accidental death (10.60) have the highest mean scores. Finally, among organizational stressors site closings/relocations were the highest scoring subtype (8.75) followed by reductions in force (7.90).

DISCUSSION

Very high severity scores observed for the disaster subtypes of hurricanes, tornadoes and explosions were expected for these dramatic and large scale events. Biochemical accidents, floods and fires score high as well, consistent with their destructive characteristics. The unexpectedly low mean score for the few workgroups affected by an earthquake is likely due to the workgroup being impacted only indirectly through family located in an earthquake impacted zone elsewhere. Among criminal subtypes, robbery scored the highest, followed by assaults, abuse/neglect and threats of violence. In addition to generating more severe individual symptoms, their human intentionality may also account for more severe organizational disruption. A possible reason for accidental injuries scoring highest among accident subtypes is they are unexpected and arbitrary, potentially afflicting any worker. Among employee stress subtypes, job-related stress scores higher than stressors involving co-workers (inter-worker conflict or a co-worker's crisis). Homicide, as anticipated given its unexpectedness, human intentionality and devastating impact, has the highest mean score among subtypes of death. Accidental death has the next highest mean score, followed by suicide. While their score difference is not meaningful, it is surprising that accidental death scores higher than suicide, suggesting that a death that is accidental may be more disruptive than one that is self-inflicted. One possible explanation is that, similar to accidental injuries, accidental deaths are both arbitrary and potentially universally applicable, whereas suicide may be viewed as self-inflicted and potentially affecting very few workers and therefore less impactful on an organizational level. A related influence, not captured by the database, is whether a co-worker suicide occurred within the workplace or in the community. As expected, natural employee death, which is often anticipated, has a very low mean score. Among illness subtypes, non-terminal illnesses scored higher than terminal illnesses. This may be due to the characteristic that many terminal illnesses allow co-workers to prepare for an anticipated death. Finally, for organizational stressors, the relatively high score for site closings/relocations is consistent with their widespread, albeit non-traumatic impact.

Practice Implications

The readily observable characteristics of an incident can inform intake assessment, organizational consultation and incident response planning. CrISIS-R represents a potential measure of an incident's severity level as based on incident characteristics disruptive to organizations. While different incident types intuitively associate with more or less severity, in practice, contingent on specific incident characteristics, an event associated with a high level of disruption (i.e. robbery), under certain circumstances, may be less so. For example, two robberies could vary significantly in characteristics. One may have involved a weapon while the other did not or one may have received more extensive media coverage. The two incidents will generate different CrISIS-R scores. Incorporation of CrISIS-R score into response planning guards against assumptions that a particular type of incident is more or less disruptive to the organization and therefore requires a higher or lower level of response or interventions.

A measure of incident severity based on incident characteristics may also help CISM practitioners inform organizational decisions about services, often made under stressful circumstances. Organizational assessment about the impact of an event and subsequent demands for specific types of interventions, their timing and overall level of services can all be unduly influenced by unfounded overreactrions, beliefs, or assumptions. The availability of an objective measure of incident severity level and normative data may assist staff in securing agreement to better align services with needs. For example, if organizations with a highly scored incident decline to provide recommended services on-site or accept follow-up services, CISM intake consultants can explore the caller's beliefs and assumptions regarding incident severity and corresponding response planning. Advising the requestor that for incidents of similar severity peer organizations provide services and complete follow-up may improve acceptance of these recommendations. On the other hand, an organization experiencing a mild incident may demand immediate, multiple and intensive group interventions. To guide the organization towards a more appropriate response, the practitioner can cite severity score and the timing and level of services appropriate for the incident.

It is essential that managers are prepared to engage employees constructively post-incident, especially for more severe incidents. Intake consultation should communicate management's pivotal role in employee recovery and recommend on-site management consultations as part of the incident response plan. In addition, consultants should consider whether the organization would benefit from scheduling training on managing performance in the aftermath of an incident. Such training would increase manager unawareness of how symptoms of traumatic stress express themselves in the workplace as performance issues. For organizations declining management consultations or training, CISM staff could again reference normative data confirming most organizations provide these services.

Study Limitations

With an Alpha of .7, scale reliability falls outside the desired range of .8 to .9. Additionally, as exploratory research using pre-existing practice data, the study is by definition retrospective, precluding randomization within a controlled design, limiting its generalizability. Another, and anticipated, limitation of clinical data mining studies is data intended for practice or program administration may not be structured optimally for research. For some variables, pre-existing data produced less than optimal distributions for analysis. Also, characteristic of research testing for bivariate associations within a very large sample is a high likelihood of finding statistically significant relationships. Lastly, effect sizes were only medium in strength.

These limitations indicate results should be considered tentative, pending testing in prospective, controlled research.

Recommendations for Further Research

CrISIS-R Scales Improvement

While this study confirmed CrISIS-R scores varied significantly among incident types and subtypes, a general association provides no insight into which incident characteristics account for the observed variance. An expanded CrISIS-R, incorporating additional characteristics, could generate a comprehensive incident typology – a more inclusive profile of incident characteristics. Use of an expanded incident profile could also further investigation into why incident types associate with more or less incident severity. To supplement the current six indices, Table 5 proposes additional indices.

Expansion of the scale may also improve the reliability of CrISIS-R, which needs continue scale refinement to improve its reliability to the desired Alpha and to produce stronger effect sizes.

Incident Severity and Individual Symptoms

Future research could examine whether a link can be established between incident severity, as measured by incident characteristics (CrISIS-R) and symptom severity, as measured by worker's clinical symptoms. As noted, several clinical impact of event scales measuring disruption to individuals are available.

Incident Severity and Organizational "Symptoms"

CrISIS-R, as a measure of incident featurespotentially disruptive to organizations, does not measure extent of organizational disruption. Its' association with incident types,

Table 5. Proposed Additional CrISIS-R Indices	
Incident Characteristic/Index	Variation
Site of Event	Workplace vs. outside workplace
Scale	Large scale vs. limited, localized
Origin	Natural vs. man-made
Human Intentionality	Intentional act vs. accidental occurrence
Organizational Intentionality	Planned management decision vs. unpredictable event
Predictability	Anticipated vs. unanticipated
Preventability	Preventable vs. not preventable
Duration	Singular event vs. enduring stressor
Fatality	Involving deaths vs. no deaths

while informative, provides no insight into how incident severity may associate with specific organizational outcomes post-incident. A follow-up CDM study could pursue this relationship by testing the CISM database for a relationship between CrISIS-R scores and various organizational outcomes available in the database, such as employee retention or post-incident performance. An alternative would be identifying an assessment scale measuring the ways in which the workplace is impacted by an event, a measure of post-incident organizational "symptoms". Such a scale, administered during follow-up, would compliment the administration of CrISIS-R at intake, allowing for examining an association between measures of incident severity and measures of organizational impact.

Organizations' Service Delivery Decisions

Three organizational service decisions are of interest to CISM units: whether an organization elects to supplement telephonic services with on-site services, whether the organization follows through with delivering on-site services and whether they accept follow-up services. As observed for

The organization accepted the recommendation to deliver on-site services for 4500 incidents (87%), while for 681 incidents (13%), the organization declined. Of the 4500 initially intending to provide services on-site, 203 (3%) did not follow though with delivering them. Which factors influence initial client organizations' decision or their deviation from intent to deliver services on site? For follow-up services, the unit offered them for 9,678 incidents, but nearly half (46%) declined them. Which factors, whether incident-related, a CISM unit's approach to offering follow-up or factors within the client organization might influence this decision? Since follow-up is considered essential to CISM practice, understanding which variables predict for accepting it would enhance CISM practice.

CONCLUSIONS

While CISM seeks to equally support individuals and organizations, measurement of individual symptoms of traumatic stress and clinical practice dominate the trauma literature, mirroring practitioner orientation that tends to emphasize clinical as opposed to organizational practice. This study contributes to less-prevalent studies focusing on the organizational level. To address the ways employee stress

symptoms impair organizational functioning, many employers turn to their EAPs, which rely on CISM as the preferred incident management strategy. However, the application of CISM processes within EAP-based units poses challenges, including the need to intervene on the organizational level and assist employees without knowledge of their risk factors or stress response level. To adapt to these challenges and develop intake assessment procedures that inform organizational consultation, an EAP-based CISM unit developed a critical incident severity scale (CrISIS-R), a measurement based on incident characteristics considered disruptive to the workplace. To capitalize on potential insights existing within a CISM practice data, this retrospective, exploratory study examined whether incident severity level associates with various critical incidents types and subtypes. The effect of incident type was found to be significant for mean CrISIS-R score for both overall incident types and their subtypes. Results suggest evidence-informed practice recommendations in the areas of CISM intake assessment, organizational consultation and incident response planning.

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Resilient Leadership and the Organizational Culture of Resilience: Construct Validation

George S. Everly, Jr,
The Johns Hopkins University School of Medicine,
The Johns Hopkins Bloomberg School of Public Health,
Loyola University Maryland

Kenneth J. Smith
Department of Accounting and Legal Studies
Salisbury University

Rachel Lobo
Loyola University Maryland

Abstract: *Political, economic, and social unrest and uncertainty seem replete throughout the world. Within the United States, political vitriol and economic volatility have led to severe economic restrictions. Both government and private sector organizations are being asked to do more with less. The specter of dramatic changes in healthcare creates a condition of uncertainty affecting budget allocations and hiring practices. If ever there was a time when a "resilient culture" was needed, it is now. In this paper we shall discuss the application of "tipping point" theory (Gladwell, 2000) operationalized through a special form of leadership: "resilient leadership" (Everly, Strouse, Everly, 2010). Resilient leadership is consistent with Gladwell's "Law of the Few" and strives to create an organizational culture of resilience by implementing an initial change within no more than 20% of an organization's workforce. It is expected that such a minority, if chosen correctly, will "tip" the rest of the organization toward enhanced resilience, ideally creating a self-sustaining culture of resilience. This paper reports on the empirical foundations and construct validation of "resilient leadership." [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(2), pp. 123-128].*

Key words: *resilience, leadership, crisis leadership, resilient leadership, culture of resilience.*

The Problem

Uncertainty in United States healthcare, real estate, and stock markets make planning and resource allocation chal-

lenging at best for many organizations. Domestically, the wars in Afghanistan and Iraq are winding down. This nation is waiting with great anticipation for the return of thousands of military members and their subsequent reunification with family and friends. In the celebration of this reunification, we would be remiss if we did not acknowledge the challenges that will be inherent in any such process. Many returning veterans will be seeking employment in an economy that is suffering high unemployment, historic credit restrictions, and an existing workforce that is reluctant to retire at previously expected age milestones. From a mental health perspective,

George S. Everly, Jr, PhD, ABPP is professor of psychology and associate professor of psychiatry and behavioral sciences. Kenneth J. Smith, DBA, CPA is professor and chairman of accounting. Rachel Lobo is in the department of psychology, Loyola University Maryland. Correspondence regarding this article should be directed to Dr. Everly at geverly@jhsph.edu.

many veterans are returning with posttraumatic stress disorder, posttraumatic depression, and traumatic brain injury, as well as severe physical injuries and disabilities. Psychiatrically, many of them will go undiagnosed and untreated until they experience significant adjustment problems with the family, the workplace, or perhaps the law enforcement system. From a systems' perspective, uncertainty and crisis (or even the threat thereof) stifles innovation, is an impediment to investment, and fosters a hording mentality, both personally and institutionally. From a personal perspective crisis creates fear, unrest, and paralyzes inclinations to act, or leads to the opposite course, i.e., impulsive, often regretful, actions largely because it threatens a core human need…the need for safety. The resultant toxic environment may erode organizational, community, and personal health. As dismal as this might sound, not every organization, community, or person is adversely affected by the toxicity of uncertainty and manifest crisis. Some individuals seem resilient in such circumstances, thus they are minimally affected. Others manifest such resilience that they seem to actually prosper in adversity. In times of prosperity, there is little motivation to study human resilience, but during times of uncertainty, crisis, and adversity the motivation is substantial.

A Solution

We have previously published on the personal characteristics of highly resilient people (Everly, McCormack, & Strouse, 2012). In this paper we shall examine resiliency at the systems' level with the intention of creating an organizational culture of resilience engendered through leadership. This construct and approach we call "resilient leadership."

Resilience Defined

Human resilience may be thought of as the ability to positively adapt to, withstand, and/or rebound from significant adversity and distress. Bonnano (2004) defines resilience as the ability of adults to maintain relatively stable and healthy levels of psychological and physical functioning after having been exposed to potentially disruptive or traumatic events. Bonnano suggests that factors such as hardiness, self-enhancement, repressive coping (emotional dissociation), and positive emotions may undergird effective resilience.

Haglund, Cooper, Southwick, and Charney (2007) postulate six primary factors that may protect against, and aid in, recovery from extreme or traumatic stress:

1. actively facing fears and trying to solve problems;

2. engaging in regular physical exercise;

3. being optimistic;

4. following a moral compass;

5. promoting social support, nurturing friendships, and seeking role models; and

6. being open minded and flexible in the way one thinks about problems, or avoiding rigid and dogmatic thinking.

Resiliency is not a monolith, however. It occurs on a continuum.

The Johns Hopkins Model of Resiliency

In an effort to provide clarity to the rapidly growing field of resilience studies, efforts from the Department of Psychiatry at The Johns Hopkins University School of Medicine yielded an integrative model of human resilience. The model contributes heuristic value to the construct of resilience and is referred to as the Johns Hopkins Model of Resistance, Resilience, and Recovery. The Hopkins' model serves to advance the field by recognizing the importance of putting resilience on a continuum, and by separating out the notion of protective immunity (resistance) from the notion of reactive resilience as a form of rebound (Kaminsky et al., 2007; Nucifora, Hall, & Everly, 2011).

Organizational Culture of Resilience (and Resistance)

While it is important to identify and foster factors that promote personal resilience (Everly, McCormack, & Strouse, 2012), a public health and an organizational development perspective would dictate the search for, and promotion of, community and organizational resilience (Everly, et al, 2011). The organizational culture of resilience is one in which there is an atmosphere, or organizational climate, wherein growth is promoted, support is abundant, and crisis is viewed as an opportunity. Simply stated, the culture of resilience is an environment wherein resistance and resilience are not only fostered but are the core fabric of the culture itself.

It matters not whether the "organization" is a non-profit or a for-profit organization. The organization could be a volunteer group, a sports team, or even a family. Regard-

less of its constituency or its purpose, a culture of resiliency would be deemed valuable. Historically, the family system has been an excellent platform upon which to study and promote resilience. It can serve as a proxy for the study of communities and organizations of all kinds. McCubbin and McCubbin (1988) argued that there are four things resilient families do that less resilient families fail to do:

They believe in the family unit. They believe in the importance of family cohesion. They have high family identity.

They celebrate key family events, such as birthdays and anniversaries. They create and uphold rituals and routines.

They believe in their ability to support, advocate for, and protect one another. They are optimistic about their ability to achieve family goals (family efficacy).

Finally, they possess good family communications (McCubbin et al., 1996; Everly, 2009).

Most would agree that an organizational culture of resilience represents a most desirable climate to promote. So the remaining question is this: how might one create such a climate? We propose it is achieved through leadership - "resilient leadership" (Everly, Strouse, Everly, 2010). Resilient leadership practices serve as the catalyst that inspires others to exhibit resistance and resilience and to exceed their own expectations. It helps create a culture of resilience wherein adversity is seen as opportunity and support is omnipresent. Based upon the observations of Malcom Gladwell (2000) and consistent with his "Law of the Few," resilient leaders can create the "tipping point" that changes an entire culture. Using a military model, the tipping point for changing the culture would be having roughly 20% of the population of a group practicing resilient leadership, although this might vary according to the organization. But for those 20% to have a maximum impact they must be unique. They should meet three criteria, i.e., the three Cs: 1) have credibility, 2) be information conduits (usually frontline supervisors), and 3) be willing to promote the success of others via collaboration. Other authors have written of similar concepts, but not fully integrated the role of leadership to promote resilience, and even less foster the creation of a culture of resilience.

Transformational Leadership

The concept of transformational leadership was initially introduced by James MacGregor Burns. According to his theory, transformational leadership can be seen when, "leaders and followers make each other advance to a higher level of morale and motivation." (Bass & Riggio 2006, p.4). That being said, it is a leadership style that leads to positive changes in those who follow, and through the strength of their vision and personality, transformational leaders are able to inspire followers to change expectations, perceptions, and motivations to work towards common goals. Later, researcher Bernard M. Bass expanded upon Burns' original ideas to develop what is today referred to as Bass' Transformational Leadership Theory. In Bass' view, "transformational leadership can be defined based on the impact that it has on followers. They garner trust, respect and admiration from their followers." (Bass et al. 2006, p.7). He believed that these leaders focused on being energetic, enthusiastic and passionate, and were leaders concerned with helping every member of the group succeed to their fullest potential. Additionally, Bass also suggested that there were four different components of transformational leadership: intellectual stimulation, individualized consideration, inspirational motivation, and idealized influence.

Intellectual stimulation recognizes that without creativity and innovation, long-term success is impossible. The leader encourages followers to explore new ways of doing things and new opportunities to learn.

Individualized consideration involves offering support and encouragement to individual followers. "In order to foster supportive relationships, transformational leaders keep lines of communication open so that followers feel free to share ideas and so that leaders can offer direct recognition of each follower's unique contributions." (Bass et al. 2006, p.10). Coaching, mentoring and advising are all examples of individualized consideration because they require a basic understanding of employee needs and motivations.

Inspirational motivation suggests that transformational leaders have a clear vision that they are able to articulate to followers. "Success in this dimension requires a certain level of charisma in order to develop influence into action." (Bass et al. 2006, p.19). Leaders create an atmosphere of teamwork that encourages co-workers to action in order to realize the larger company vision. Inspirational motivation encourages employees to take real action to make the vision a reality.

Idealized influence, in its most basic form, means becoming a role model. Since followers trust and respect their

leaders, they emulate this individual and internalize his or her ideals to make their own. "Sometimes referred to as "walking the talk," idealized influence hearkens back to Max Weber's original research on charismatic heroes." (Bass et al. 2006, p.20).

In Extremis Leadership

In extremis leadership is discussed by Thomas Kolditz (2007) based on work by Kolditz and Donna Brazil. It is a leadership skill that purports to demonstrate "authentic leadership." Authentic leaders are confident, optimistic, and possess high moral character and ethical reasoning. These leaders provide purpose, motivation, and decisive direction "in extremis" (highly stressful) conditions. They are most likely to create loyalty, obedience, admiration, and respect. Authentic leaders seem to exert much of their effectiveness by making their followers feel safe. They ease fear and provide hope for those who follow; safety is based in trust, and trust in honor and integrity.

Authentic leaders have a willingness to share the same or more risk as their followers. Authentic leaders appear to be intrinsically motivated leaders. Pay should take a back-seat to other more important concerns. People who live and choose to work in dangerous environments learn to love life more than the next person simply because they seem to live in a world where value is only loosely attached to material possessions and wealth.

Lastly, authentic leaders must be highly competent in order to gain the subordinate's trust and loyalty. According to Kolditz (2007), authentic leadership emphasizes the development of hope, resilience, and optimism within a highly ethical perspective. That being said, "To be a leader is not to hold down a position or perform a job: it is to develop a character that is inextricably linked to giving purpose, motivation, and direction to others" (Kolditz, 2007, p.71). Kolditz recommends that we go beyond skill-focused leader training, and use a more inspirational, more spiritual approach. Leaders like these need to work on putting themselves last and their followers first, and being able to lead their people in a comprehensive, modest manner, while achieving the mission.

Crisis Management Leadership

Crisis management, a leadership technique begun by Ian Mitroff, is the process by which an organization deals with a major event that threatens to harm the organization, its stakeholders, or the general public. As discussed in his own book, *Crisis Leadership: Planning for the Unthinkable,* Mitroff (2006) talks about how managers, consultants, and researchers have traditionally focused on problems of financial performance and growth, but have paid little attention to the effective management of corporate crises. He claims that, "The study of crisis management originated with the large scale industrial and environmental disasters in the 1980s" (Mitroff, 2006, p.10). Crisis management involves dealing with threats before, during, and after they have occurred. It is also a discipline within the broader context of management consisting of skills and techniques required to identify, assess, understand, and cope with a serious situation, especially from the moment it first occurs to the point that recovery procedures start. The purpose of this leadership skill is to argue that no one can prevent all disasters, but organizations can adopt an approach for managing them more effectively in a timely manner.

As Mitroff portrays, the essential phases of crisis management in his model are as follows: detection, crises, repair, and assessment. "Detection stands for the organization's early warning systems that include computerized control systems, monitoring systems, management systems, and environmental scanning systems that scan both external and internal signals for impending crises" (Mitroff, 2006, p.22). Crises emphasize the second point in his model that no organization can prevent every crisis from occurring. In terms of dealing with a crisis, "Prevention and preparation take the form of safety policies, maintenance procedures, environmental-impact audits, crisis audits, and worker training" (Mitroff, 2006, p.34). Phase three of the model focuses on guiding the organization back to recovery, and repairing any damages the company had to endure due to the causes of the crisis. Last, but not least, management draws up assessments based on the previous crises, and prepares the company for a more proactive approach to addressing any upcoming issues they encounter. Mitroff makes it clear that, "first and perhaps most important is that most crises are preceded by a string of early warning signs that are key in preventing any sort of problem the organization has to endure" (Mitroff, 2006, p.47).

Resilient Leadership Data

Integrating the preceding postulations on human resilience and leadership, the "resilient leadership" construct was postulated by Everly (Everly, 2009; Everly, Strouse &

Everly, 2010) as an effective and efficient means to create the culture of resilience. Initially based upon scholarly reviews as noted above, the core presiding "covenants" of resilient leadership were described as "strength and honor." Seeking to add greater specificity to the construct of covenants and an empirical foundation for the construct itself, we obtained and analyzed data (available at C-SPAN websites) pertaining to C-SPAN-initiated surveys of historical scholars wherein the scholars were asked to rate the 41 presidents of the United States in 2000 and the 42 presidents in 2009 on overall leadership and nine core constituents of leadership effectiveness and a 10th element of crisis leadership. We omitted the 10th as we saw it as a component of one of the core nine.

METHOD

In 2000, the C-SPAN described its methodology as follows:

> C-SPAN conducted a Survey of Presidential Leadership, in which historians & viewers participated online. The survey rated 10 qualities of presidential leadership established by our advisory team, including each president's effectiveness within the context of our nation's changing expectations of the presidency…The C-SPAN Survey of Presidential Leadership was crafted by a team of four historians and academics who have been deeply involved in the American Presidents series...The four survey advisors devised a survey which asked participants to use a one ("not effective") to ten ("very effective") scale to rate each president on ten qualities of presidential leadership… The survey was sent by mail in December to 87 historians and other professional observers of the presidency… Fifty-eight agreed to participate. Survey responses were tabulated by averaging all the responses in any given category for each president."

In 2009, C-SPAN repeated the survey. It was described as follows:

> "Surveys were distributed to 147 historians and other professional observers of the presidency, drawn from a database of C-SPAN's programming, augmented by suggestions from the academic advisors. Sixty-five agreed to participate. Participants were guaranteed that individual survey results remain confidential. Survey responses were tabulated by averaging all responses in a given category for each president."

It is an empirical truism that reliability is the sine qua non of validity. The 2000 and 2009 C-SPAN results were most highly reliable for the top five presidential leaders. Thus we chose to analyze the C-SPAN data with the goal of revealing the leadership constituents that were deterministic of the highest rankings and most reliable findings. In essence we sought to discover what leadership behaviors determined effective leadership. To do so we simply averaged the scores obtained by the top five leaders for the 2000 and 2009 surveys on the nine core constituents of leadership. We drew a cutting line between the fourth and fifth constituent, as the first four constituents were highly reliable across surveys and had universal applicability, whereas the fifth through eighth constituents possessed situational but not universal applicability.

FINDINGS

The results of our analyses are reported in Table 1 below.

TABLE 1.
Ranking and Mean Values of Leadership Behaviors in C-SPAN 2000 and 2009 Surveys

Leadership Behavior	2000 Score	2009 Score
Performance (Action)	90.6	89.8
Vision/Agenda (Optimism?)	90.2	88.2
Moral Authority (Ethics?)	88.2	85
Public Persuasion (Communications)	87.4	84.6
International Relations	86.2	83.6
Administrative Skills	78	78
Economic Management	77.8	74
Relations with Congress	71.6	71.8
Pursuit of Justice and Equality	73.4	71.2

DISCUSSION

Our analyses yielded evidence that the most important and universally applicable leadership behaviors were Performance, what we shall refer to as decisiveness and action; Vision/Agenda, what we see as active optimistic vision; Moral Authority, what we refer to as honesty, ethics, and morality; and Public Persuasion, what we refer to as effective communications.

It is interesting to note that Crisis Leadership scored 89 in the 2009 survey. We did not include that in our analyses as we saw it as a covariate and redundant to performance. It is nevertheless interesting to note that performance in crisis appears to be an important aspect of perceived leadership effectiveness.

These findings appear consistent with our covenants of strength and honor and serve to provide greater granularity by operationalizing "strength" as 1) performance, and 2) optimistic vision (who would follow a pessimistic leader?), while operationalizing "honor" as 1) honesty and morality, and 2) effective communications. Truncating further, perhaps we could say effective and resilient leadership, as defined herein, consists of optimistic action and open, honest communications.

Summary

The preceding impressions may be more heuristic than determinative; nevertheless they may be worthy of consideration. The empirical foundations serve as a form of construct validation, as well.

The immediate future does not appear to hold any "quick fix" nor any spontaneous healing for a world that, at times, seems out of control. We believe a "culture of resilience" is, if not requisite, certainly a first step. This culture we believe is best achieved and maintained through training "first line supervisors" to practice and model resilient leadership as defined herein.

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Children of National Guard Troops:
A Pilot Study of Deployment, Patriotism, and Media Coverage

Betty Pfefferbaum
Terrorism and Disaster Center
University of Oklahoma Health Sciences Center

Haekyung Jeon-Slaughter
Terrorism and Disaster Center
University of Oklahoma Health Sciences Center

Anne K. Jacobs
Terrorism and Disaster Center
University of Oklahoma Health Sciences Center

J. Brian Houston
University of Missoouri, Columbia

Abstract: *This exploratory pilot study examined the psychosocial effects of the war in Iraq, patriotism, and attention to war-related media coverage in the children of National Guard troops across phases of parental deployment—pre deployment, during deployment, and post deployment. Participants included 11 children, ages 8 to 18 years. Data collected in each deployment phase included demographics, the Behavior Assessment System for Children, (Second Edition, BASC-2), patriotism (national identity, uncritical patriotism, and constructive patriotism), and attention to war-related media coverage. School problems and emotional symptoms were significantly higher during deployment than post deployment. National identity and constructive patriotism increased and uncritical patriotism decreased post deployment from levels during deployment. Uncritical patriotism correlated positively with emotional symptoms and correlated negatively with personal adjustment. Constructive patriotism correlated positively with emotional symptoms and with internalizing problems. Greater attention to war-related media coverage correlated with uncritical patriotism, and attention to internet coverage correlated with constructive patriotism. Attention to media coverage was linked to greater emotional and behavioral problems and was negatively correlated with personal adjustment. The results of this pilot study identified relationships of both patriotism and attention to media coverage with children's emotional and behavioral status and personal adjustment suggesting areas for future investigation.* [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(2), pp. 129-138].

Key words: *deployment, media, military, patriotism, terrorism, war*

With its origins in the September 11 attacks and recognized in its name, the Global War on Terrorism, the conflict in Iraq and Afghanistan is inextricably tied to terrorism and reinforces an awareness of our vulnerability to terrorist events both within our geographic borders and abroad. The September 11 attacks resulted in increased fearfulness in some Americans and also spawned a surge of patriotic displays and actions (Sherrod, Quinones, & Davila, 2004). The Global War on Terrorism carries threat for people in the United States through at least three prongs: direct through terrorist acts on American soil and through service in the theater of war; vicarious for family members of terrorism survivors and deployed service personnel; and virtual through media coverage of terrorist attacks and the war which brings graphic images, sounds, and descriptions into homes at all hours of the day and night. By virtue of having a parent serving in Iraq or Afghanistan, children of military families have greater exposure to the war than their peers. Research on the effects of parental deployment on military children has identified deleterious effects (Chandra, et al., 2010; Chartrand, Frank, White, & Shope, 2008; Flake, Davis, Johnson, & Middleton, 2009), but the extant literature on the psychological effects of deployment has yet to explore several potential variables related to children's adaptation, including patriotism and media coverage of the war.

Patriotism

Children's views of their country are thought to develop gradually and to reflect their families' positive views of their own country in an unquestioning manner. These views either remain fairly uncritical in a form of sociocentricity or transition to a greater understanding of others and greater examination of positive and negative attributes of their own and other countries (Piaget & Weil, 1951). The development of patriotism is linked to cognitive, political, and cultural influences (Nugent, 1994). Perceived threat may also affect patriotism. Following the 1967 Arab-Israeli War, Israeli children from settlements that were subjected to frequent artillery shelling expressed greater "locale patriotism," or a more positive attitude toward local places and people, than did children from settlements that were not shelled (Ziv, Kruglanski, & Shulman, 1974). Among adults, "blind patriotism," or unquestioning allegiance to one's own country, may increase with, and possibly serve a defensive function in the face of, threat and vulnerability (Sahar, 2008; Schatz,

Staub, & Lavine, 1999), then decrease as time passes and the sense of threat lessens (Sahar, 2008).

To our knowledge, no study has examined patriotism in children across the phases of parental deployment. The present pilot study examined three forms of patriotism: *national identity*, representing a sense of belonging to one's country on a continuum of weak to strong and negative to positive feelings (Tartakovsky, 2011); *blind* or *uncritical patriotism*, generally representing an attachment to one's country that reflects an assertion of the superiority and moral right of one's country without critique or further analysis (Schatz et al., 1999); and *constructive patriotism*, which encourages critical thinking in an effort to promote positive change in one's country (Schatz et al., 1999).

In one study 15% of National Guard and Reserve troops and 24% of their non-deployed spouses identified patriotism, pride, and/or civic responsibility as a positive aspect of their service (Casteñeda et al., 2008). This sense of pride in one's country may add meaning to the daily sacrifices military personnel and their spouses endure. The degree to which the children of military personnel experience similar pride, and the influence of such sentiments if they exist, is unknown. Although an initial investigation failed to find an association between patriotism and symptoms of posttraumatic stress disorder (PTSD) or general distress in veterans of the Iraq and Afghanistan wars (Whitesell & Owens 2012), the role of patriotism has not been well studied in service personnel. Furthermore, its function related to different emotional and behavioral responses in children of troops is yet to be explored.

Media coverage

The wars in Iraq and Afghanistan are unique in the extensive use of media and increased, instant communication between family members and their in-theater loved one (Lester, 2012). One way that families attempt to cope is to seek more information from the media, a strategy that has the potential to bring more stress and anxiety than comfort (Faber et al., 2008). Children's access to terrorism- and war-related information does not solely comprise television viewing; many seek information via the Internet. After the September 11 attacks, elementary school students who accessed Internet information about the attacks displayed higher levels of PTSD symptoms than those who watched televised coverage or relied on print media (Saylor, Coward, Lipovsky, Jackson

& Finch, 2003). In addition to the novel focus on patriotism and media coverage in the children of military personnel, this study examined the children of National Guard troops who along with Reserve troops have unique experiences with their service in Iraq and/or Afghanistan.

Unique considerations for the National Guard

Data gathered on the effects of deployment on family members of military personnel do not adequately capture the experiences of Reserve or National Guard (NG) families (Chartrand et al., 2008; Mansfield et al., 2010) which often have different expectations regarding military service than other troops. For example, these troops may not have anticipated extended deployment (Griffith, 2011), or the potential for multiple deployments seen in the current wars. Reserve and NG troops tend to differ from other soldiers in combat readiness (Griffith, 2011), and perhaps related, carry a greater risk for mental and general health problems (Milliken, Auchterlonie, & Hoge, 2007). It is perhaps no surprise then that recent studies and reviews have begun to identify unique deployment effects for the families of these troops (Faber,Willerton, Clymer, MacDermid & Weiss, 2008; Lemmon & Chartrand, 2007). In contrast to other military families, Reserve and NG families typically do not reside near a military base creating barriers to obtaining related support services (Faber et al., 2008; Mansfield et al., 2010). While NG families have support systems within their home communities, there may be a dearth of professionals with experience and knowledge specific to the effects of military duty (Gorman, Blow, Ames, & Reed, 2011). The lack of deployment experience may leave NG families comparatively less prepared for the shifts in responsibilities, roles, and uncertainties that accompany deployment (Casteñeda et al., 2008). The wars in Iraq and Afghanistan have presented a number of novel challenges to NG families as many have experienced multiple deployments of their loved ones.

The present study

The present exploratory pilot study examined the psychosocial effects of the war in Iraq on the children of NG troops across three phases of deployment—pre deployment, during deployment, and post deployment. To explore the intricacies of contemporary factors on a unique and evolving war, this study examined changes in, and relationships among, children's emotions, behaviors, and adjustment;

aspects of patriotism; and attention to media coverage. Children of NG troops were chosen in recognition of the unique stresses they experience.

METHODS

Recruitment of participants

Participants were the children, ages 8 through 18 years, of Oklahoma NG troops who were deployed to Iraq in the Global War on Terrorism. The Oklahoma NG leadership endorsed the project and notified families about the study through a letter of support. Flyers advertising the study were distributed and posted at various NG facilities and functions. The University of Oklahoma Health Sciences Center Institutional Review Board approved the study. Informed consent was obtained from parents and informed assent was obtained from participating children.

Procedures and participants

Children completed assessments at a location of their parent's choosing such as at their home. Older children completed a written assessment while a trained research assistant read the questions to younger children and transcribed the results. All children received a $20 gift card to compensate for their time and effort. The assessments were conducted at three time periods—pre deployment, during deployment, and post deployment. Pre-deployment assessments were conducted over a three-month period just prior to deployment when the children's fathers were mobilized and separated from their families for training out of state. Deployment assessments were conducted over a three-month period approximately six months after deployment had begun. Post-deployment assessments began approximately two to four months after the deployed soldiers had returned home and were conducted over a three-month period.

Eighteen children ages 8 years and older from 13 families were recruited. Eleven children from 9 families completed all self-report questionnaires during all three phases of deployment and were included in the final sample.

Variables

Demographics

Information on the gender and age of children, annual family income, and other family characteristics (e.g., ethnicity, education) was collected.

Child emotions, behaviors, and personal adjustment

Child emotional and behavioral problems and personal adjustment were measured using the *Behavior Assessment System for Children, Second Edition* (BASC-2; Reynolds & Kamphaus, 2004). Child self report raw scores for all scales were converted to *T* scores (mean = 50, standard deviation = 10) for four composite scales (school problems, internalizing problems, inattention/hyperactivity, and personal adjustment) plus an emotional symptoms index. Higher scores indicate greater risk for all composites except personal adjustment. Lower personal adjustment composite scores indicate greater risk. *T* scores between 60 and 70 are considered "at risk" and *T* scores over 70 are considered "clinically significant" for the school problems, internalizing problems, inattention/ hyperactivity, and emotional symptoms index scales. For the personal adjustment scale, *T* scores between 31 and 40 are considered "at risk," and scores less than 30 are considered "clinically significant."

Patriotism

National identity was assessed using items adapted from the work of Huddy and Khatib (2007) while items for uncritical and constructive patriotism were adapted from the work of Schatz and colleagues (1999). See Table 1 for the specific items used to assess the three forms of patriotism. Possible response options for all patriotism items ranged from 1 ("strongly disagree") to 5 ("strongly agree"). Non-weighted average scores were used to calculate each of the three patriotism scores. Alpha reliabilities were .90, .79, and .77 for national identity, uncritical patriotism, and constructive patriotism, respectively.

Attention to media coverage

Children were asked how much attention they paid to news about the war on television, the radio, and the Internet and in the newspaper. Responses to queries about radio and

Table 1. Forms of Patriotism forms and Items	
Forms of Patriotism	Items
National identity	Being an American is important to me.
	I see myself as a normal American.
	The term "American" describes me well.
	I feel close to America.
Uncritical patriotism	I support my country's leaders even if I disagree with some things they do.
	The United States is almost always right.
	Too many people say bad things about the United States, so we should not criticize it.
	I believe that what the United States does is almost always the right thing to do.
Constructive patriotism	People should work hard to improve the country.
	If I say bad things about the United States, I say them because I love my country.
	I disagree with some things the United States does because I care about my country and want to improve it.
	I show that I care about America by supporting helpful changes and improvements.

news print coverage indicated that these media sources were not used or were rarely used, and there was no variation in the responses to these variables across the three phases. Thus, only attention to television coverage and internet coverage were used in the analyses. Possible responses were "none," "very little," "some," "quite a bit," and "a great deal" on a five-point scale of 1 to 5.

Statistical analysis

Wilcoxon rank sum test was used to examine gender differences in child emotions, behaviors, and personal adjustment; patriotism; and attention to media coverage across the three deployment phases. Paired t test was used to examine patterns of change in emotions, behaviors, and personal adjustment; patriotism; and attention to media coverage across the three deployment phases.

A random effect model (Green, 2003) was used to estimate correlations among variables measuring child emotions, behaviors, and personal adjustment with patriotism and with attention to media coverage measured repeatedly over the three deployment phases combined. Before estimating a random effect model, the original cross sectional data structure was rearranged as a panel structure with repeated cross-sectional surveys over the three deployment phases. The panel data represented the responses of the 11 participants, each of whom had repeated measurements from the three deployment phases.

Proc panel procedure of SAS was used to calculate correlations among child emotions, behaviors, and personal adjustment; patriotism; and media use across the three time periods. All statistical analyses were conducted using SAS 9.2 version (SAS Institute Inc., Cary, NC).

RESULTS

Of nine families participating in the study, seven families had one child each and two families had two children each. The 11 participating children, 73% boys and 27% girls, ranged in age from 8 and 15 (M = 10.91, SD = 2.51) years and were enrolled in grades three through ten. With respect to ethnicity, 68% were Caucasian, 18% African American, and 18 % Native American. Family income ranged between $20,000 and $100,000 (top coded) with median and mean income of $71,666 and $75,000, respectively.

Child emotions, behaviors, and personal adjustment

Means and standard deviations of BASC-2 composite scores across the three phases are presented in Table 2. There were no significant gender differences in emotions, behaviors, and personal adjustment in any deployment phase and no significant correlations between children's age and emotions, behaviors, and personal adjustment in any deployment phase.

There were no significant patterns of change in children's emotions, behaviors, and personal adjustment over the three successive deployment phases. School problems and emotional symptoms composite scores were each significantly higher during deployment than post deployment (*paired t* = 4.01, p = 0.0025 school problems; *paired t* = 2.28, p = 0.0425 emotional symptoms).

Analysis of repeated cross sectional data revealed that internalizing problems and inattention/hyperactivity scores were positively correlated with both school problems and emotional symptom scores while the personal adjustment score was negatively correlated with both internalizing problems and emotional symptoms scores. See Table 3.

Patriotism

On average, children scored higher on national identity (4 and higher out of 5) than uncritical or constructive patriotism (3 and higher out of 5), and there was greater variability in their scores for uncritical and constructive patriotism across all three deployment phases. See Table 2.

No significant correlations were found between the children's age and measures of patriotism in any deployment phase. National identity scores were positively correlated with both uncritical and constructive patriotism scores. See Table 3.

While children's patriotism scores were not significantly different between pre-deployment and deployment phases, scores on all three patriotism measures were significantly different between the deployment and post-deployment phases. Scores on national identity and constructive patriotism increased post deployment from scores during deployment (*paired t* = 12.12, p < 0.0001 national identity; *paired t* = 13.57, p < 0.0001 constructive patriotism) while scores on uncritical patriotism post deployment decreased from the deployment score (*paired t* = -14.56, p < 0.0001).

		Prior to deployment Mean (SD)	During deployment Mean (SD)	After deployment Mean (SD)
	Variables			
BASC-2	School problems	53.00 (7.33)	56.36 (10.48)	48.27 (9.63)
	Internalizing problems	46.80 (7.83)	48.73 (8.36)	47.36 (7.54)
	Inattention/hyperactivity	51.50 (5.85)	57.36 (9.74)	56.18 (10.09)
	Personal adjustment	49.40 (7.85)	51.09 (7.48)	53.45 (6.89)
	Emotional symptoms	47.90 (7.20)	48.72 (7.96)	45.55 (5.35)
Patriotism	National identity	4.09 (1.12)	4.30 (0.81)	4.43 (0.92)
	Constructive patriotism	3.61 (0.88)	3.93 (0.90)	4.00 (0.92)
	Uncritical patriotism	3.27 (0.75)	3.32 (0.98)	2.86 (0.91)
Media	TV	2.09 (1.30)	1.91 (1.30)	1.72 (0.90)
	Internet	1.36 (0.67)	1.64 (1.29)	1.27 (0.65)

Table 2.
Means and Standard Deviations of BASC-2 Composite Scores and
Patriotism and Media Variables Across Deployment Phases

Attention to media coverage

On average, across all deployment phases, children paid "no" to "very little" attention to news about the war on television or the Internet. There were no significant patterns of change in children's attention to war-related media coverage across the deployment phases. Children's attention to television and Internet news was positively correlated. See Table 3.

Relationships among measures

Table 3 displays relationships among child emotions, behaviors, and personal adjustment; patriotism; and attention to media coverage during the entire deployment experience.

There were no significant relationships between national identity patriotism and any of the five BASC-2 composites. Both uncritical and constructive patriotism scores were positively correlated with the emotional symptoms composite score. Uncritical patriotism was negatively correlated with personal adjustment and constructive patriotism was positively correlated with internalizing problems.

Attention to both television and Internet coverage was positively correlated with uncritical patriotism, and attention to Internet coverage was positively correlated with constructive patriotism. There was no correlation between media attention and national identity score for either medium (TV or Internet).

Both television and Internet media attention were positively correlated with emotional symptoms and negatively correlated with personal adjustment. Relationships between media attention and both school and internalizing problems differed by medium. Attention to war-related television coverage was positively correlated with school problems, and attention to Internet coverage was positively correlated with internalizing problems.

DISCUSSION

Despite a small and non-representative sample, this exploratory pilot study with its unique perspective is important in its investigation of children's emotions, behaviors, and personal adjustment in relation to their patriotism and attention to media coverage of the war. Perhaps not surprising during times of national crisis and war, the children's national identity scores tended to be uniformly high across all deployment phases. Both national identity and constructive patriotism increased from deployment to post-deployment phases while uncritical patriotism decreased from deployment to post-deployment periods. Uncritical patriotism has been linked to the tendency to see the world as a threatening place (McFarland, 2005; Sahar, 2008) and may have a protective role in the face of threat. It may be that once their fathers returned home and were out of harm's way, the threat these children experienced diminished and the children were more

Table 3.
BASC-2 Composite Scores, Patriotism, and Attention to War-related Media Coverage

Variables	BASC-2					Patriotism			Media	
	School problems	Internalizing problems	Inattention/ hyperactivity	Personal adjustment	Emotional symptoms	National identity	Constructive patriotism	Uncritical patriotism	TV	Internet
School problems	1.00									
Internalizing problems	0.41*	1.00								
Inattention/ hyperactivity	0.27*	0.13	1.00							
Personal adjustment	0.09	-0.34***	0.08	1.00						
Emotional symptoms	0.41	0.94***	0.46*	-0.84***	1.00					
National identity	1.78	0.20	1.78	1.00	1.36	1.00				
Constructive patriotism	1.01	2.10***	1.36	-1.47	3.09***	0.73***	1.00			
Uncritical patriotism	1.76	1.16	0.95	-2.62***	2.40***	0.37**	0.24	1.00		
TV	1.53**	0.86	0.36	-1.64**	1.39***	0.04	0.10	0.24**	1.00	
Internet	1.58	1.39*	0.46	-2.82***	2.54***	0.18	0.33**	0.33**	0.50***	1.00

Notes: *, **, and *** represent p-values of < 0.10, <0.05, and <0.01, respectively

open to explore negative and/or ambivalent views about their country. Patriotism was correlated with the children's emotional and behavioral status and personal adjustment. While there were no significant relationships between national identity patriotism and any of the five BASC-2 composite measures (likely due to the small sample size and uniformly high national identity scores), both uncritical and constructive patriotism scores were positively correlated with emotional symptoms. Constructive patriotism was positively correlated with internalizing problems, and uncritical patriotism was negatively correlated with personal adjustment. The relationships between various patriotism measures and emotional and behavioral status suggest that ideology may have a protective influence with children whose fathers face military deployment. These results are too preliminary to determine if one form of patriotism or another (e.g., uncritical patriotism or constructive) is more likely to be used by children, is more likely to be effective, or is more likely to constitute healthy adaptation.

There were positive correlations between attention to media coverage and various indicators of emotional and behavioral problems and negative correlations with personal adjustment. These findings echo those of studies of media coverage of terrorist events (see e.g., Joshi, Parr, & Efron, 2008) and raise concern about the potential relationship between children's attention to media coverage and their adjustment to large-scale events. Of note, however, on average attention to media coverage in this sample was low, and the findings do not establish a causal relationship. The salience of media coverage for children whose parents are serving in the theater of war warrants consideration in future research.

The current study makes a unique contribution to the literature, but has several limitations in relation to the small and restricted sample, measures of patriotism, and the timing of assessments. First, this sample included only NG families highlighting an often overlooked group of families with unique risks (Milliken et al., 2007) and limited availability of military supports for their families (Chartrand et al., 2008; Faber et al., 2008; Lemmon & Chartrand, 2009) and the results may not generalize to other branches of the service. Second, while there are normative scores for the measures of the children's emotional and behavioral status and personal adjustment, the patriotism scales used in this study have not been widely used in children. The strength of the patriotism scales is in their theoretical basis. Third, the timing of assessments was limiting. The pre-deployment assessment occurred while the soldiers were still in the country though they had left home for training. Data collected longer before the military parent left home would have been informative. During the post-deployment phase, fathers had not been home for long so these assessments failed to measure long-term reintegration.

Future research is needed to expand upon the three deployment phases to capture both the time before troops leave their families for training for deployment and to help understand the intricacies of long-term family reintegration when troops return. Research regarding war- and terrorism-related media coverage is growing, but few studies have examined Internet use. The preliminary findings in this study linking Internet use to greater difficulties in children warrant further investigation especially as access to the Internet grows. Many aspects of the wars in Iraq and Afghanistan have been novel for Americans especially against a backdrop of a rapidly-expanding world of electronic connections and media. This evolving landscape may change our previous conceptions of how war affects children and should guide future studies.

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Fostering
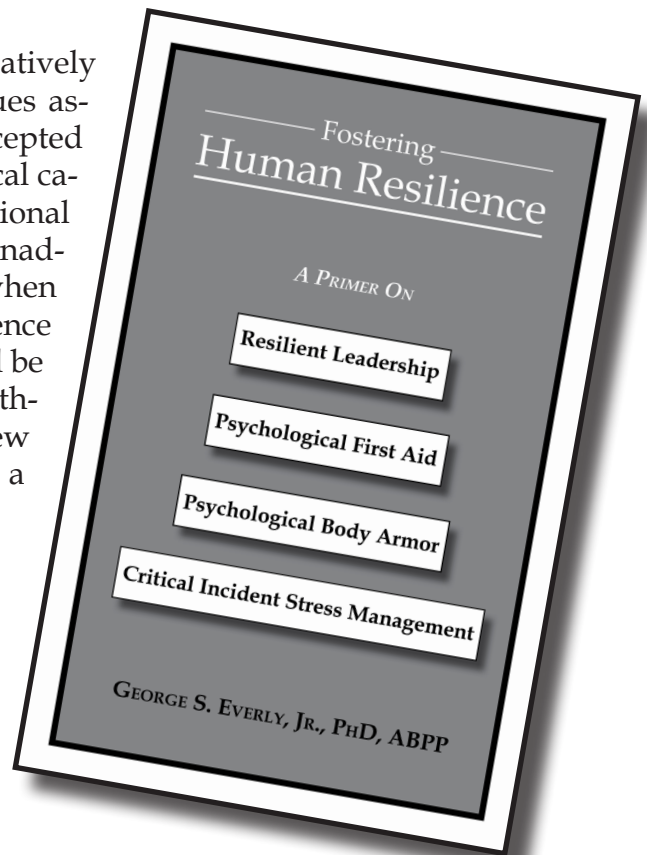# Human Resilience

George S. Everly, Jr., PhD, ABPP

The promotion of human resiliency represents a relatively new approach to dealing with mental health issues associated with crisis and disaster. It is generally accepted that psychological casualties invariably far exceed physical casualties in the wake of disaster, thus reliance upon traditional mental health resources to address such needs seems inadequate. General hesitance to seek such services, even when available, compounds the problem. Finally, there is evidence that public health and emergency response resources will be available in lower numbers than expected, at all levels within the system and throughout the continuum of care. A new approach is needed. That approach, we argue, must be a system based upon the promotion of human resilience.

Resilience is typically defined as the ability to withstand, adapt to, or rebound from challenges and adversity. This brief treatise is offered as a simple primer for any and all personnel who are likely to respond to, or in the wake of, crisis and disaster.

The reader will be introduced to three mechanisms designed to enhance resiliency:

- Psychological Body Armor - promoting personal resilience;
- Psychological First Aid (PFA) – promoting resilience in other individuals;
- Resilient Leadership – promoting resilience in groups;
- Critical Incident Stress Management – a systems approach to resiliency; and
- Pastoral Crisis Intervention – harnessing the power of the Faith Community

This book is especially directed to first responders, first receivers, public health and safety, and military personnel. It is designed to be a quick, practical, and informative guide to human resiliency in the wake of crisis and disaster.

Fostering Human Resilience
George S. Everly, Jr.
$20

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Selected Annotated Journal Resources

Alicia Dodds, M.S.

TYPE OF ARTICLE

- Original empirical investigation.

OBJECTIVE/PURPOSE OF THE STUDY

- To examine whether meaning made of trauma (defined as the ability to integrate traumatic memories into one's personal narrative in an adaptive way that makes sense and permits the individual to have a positive future orientation) accounts for the relation between mild traumatic brain injury (mTBI) and posttraumatic stress disorder (PTSD) symptoms of reexperiencing, avoidance, and hyperarousal in a sample of Iraq and/or Afghanistan war veterans.

METHODS
Participants

- One hundred and sixty nine veterans who served in Iraq and/or Afghanistan and attended a scheduled group medical appointment ("Combat Clinic") at the Department of Veterans Affairs (VA) were recruited to participate.
- Most participants were male (92.6%), Caucasian (63.0%), married (51.9%), in the army (79.6%), and served in Iraq (92.6%). The average age was 36.1 years ($SD = 10.1$), average education was 13.4 years ($SD = 2.0$), and average length of time since last deployment was 22.9 months ($SD = 24.1$).

Procedure

- Participants were screened for TBI using the VA's TBI assessment protocol. Questions assessed for TBI-related events (e.g., explosions), neurocognitive sequelae (e.g., loss of consciousness), development or worsening of neurocognitive problems (e.g., memory trouble), and persistence of these neurocognitive problems over the past week.
- Of participants assessed, 14.8% were considered to have a probable mTBI.
- Meaning making was assessed with the Integration of Stressful Life Experiences Scale (ISLES) and was completed about participants' most stressful life event. The ISLES is a self-report Likert-type scale measure with two factors: Comprehensibility of the stressor (e.g., "I have difficulty integrating this event into my understanding of the world") and Footing in the World (e.g., "My previous goals and hopes for the future don't make sense anymore since this event").
- Of those assessed, 91% considered an experience in Iraq or Afghanistan to be their most stressful life event.
- PTSD symptoms were assessed using the Posttraumatic Stress Disorder Checklist-Civilian version (PCL-C), a self-report Likert-type scale measure examining symptoms of reexperiencing, avoidance, and hyperarousal over the past month.
- To examine the direct and indirect effects of mTBI on PTSD symptoms of reexperiencing, avoidance, and hyperarousal via the meaning making dimensions of Comprehensibility and Footing in the World, structural Equation Modeling (SEM) was used.
- The following fit indices assessed the proposed model: X^2goodness-of-fit test, comparative fit index (CFI), standardized root-mean-square residual (SRMR), and the root mean square error of approximation (RMSEA).

RESULTS

- The fit indices all indicated that the measurement model was reasonable for the data: $X^2(454) = 894.95$, $p < .001$; CFI = .90; SRMR = .04; RMSEA = .076, CI = .068-.083) and all variables had statistically significant factor loadings (all $p < .001$).

- Participants with probable mTBI diagnoses reported higher levels of PTSD symptoms.

- The presence of a probable mTBI was significantly associated with reports of less Comprehensibility ($r = -0.37$, $p < .001$) and less Footing in the World ($r = -0.43$, $p < .001$).

- The presence of a probable mTBI was indirectly related to PTSD symptoms of reexperiencing ($r = .28$, $p < .001$), avoidance ($r = .35$, $p < .001$), and hyperarousal ($r = .31$, $p < .001$). Meaning made of the stressor accounted for these effects.

- The indirect effects of mTBI on reexperiencing were mostly mediated by Comprehensibility ($r = .30$, $p < .05$), and the indirect effects of mTBI on avoidance were mostly mediated by Footing in the World ($r = .37$, $p < .01$).

CONCLUSIONS/SUMMARY

- There was a higher prevalence of PTSD symptoms in participants with probable mTBI compared to those without mTBI.

- Probable mTBI was indirectly associated with PTSD symptoms, and meaning making mediated this association. These data suggest that mTBI sequelae might make it difficult for those exposed to successfully and meaningfully process a traumatic event.

- Reexperiencing PTSD symptoms may be a product of difficulty integrating a traumatic event into how one understands the world.

- Avoidance PTSD symptoms may result from difficulty making sense of one's purpose and safety in a post-trauma world.

CONTRIBUTIONS/IMPLICATIONS

- The current study suggests that difficulties in making meaning of traumatic events put returning veterans with mTBI at increased risk for PTSD.

- This has implications for rehabilitative assessment and treatment of veterans with comorbid mTBI and PTSD.

More specifically, assessment and treatment for these individuals should address cognitive processing of the traumatic event and meaning making. This seems especially relevant since a subjective appraisal or interpretation of a traumatic event is part of the DSM-IV diagnosis of PTSD. Future studies should attempt to replicate these initial findings.

Dalton, E.J., Greenman, P.S., Classen, C.C., & Johnson, S.M. (2013). Nurturing connections in the aftermath of childhood trauma: A randomized controlled trial of emotionally focused couple therapy for female survivors of childhood abuse. Couple and Family Psychology: Research and Practice, 2, 209-221. doi: 10.1037/a0032772

TYPE OF ARTICLE

- Original empirical investigation.

OBJECTIVE/PURPOSE OF THE STUDY

- To examine the efficacy of emotionally focused therapy (EFT) in treating relationship distress in couples where the female partner had a history of childhood abuse (physical or sexual abuse).

- To explore whether female partners with a history of childhood abuse who received couples EFT would demonstrate reduced levels of trauma symptoms compared to women in the control group.

METHODS
Participants

- Thirty-two distressed couples in which the female partner had a history of childhood abuse were recruited to participate via fliers at the Women's Mental Health Program, clinician referrals, and mailings to former patients of the Trauma Therapy Program.

- The following exclusion criteria were applied: homosexual couples, couples in relationships shorter than two years, couples where both partners had a history of childhood abuse, couples where only the male partner had a history of childhood abuse, couples who were not experiencing clinically significant marital distress, relationships with physical violence in the past six months, relationships with substance dependence or active suicidal ideation or psychosis, and couples who were legally separated.

- The average age for all participants was 43 years (range = 22 to 65 years of age), average relationship length was 14 years (range = 2 to 40 years), and the majority of the sample was Caucasian (86%).
- Most of the women (81%) had received prior psychotherapy and 56% had received prior psychiatric medication for their trauma symptoms.

Measures

- The Dyadic Adjustment Scale (DAS) is a 32-item self-report questionnaire designed to measure marital adjustment and satisfaction.
- The Childhood Trauma Questionnaire (CTQ) is a retrospective self-report measure designed to examine the severity of childhood maltreatment (physical, sexual, and emotional abuse and physical and emotional neglect).
- The Childhood Maltreatment Interview Schedule – Short Form (CMIS-SF) is a retrospective self-report measure designed to examine childhood maltreatment (psychological, physical, and sexual abuse).
- The Trauma Symptom Inventory (TSI) assesses frequency of posttraumatic stress disorder symptoms and associated intra- and interpersonal difficulties. The TSI is a 100-item self-report measure with 10 clinical scales.
- The Dissociative Experiences Scale (DES) is a 28-item self-report questionnaire that measures dissociative experiences.
- The Couple Therapeutic Alliance Scale (CTAS) is a 29-item self-report measure that assesses perceptions of the therapeutic alliance.

Procedure

- After telephone screening, all couples attended an in-person interview and complete the DAS and CTQ measures. All female participants also completed the TSI, DES, and CMIS-SF.
- Couples were randomly assigned to the treatment group (12 couples) or waitlist control group (16 couples).
- Treatment group couples were assigned to a therapist and completed 24 EFT sessions, each 75 minutes in length.
- All sessions were audio recorded and randomly reviewed to ensure the consistent use of EFT techniques.
- Therapists included the principal investigator and four masters-level therapists with at least four years of experience treating people with childhood abuse histories and five months of training in EFT.
- At session three, couples completed the CTAS.
- One week after their last session, couples completed the DAS. Female participants also completed the TSI and DES.
- Ten of the control group couples completed the DAS 24 weeks after the intake. Female participants also completed the TSI and DES.

RESULTS

- The average female participant had experienced "severe" emotional and sexual abuse, "moderate to severe" physical abuse (based on CTQ scores), and "moderate to severe" physical and emotional neglect (based on CMIS-SF scores).
- Nearly all of the women experienced sexual abuse (92%) and 65% experienced physical abuse.
- The average age of onset of abuse was five to seven years old. The abuse was chronic in most cases (e.g., an average of 81 incidents of physical abuse) and was often perpetrated by a family member.
- Mean CTAS scores indicated high levels of collaboration ($M = 5.98$ out of 7).
- There was a significant main effect for treatment condition ($F(1, 38) = 4.73$, $p = .04$). That is, posttreatment DAS scores changed from the "mildly atypical: indicates significant problem" range to the "average: typical score – no concern" range for 70% of couples in the EFT group, but scores did not change for couples in the control group.
- The treatment effect size was medium ($d = 0.62$) for all EFT participants and large ($d = 1.00$) for women in the EFT group.
- An increase in women's understanding of their childhood abuse since age 18 years (an item on the CMIS-SF) was related to less initial relationship satisfaction (pretreatment DAS scores; $r = -.45$, $p < .03$).
- Women's scores on the Anger/Irritability and Depression scales of the TSI were also negatively correlated with initial relationship satisfaction (pretreatment DAS scores; $r = -.54$, $p = .007$; $r = -.59$, $p = .003$, respectively).
- There were no significant differences in treatment outcomes between four of the five therapists, though there was a difference between therapists one and three ($F(4, 16) = 3.66$, $p = .03$).

- Women in the EFT and waitlist groups exhibited no significant differences on pretreatment and posttreatment TSI and DES scores.

CONCLUSIONS/SUMMARY

- Couples EFT was effective at decreasing relational distress in couples where the female partner had a history of childhood abuse.
- Couples EFT was not effective in reducing the female partner's trauma symptoms.
- The female partner's understanding of her abuse since age 18 years and her symptoms of depression and anger/irritability led to less initial relationship satisfaction.

CONTRIBUTIONS/IMPLICATIONS

- EFT seems to be an effective treatment for couples experiencing relationship distress where the female partner has a history of childhood abuse. It may be especially helpful when the female partner has an increased understanding of her childhood abuse and when the female partner is experiencing symptoms of depression or anger and irritability.
- EFT for couples may help partners target the interpersonal and socioaffective sequelae of the female partner's childhood abuse.
- This study is the first known controlled trial examining an empirically supported couple-based intervention for treating survivors of childhood abuse in distressed relationships.
- The present study provides a basis for future research to replicate these findings, especially in a larger sample and in different types of couples (e.g., homosexual couples, couples where the male partner or both partners experienced childhood abuse).

Haller, M. &Chassin, L. (2013). **The influence of PTSD symptoms on alcohol and drug problems: Internalizing and externalizing pathways. Psychological Trauma: Research, Practice, and Policy, 5, 484-493. doi: 10.1037/a0029335**

TYPE OF ARTICLE

- Longitudinal study.

OBJECTIVE/PURPOSE OF THE STUDY

- To examine how posttraumatic stress disorder (PTSD) symptoms might influence future adult alcohol and drug problems (substance use disorders, or SUDs).
- To explore how early adult internalizing and externalizing symptoms may mediate the relation between PTSD symptoms and adult alcohol and drug problems.

METHODS
Participants

- Data from 166 participants who were part of a large longitudinal study about familial alcoholism were used.
- Data from the larger study was collected in five waves and the present study utilized data from Waves 1 (1988), 4 (1995-1999), and 5 (2000-2004).
- At Wave 1, participants were adolescents.
- Participants who had Wave 1 data about internalizing and externalizing symptoms and substance use problems; who reported at Wave 4 that they had trauma exposure and PTSD between Waves 1 and 4; and who had data about alcohol and drug use at Wave 5 were included in the present study.
- Participants were mostly male (38% female) and Caucasian (68%), were children of parents with an alcohol disorder (57%), and had attended some college by Wave 5 (73%).

Procedure

- All measures were completed with the family in their home using computer-assisted interviews or via phone if the family moved out of the geographic region.
- Parental alcoholism was measured by parents' self-report of *DSM-III* diagnoses of alcohol abuse or dependence at Wave 1.
- Adolescent (pre-trauma) substance use problems were measured at Wave 1, assessing for frequency of alcohol and drug use, total number of social consequences due to alcohol or drugs, and total number of dependence symptoms. Of the sample of adolescents, 43% reported ever consuming alcohol or drugs, 15% reported experiencing a consequence (such as hearing complaints from friends or family about their alcohol or drug use), and 16% reported symptoms of dependence.
- Adolescent (pre-trauma) and early adult (post-trauma) internalizing and externalizing symptoms were mea-

sured at Waves 1 and 4 via self-report about the past three months. Ten internalizing (e.g., "I felt worthless or inferior") and 11 externalizing (e.g., "I argued a lot") symptom items were modified from the Child Behavior Checklist (CBCL).

- PTSD symptoms were measured at Wave 4 using the Computerized Diagnostic Interview Schedule (CDIS-III-R), a self-report about lifetime exposure to trauma and subsequent PTSD symptoms. Of participants assessed, 19% met *DSM-III-R* criteria for PTSD.

- Adult alcohol and drug problems were measured at Wave 5 with three self-report measures to assess frequency of use, social consequences, and dependence symptoms during the past year.

- All models included five continuous endogenous variables (PTSD symptoms, early adult internalizing symptoms, early adult externalizing symptoms, adult alcohol problems, and adult drug problems) and sex exogenous variables (gender, adolescent internalizing symptoms, adolescent externalizing symptoms, adolescent substance use problems, parental alcoholism, and recency of trauma).

RESULTS

- The most appropriate model to fit the data was a modified direct and indirect effects model, where the effects of PTSD symptoms on adult drug use were partially mediated by internalizing and externalizing symptoms (direct and indirect effects), and the effects of PTSD symptoms on adult alcohol use were primarily mediated by internalizing and externalizing symptoms (indirect effects).

- PTSD symptoms had a significant direct effect on adult drug problems ($\beta = .18$, $p = .021$).

- PTSD symptoms did not have a significant direct effect on adult alcohol problems.

- PTSD symptoms predicted significant increases in early adult internalizing ($\beta = .38$, $p < .001$) and externalizing ($\beta = .35$, $p < .001$) symptoms.

- Early adult internalizing symptoms did not predict adult alcohol or drug problems.

- Higher levels of early adult externalizing symptoms significantly increased risk for adult alcohol problems ($\beta = .27$, $p = .001$).

- Higher levels of early adult externalizing symptoms sig-

nificantly mediated the effect of PTSD on adult alcohol problems (95% C.I. = [.007, .035]).

- Higher levels of adolescent internalizing symptoms ($\beta = .21$, $p = .011$) significantly increased risk for PTSD.

- Higher levels of PTSD symptoms were reported in women ($\beta = .70$, $p < .001$).

- Men were more likely to report higher levels of early adult externalizing symptoms ($\beta = -.46$, $p = .001$), adult alcohol problems ($\beta = -.44$, $p = .003$), and adult drug problems ($\beta = -.38$, $p = .029$).

- Parental alcoholism significantly increased risk for PTSD ($\beta = .31$, $p = .022$).

- PTSD symptoms mediated the influence of parental alcoholism on adult drug problems (95% C.I. = [.003, .106]).

- PTSD and externalizing symptoms mediated the relation between parental alcoholism and adult drug problems.

CONCLUSIONS/SUMMARY

- PTSD symptoms directly influenced risk for adult drug but not alcohol problems.

- PTSD symptoms predicted higher levels of internalizing and externalizing symptoms controlling for pre-trauma levels of these symptoms.

- Early adult externalizing symptoms increased the risk for adult alcohol but not drug problems.

- Early adult internalizing symptoms did not have a significant effect on adult alcohol or drug problems.

- The relation between PTSD symptoms and adult alcohol problems was mediated by externalizing symptoms.

- The relation between PTSD symptoms and adult drug problems was not mediated by internalizing or externalizing symptoms.

CONTRIBUTIONS/IMPLICATIONS

- This is the first known study using longitudinal data to examine externalizing symptoms as a possible link between PTSD and SUDs.

- The present findings suggest that a PTSD-specific self-medication model may best explain the link between PTSD symptoms and future drug problems.

- PTSD still seems to be linked to alcohol problems through externalizing problems such as behavioral dysregulation.

- Internalizing symptoms may be a risk factor for and

consequence of PTSD symptomatology, whereas externalizing symptoms may just be a consequence.

- Children with alcoholic parents and trauma may be at higher risk for PTSD-SUD comorbidity and this population should receive special consideration in prevention efforts.

- PTSD and externalizing symptoms should be addressed in both prevention and treatment of PTSD-SUD comorbidity.

Healing War Trauma: A Handbook of Creative Approaches
Raymond Monsour Scurfield & Katherine Theresa Platoni (Eds.)
Routledge, 2013, 318 pages, Softcover, $59.95

Healing War Trauma: A Handbook of Creative Approaches is a valuable compilation of resourceful approaches for healing from the trauma of war. This is the second of two books recently assembled by these editors; the first is entitled, *War Trauma and Its Wake*. In their preface, the editors explain that when they detailed their original book plan, it reached over 500 pages, so they focused their first book on expanding the circle of healing, and their second on healing techniques.

Healing War Trauma offers 18 clinically focused chapters covering an array of techniques, plus a resource section containing a sample of resources of benefit to both clinicians and consumers. This sample is a small portion of the over 500 annotated resources maintained by Dr. Scurfield at http://www.usm.edu/social-work/dr-raymond-scurfield-home-page.

After providing the context and purpose of this book, the first chapter recommends factors to consider when assessing and treating war trauma. The second chapter then details 12 common survival modes enabling service members to function and survive in a war zone, including dehumanizing the enemy; detachment, numbing, denial and acceptance; social isolation and alienation; and "drinkin' and druggin'. The authors parallel how these survival modes aid the veteran in combat, but can then hinder the veteran as they return home. Another author poignantly points out that "coming *back* from a combat zone is not the same as coming *home*."

Other chapters detail the potential importance of cultural healing rituals, and ceremonies welcoming and honoring returning veterans; writing as a medium for healing; mind-body approaches such as hypnotherapy and mindful-awareness practice; animal assisted and outdoor approaches such as canine and equine support; developing technological approaches including the HealingCombatTrauma.com website; spiritual approaches; and a chapter focusing on helping the veteran successfully return to the civilian workforce.

Throughout their chapters, authors offer examples illustrating their approach and/or personal narratives detailing their own combat experiences. These add depth and color to their pragmatic offerings.

I found the Determining the Percentages of Responsibility technique particularly intriguing. Those of us who work with veterans, first responders, and/or individuals exposed to trauma understand that a very common reaction to trauma is to assign an exaggerated percentage of blame or responsibility for the outcome to self – the "should'a, could'a, would'a, if only" response. This technique tactfully, but persistently, examines with the individual how much responsibility others may hold for the event. The goal is not to reduce the individual's responsibility to zero, but rather to apportion responsibility more realistically.

As an example, a veteran driving a vehicle in theatre strikes an IED, resulting in the death of his three comrades in the vehicle. When asked to recount the event, the surviving veteran initially claims 90% of the responsibility; after all, s/he was driving. This technique gradually widens the range of those responsible, with the result that the veteran realizes s/he cannot be 90% responsible. Those who share the responsibility for the tragedy might include other unit personnel, the enemy who planted the IED, the local chain of command who assigned the mission, senior military leaders in theatre and in the US, even the public who elected the Congress backing the action.

The point is, when the individual considers the amount of responsibility each of the above individual(s) holds, s/he realizes s/he cannot be 90% responsible if, for example, other personnel have 15% responsibility for their actions, the enemy 50% for planting the IED, the chain of command 15%

for assigning the mission, even the public has perhaps 5%, leaving the individual themselves with a maximum of 15% of the responsibility. The therapist then asks the individual if they have suffered enough for their reduced share of the responsibility. This reframing process needs processing time, and may require the therapist to act as "devil's advocate" in questioning the percentages assigned and personnel considered. Read chapter 17 for details on the complete technique.

I recommend this valuable resource to mental health professionals, chaplains, and others working with traumatized service members. I believe those of us working with the first responder community can effectively apply many of the concepts with our populations as well. This is a broad scope resource, with multiple approaches to consider.

Raymond Monsour Scurfield, DSW, LCSW, is a Vietnam veteran who was a social work officer on one of the Army's two psychiatric teams, professor emeritus of social work at the University of Southern Mississippi, and the founding director of the VA's National Center for PTSD in Honolulu, Hawai'i.

Katherine Theresa Platoni, PsyD, maintains a private practice in Centerville, Ohio, is a colonel in the Medical Service Corps of the United States Army Reserve, and serves as Army Reserve Psychology Consultant to the Chief in the Medical Service Corps. She is a veteran of four deployments, including Operation Desert Storm, Operation Iraqi Freedom, and Operation Enduring Freedom.

ORIGINAL ARTICLES

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Purpose and Scope

The **International Journal of Emergency Mental Health and Human Resilience** provides a peer-reviewed forum for researchers, scholars, clinicians, and administrators to report, disseminate, and discuss information with the goal of improving practice and research in the field of emergency mental health.

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Mental Health Outcomes at the Jersey Shore After Hurricane Sandy

Joseph A. Boscarino
Center for Health Research, Geisinger Clinic
Dept. of Psychiatry, Temple Univ. School of Medicine

Stuart N. Hoffman
Department of Neurology, Geisinger Clinic
Dept. of Neurology, Temple Univ. School of Medicine

H. Lester Kirchner
Center for Health Research, Geisinger Clinic
Dept. of Medicine, Temple Univ. School of Medicine

Porat M. Erlich
Center for Health Research, Geisinger Clinic
Dept. of Medicine, Temple Univ. School of Medicine

Richard E. Adams
Department of Sociology
Kent State University

Charles R. Figley
Graduate School of Social Work
Tulane University

Ramon Solhkhah
Dept. of Psychiatry, Jersey Shore University Medical Center
Rutgers - Robert Wood Johnson Medical School

Abstract*:On October 29, 2012, Hurricane Sandy made landfall in the most densely populated region in the US. In New Jersey, thousands of families were made homeless and entire communities were destroyed in the worst disaster in the history of the state. The economic impact of Sandy was huge, comparable to Hurricane Katrina. The areas that sustained the most damage were the small- to medium-sized beach communities along New Jersey's Atlantic coastline. Six months following the hurricane, we conducted a random telephone survey of 200 adults residing in 18 beach communities located in Monmouth County. We found that 14.5% (95% CI=9.9-20.2) of these residents screened positive for PTSD and 6.0% (95% CI=3.1-10.2) met criteria for major depression. Altogether, 13.5% (95% CI=9.1-19.0) received mental health counseling and 20.5% (95% CI=15.1-26.8) sought some type of mental health support in person or online, rates similar to those reported in New York after the World Trade Center disaster. In multivariate analyses, the best predictors of mental health status and service use were having high hurricane exposure levels, having physical health limitations, and having environmental health concerns. Research is needed to assess the mental health status and service use of Jersey Shore residents over time, to evaluate environmental health concerns, and to better understand the storm's impact among those with physical health limitations.* [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(3), pp. 147-158].

Key words: *Mental health services; Posttraumatic stress disorder; Depression; Treatment seeking; Disasters; Hurricanes; Preparedness; Emergency response.*

While the most destructive aspects of disasters are over quickly, studies suggest that disasters characterized by a loss of life, major economic disruptions, and disasters related to large-scale events, such as hurricanes, can result in significant psychiatric disorders (Cerda et al., 2013; Galea et al., 2007; Galea, Tracy, Norris, & Coffey, 2008; Norris et al., 2002; Norris, Friedman, & Watson, 2002; Pietrzak, Van Ness, Fried, Galea, & Norris, 2013). These conditions were all present at the Jersey Shore on October 29, 2012 (Hurricane Sandy Rebuilding Task Force, August, 2013; Manuel, 2013). In addition, while post-disaster mental health utilization has been studied in the past (North et al., 1999; Smith, Christiansen, Vincent, & Hann, 1999), few disaster studies have assessed population-level mental health service utilization before September 11, 2001 (Boscarino, Adams, & Figley, 2004), which is essential for disaster management and evacuation planning.

On October 29, 2012, Hurricane Sandy struck the most densely populated region in the US, with devastating results. More than 650,000 homes were damaged or destroyed, hundreds of thousands of businesses were forced to close, and millions lost electrical power for a week or more in sub-freezing temperatures. In addition, over 100 lives were lost, thousands of families were made homeless, and entire communities were in psychological shock at the scale of the event (Hurricane Sandy Rebuilding Task Force, August, 2013; Manuel, 2013). The economic impact of Sandy was huge, estimated to be comparable to Hurricane Katrina (Hurricane Sandy Rebuilding Task Force, August, 2013). New Jersey is the most densely populated state in the US. The areas that sustained the most damage from the storm were the small- to medium-sized beach communities along New Jersey's Atlantic coastline. New Jersey's shoreline is highly developed and includes year-round residents, urban centers, and a significant number of seasonal residences and facilities related to a multi-billion dollar tourism industry (Hurricane Sandy Rebuilding Task Force, August, 2013). In addition to the residential destruction, the healthcare delivery system at the Jersey Shore was seriously degraded by the storm, limiting access to care and the provision of emergency services (Abramson & Redlener, 2012; Busch, 2013; Donohue, 2013; Redlener & Reilly, 2012; Traynor, 2012)

In the current study, we assessed mental health service use and mental health outcomes at the Jersey Shore after Hurricane Sandy. To achieve this, we conducted telephone interviews among a random sample of community-based adults residing at the Jersey Shore approximately 6 months after the storm. Previous research indicated that despite the wide availability of post-disaster mental health services after the World Trade Center attacks (Donahue, Lanzara, Felton, Essock, & Carpinello, 2006; Felton, 2002), mental health service utilization was limited (American Psychiatric Association, 2002). In addition, examination of the effectiveness of these mental health services suggested that, with the exception of brief psychosocial interventions, conventional psychotherapeutic sessions appeared less effective (Boscarino, Adams, & Figley, 2011). The objectives of the current study are threefold: (*i.*) to assess the prevalence of post-disaster mental health disorders; (*ii.*) to describe post-disaster mental health service use; and *(iii.)* to identify key psychosocial risk factors for adverse health outcomes. It is noted that our study was guided by a "psychosocial-stressor model" used in previous research, whereby the availability of an individual's psychosocial resources in the pre- and post-disaster periods will likely affect reactions to environmental stressors and subsequent manifestation of mental health outcomes (Adams, Boscarino, & Galea, 2006; Adams & Boscarino, 2011; Yamashita, 2012).

DATA AND METHODS
Sample Selection and Data Collection

All adults, 18 years old or older, who were permanent residents in a shore community in Monmouth County, New Jersey with telephone access were eligible for the current study. These communities included the following municipalities: Allenhurst, Asbury Park, Avon-by-the-Sea, Belmar, Bradley Beach, Deal, Highlands, Keansburg, Loch Arbour, Long Branch, Manasquan, Monmouth Beach, Ocean Grove, Sea Bright, Sea Girt, Spring Lake, and Union Beach. Using random-digit dialing (RDD), a telephone survey was conducted approximately 6 months after the storm. Experienced and trained mental health interviewers, using computer-assisted telephone interviewing (CATI) technology, conducted the interviews. Since eligible respondents were identified by means of RDD, some respondents did not reside in the targeted beach communities. However, these respondents were included in the study if they were permanent residents in an adjacent community and had been living in the community during the storm. Approximately 20% of respondents surveyed resided in adjacent communities. The Institutional Review Board (IRB) of the Geisinger Health System reviewed and approved the study's protocol. For the

survey, 200 residents completed the interview, after providing informed consent. Emergency mental health counseling was available for those who requested this or who appeared to experience psychological distress. The average interview time for the survey was approximately 25 minutes. Using standard survey definitions (American Association for Public Opinion Research, 2008), our survey response rate was estimated to be about 35%

Mental Health Service Use

For our mental health service use measures, we adopted those originally used in the National Comorbidity Survey (NCS) (Kessler et al., 1999). For the interview, we surveyed participants about receiving counseling from a helping professional (e.g., psychiatrist, counselor, physician, self-help group, etc.) for 30 minutes or more for "problems with emotions or nerves or use of alcohol or drugs" since Hurricane Sandy. These counseling questions were pre-tested before implementation and had been used in previous disaster surveys by the study team (Boscarino et al., 2004). In the survey, we also asked about use of "other" professional services, such as professional information from internet sites, mental health hotlines, other professional information or materials, or the use of prescription medications to help cope after the disaster. These other mental health services were combined with the use of professional counseling services to identify respondents who received "any" post-disaster mental health services.

Mental Health Outcomes Assessed

We also assessed two mental health outcomes, including those related to PTSD and depression. PTSD assessment was based on the Primary Care PTSD Screener (PCPS) (Ouimette, Wade, Prins, & Schohn, 2008). The PCPS is a widely used PTSD instrument that has been utilized among different populations (Bliese et al., 2008; Calhoun et al., 2010; van Dam, Ehring, Vedel, & Emmelkamp, 2010). Research has demonstrated that this diagnostic screener works well among various populations, including disaster victims (Boscarino et al., 2011; Boscarino, Kirchner, Hoffman, Sartorius, Adams, & Figley, 2012a; Boscarino, Kirchner, Hoffman, Sartorius, Adams, & Figley, 2012b) It was recently reported that the area under the ROC curve (AUC) was 0.880 for the PCPS (specificity = 82.2%, sensitivity = 93.7%) in predicting current PTSD among trauma-exposed adults (Boscarino et al.,

2011). The briefness of the PCPS, its wide-scale use, and its predictive values are the strengths of this instrument (Boscarino, Kirchner, Hoffman, Sartorius, Adams, & Figley, 2012a; Boscarino, Kirchner, Hoffman, Sartorius, Adams, & Figley, 2012b). We also assessed the number of PTSD symptoms experienced in the past 6 months in the current study, based on a commonly-used PTSD scale (Boscarino et al., 2004). In the current study, we used the presence of 2 items on the PCPS to screen positive for PTSD. We also assessed the impact of using a higher, more conservative, cut-point of 3 PCPS symptoms and discuss these results.

For depression, we used a version of a major depressive disorder scale, which has been used in previous trauma surveys (Boscarino et al., 2004; Galea et al., 2002; Kilpatrick et al., 2003). Consistent with DSM-IV criteria (American Psychiatric Association, 2000), respondents met criteria for depression if they had five or more depression symptoms for at least two weeks or more. Studies have suggested that this scale has good reliability and validity (Boscarino et al., 2004; Galea et al., 2002).

Psychological Stress Exposures

Consistent with the psychosocial-stressor model, our study also included three psychological stress exposure measures that could have affected mental health status. One was related to hurricane exposure level, which was the sum of hurricane-related events that could have been experienced during or shortly after the storm (e.g., knew persons killed or injured, was evacuated, lost possessions, home damaged or destroyed, etc.) (Freedy, Kilpatrick, & Resnick, 1993). For descriptive purposes, since we had no a priori method to judge the severity of events, we categorized these events into high exposure (10 or more events) vs. not high exposure (< 10 events), based on a total count of different events experienced. A total of 15% of respondents reported 10 or more hurricane event exposures. This scale was developed from previous disaster studies, had been used in previous research, and has been described in detail elsewhere (Freedy et al., 1993).

A stressful life event scale also was used, which was the sum of eight negative experiences (e.g., divorce, legal problems, etc.) that could have happened in the past 12 months. This scale was also developed from previous disaster studies, used in earlier research, and had good reliability and validity (Boscarino et al., 2004; Galea et al., 2002). In the current

study, based on previous research (Boscarino et al., 2004), this scale was collapsed into two categories: less than two stressful events and two or more stressful events. Twenty percent (20%) of respondents were classified as having experienced two or more stressful life events in the past year.

The third stressor measure assessed 10 traumatic events, other than Hurricane Sandy (e.g., had forced sexual contact, was in a serious accident, served in a warzone, etc.) (Freedy et al., 1993). Since we had no a priori method to judge the severity of these events, based on previous research (Boscarino et al., 2004), we collapsed these exposures into two categories: less than 4 traumatic events and 4 or more traumatic events. A total of 14.5% of respondents experienced 4 or more lifetime traumatic events in the current study. This traumatic event scale also was developed from other disaster studies, used in previous research, and had good reliability and validity (Boscarino et al., 2004; Freedy et al., 1993; Galea et al., 2002).

Psychosocial Resources

Again, consistent with the psychosocial-stressor model, our study also included two measures of psychosocial resources: a measure of self-esteem and a measure of social support. Self-esteem was measured by a brief version of the Rosenberg self-esteem (RSE) scale (Rosenberg, 1979). The RSE scale is a widely used measure with good reported reliability and validity that has been incorporated into numerous studies (Blascovich & Tomaka, 1991). We divided this self-esteem measure into two categories: low self-esteem vs. high self-esteem, based on the lowest quintile distribution. Altogether 22% of respondents were classified as having low self-esteem. This scale has been used in previous post-disaster and trauma-related research (Adams et al., 2006; Boscarino et al., 2004; Boscarino et al., 2010)

Our other psychosocial resource measure included was a measure of current social support (e.g., someone to take care of you if you were sick or ill). The social support scale used was a version utilized in the Medical Outcomes Study (Sherbourne & Stewart, 1991), which has been included in previous disaster studies and considered a reliable and valid measure of current social support (Boscarino et al., 2004; Galea et al., 2002). This scale was used as a categorical measure, with low social support defined as the lowest quintile. Altogether 22% of respondents were classified as having low social support.

Demographic and Functional Status Measures

Our study also included the following demographic measures: age, education level, gender, marital status, race, and Hispanic ethnicity. The functional status measure used included a measure of physical limitations, which was related to reporting physical health limitations (e.g., "does your health limit you in climbing several flights of stairs, in moderate activities, such as vacuuming, bowling, etc.). Age was based on self-report and recorded in years. This measure was used as a categorical variable in bivariate analyses (coded, 18-44, 45-64, and 65+) and as a continuous variable (in years) in multivariate analyses. Education, gender, marital status, race, Hispanic ethnicity, and reported physical limitations were based on self-report and coded as binary variables for bivariate analyses. For multivariate analyses, college graduate, female sex, married, White race, Hispanic, and reported physical limitations were coded as the indicator variables, respectively.

Other Disaster-related Measures

Other study measures, also based on self-report, included having received post-disaster financial assistance, having contact with the Federal Emergency Management Agency (FEMA), and having post-disaster environmental concerns. Financial assistance and contact with FEMA were based on survey responses to these respective questions. The environmental concern measure was based on response to a survey question related to concern about exposure to sewage, pollution, chemicals, or debris after the hurricane. Those who responded that they were "very" or "somewhat" concerned about these exposures were coded as "yes" responses. These three measures were used as binary variables in bivariate analyses. For the multivariate analyses, receiving financial assistance, FEMA contact, and having environmental concerns were coded as the indicator variable in these analyses, respectively.

Statistical Analyses

Statistical analyses included descriptive statistics related to the study, population and statistical analyses testing the association between mental health status, service utilization, and potential risk/protective factors. Both bivariate and multivariate data analyses were conducted. For the multivariate

analyses we used logistic regression analysis, whereby the risk/protective factors were used to predict PTSD, depression, and mental health service use, respectively if they were significant in the bivariate analyses (Table 1). With the exception of age and gender, only variables that were significant in bivariate analyses were included in the multivariate analyses (Table 2). To prevent model over-fitting, with the exception of age and gender, variables that were not significant in the multivariate analyses were removed from the analyses. Analyses were conducted using Stata, version 12.1 software (Stata Corporation, 2012). Since different cut-points have been used for the PCPS screener in the past (Boscarino et al., 2011), we present sensitivity results using different cut-points for the PCPS in our results section.

RESULTS

The majority of respondents surveyed in the current study, 51%, were between 45-64 years old (Table 1) and the mean age of respondents was 59.25 (SD = 13.66). In addition, 65% were female, 15.5% non-White, and 5% were Hispanic ethnicity. The majority were also married (57%) and college graduates (52.5%). Altogether, 17.5% reported having physical health limitations (Table 1). In addition, 14.5% and 20%, respectively, were classified as having high exposure to lifetime traumatic and recent exposure to stressful life events. Additionally, 22% were categorized as having low self-esteem, and 22% were categorized as having low social support (Table 1). Furthermore, 15% had high exposure to hurricane-related events, 24.5% reported receiving some type of storm-related financial assistance, and 30% reported that they or someone in the household had contacted a FEMA representative following the storm. Finally, a total of 48% of Jersey Shore residents reported that they had environmental health concerns related to the storm (Table 1).

In terms of mental health outcomes, we found that 6 months following Hurricane Sandy that 14.5% (95% CI=9.9-20.2) of Jersey Shore residents screened positive for PTSD and 6.0% (95% CI=3.1-10.2) met criteria for major depression. Altogether, we also found that 13.5% (95% CI=9.1-19.0) of residents received mental health counseling and that 20.5% (95% CI=15.1-26.8) sought some type of mental health support in person or online following the storm (Table 1).

Bivariate analyses indicate that significant predictors of positive PTSD status on the PCPS included having high exposure to stressful life events (OR = 4.33, p = 0.001), low

social support (OR = 2.56, p = 0.034), low self-esteem (OR = 3.07, p = 0.01), high storm exposure (OR=11.14, p < 0.001), financial assistance (OR = 3.05, p = 0.009), FEMA contact (OR = 7.28, p < 0.001), and having environmental health concerns (OR = 8.80, p < 0.001). For post-storm depression, significant predictors included being Hispanic (OR = 8.62, p = 0.001), having physical limitations (OR = 8.00, p < 0.001), having high lifetime trauma exposure (OR = 7.17, p < 0.001), having high stress exposure (OR = 6.58, p = 0.001), having low self-esteem (OR = 8.44, p = 0.001), having high storm exposure (OR=6.83, p < 0.001), having received post-storm financial assistance (OR = 3.37, p = 0.034), and having contact with FEMA (OR = 8.06, p < 0.001). Significant predictors for receiving mental health counseling or having any mental health service contact were generally similar. Noteworthy is that for mental health service use, having had recent stressful life events were significant for both having received psychological counseling (OR = 4.14, p = 0.001) and for having gotten any type of professional mental health support (OR = 4.19, p < 0.001) (Table 1). Also noteworthy was that high storm exposure was strongly associated with both receiving counseling services (OR = 4.50, p = 0.001) and having sought any professional mental health support (OR = 4.63, p < 0.001). Having environmental health concerns was also associated with these outcomes (for counseling, OR = 3.65, p = 0.004; for any professional support, OR = 2.88, p = 0.003).

In terms of multivariate results, the data suggest that the variables most strongly associated with PTSD are high hurricane exposure (OR =5.97, p < 0.001) and having environmental health concerns (OR = 5.98, p = 0.003) (Table 2). For major depression, the most significant predictor variable is having physical limitations (OR =12.00, P = 0.001). Older age tended to be protective for depression (OR = 0.94, p = 0.022), however. The best predictor for receiving professional counseling was having environmental health concerns (OR = 2.94, p = 0.029). For receiving any type of professional mental health support for mental health problems, significant predictors were having physical limitations (OR = 3.22, p = 0.011) and having high exposure to hurricane-related events (OR = 2.93. p = 0.023). Female gender also appears associated with receiving any type of professional mental health support (OR = 2.79, p = 0.026). Finally, we also examined post-storm psychotropic medication use as a separate outcome and 12% of residents used these drugs following the storm. Use of these drugs tended to be associated with having physical limitations, high hurricane exposure level,

Table 1.
PTSD-positive Status, Depression and Mental Health Service Use in past 6 Months by key Study Predictor Variables (N =200)*

Study Variables	(N)	Total %	PTSD-Positive				Major Depression				Mental Health Counseling				Any Mental Health Treatments			
			%	OR	(95% CI)	P-value	%	OR	(95% CI)	P-value	%	OR	(95% CI)	P-value	%	OR	(95% CI)	P-value
Age: 18-44	(27)	13.5	22.2	3.10	(0.90-10.63)	0.165	7.4	5.60	(0.49-64.48)	0.200	14.8	1.37	(0.38-4.98)	0.792	29.6	2.30	(0.81-6.54)	0.287
Age: 45-64	(102)	51.0	16.7	2.17	(0.81-5.80)		8.8	6.77	(0.84-54.72)		14.7	1.36	(0.54-3.40)		21.6	1.50	(0.68-3.33)	
Age: 65+	(71)	35.5	8.5	1.00			1.4	1.00			11.3	1.00			15.5	1.00		
Female Gender	(130)	65.0	16.2	1.49	(0.62-3.57)	0.358	5.4	0.74	(0.23-2.42)	0.618	12.3	0.75	(0.33-1.73)	0.501	25.4	2.64	(1.14-6.08)	0.016
Male Gender	(70)	35.0	11.4	1.00			7.1	1.00			15.7	1.00			11.4	1.00		
Married	(114)	57.0	14.0	0.92	(0.42-2.02)	0.830	5.3	0.74	(0.23-2.38)	0.613	13.2	0.93	(0.41-2.11)	0.871	19.3	0.84	(0.42-1.68)	0.629
Not Married	(86)	43.0	15.1	1.00			7.0	1.00			14.0	1.00			22.1	1.00		
White Race	(169)	84.5	11.8	0.33	(0.13-0.81)	0.021	5.9	0.91	(0.19-4.38)	0.908	13.0	0.78	(0.27-2.24)	0.641	19.5	0.70	(0.29-1.70)	0.437
Non-White Race	(31)	15.5	29.0	1.00			6.5	1.00			16.1	1.00			25.8	1.00		
Hispanic Ethnicity	(10)	5.0	30.0	2.70	(0.66-11.12)	0.197	30.0	8.62	(1.91-38.99)	0.001	20.0	1.65	(0.33-8.22)	0.537	20.0	0.97	(0.20-4.74)	0.968
Non-Hispanic Ethnicity	(190)	95.0	13.7	1.00			4.7	1.00			13.2	1.00			20.5	1.00		
Not College Graduate	(94)	47.5	19.1	1.00			9.6	1.00			17.0	1.00			28.7	1.00		
College Graduate	(104)	52.5	9.6	0.45	(0.20-1.03)	0.054	2.9	0.28	(0.07-1.07)	0.050	9.6	0.52	(0.22-1.21)	0.123	11.5	0.32	(0.15-0.69)	0.002
Physical Limitations	(35)	17.5	25.7	2.51	(1.03-6.12)	0.052	20.0	8.00	(2.37-26.99)	<0.001	25.7	2.83	(1.15-6.97)	0.020	37.1	2.89	(1.30-6.42)	0.011
No Limitations	(165)	82.5	12.1	1.00			3.0	1.00			10.9	1.00			17.0	1.00		
High Lifetime Trauma	(29)	14.5	24.1	2.16	(0.82-5.64)	0.133	20.7	7.17	(2.13-24.12)	<0.001	27.6	3.05	(1.19-7.83)	0.016	31.0	1.96	(0.81-4.69)	0.145
Low Lifetime Trauma	(171)	85.5	12.9	1.00			3.5	1.00			11.1	1.00			18.7	1.00		
High Life Stressors	(40)	20.0	32.5	4.33	(1.87-10.03)	0.001	17.5	6.58	(1.97-22.00)	0.001	30.0	4.14	(1.75-9.79)	0.001	42.5	4.19	(1.95-8.98)	<0.001
Low Life Stressors	(160)	80.0	10.0	1.00			3.1	1.00			9.4	1.00			15.0	1.00		
Low Social Support	(44)	22.0	25.0	2.56	(1.10-5.92)	0.034	11.4	2.73	(0.82-9.07)	0.114	22.7	2.41	(1.01-5.72)	0.054	22.7	1.19	(0.53-2.66)	0.681
High Social Support	(156)	78.0	11.5	1.00			4.5	1.00			10.9	1.00			19.9	1.00		
Low Self-esteem	(44)	22.0	27.3	3.07	(1.33-7.05)	0.010	18.2	8.44	(2.41-29.59)	0.001	29.5	4.25	(1.82-9.94)	0.001	36.4	2.99	(1.42-6.33)	0.005
High Self-esteem	(156)	78.0	10.9	1.00			2.6	1.00			9.0	1.00			16.0	1.00		
High Storm Exposure	(30)	15.0	50.0	11.14	(4.53-27.43)	<0.001	20.0	6.83	(2.04-22.91)	<0.001	33.3	4.50	(1.81-11.12)	0.001	46.7	4.63	(2.03-10.59)	<0.001
Low Storm Exposure	(170)	85.0	8.2	1.00			3.5	1.00			10.0				15.9	1.00		
Financial Assist Received	(49)	24.5	26.5	3.05	(1.34-6.91)	0.009	12.2	3.37	(1.03-10.99)	0.034	22.4	2.44	(1.05-5.70)	0.035	32.7	2.44	(1.17-5.10)	0.019
No Assist Received	(151)	75.5	10.6	1.00			4.0	1.00			10.6	1.00			16.6	1.00		
FEMA Contacted	(60)	30.0	33.3	7.28	(3.07-12.25)	<0.001	15.0	8.06	(2.10-30.95)	<0.001	21.7	2.49	(1.09-5.69)	0.027	28.3	1.91	(0.94-3.90)	0.079
FEMA not Contacted	(140)	70.0	6.4	1.00			2.1	1.00			10.0	1.00			17.1	1.00		
Environmental Concerns	(96)	48.0	26.0	8.80	(2.94-26.40)	<0.001	9.4	3.48	(0.91-13.27)	0.053	20.8	3.65	(1.47-9.07)	0.004	29.2	2.88	(1.39-5.98)	0.003
No Environment Cons.	(104)	52.0	3.8	1.00			2.9	1.00			6.7	1.00			12.5	1.00		
Total %, 95% CI	(200)	100.0	PTSD = 14.5%, 95% CI= 9.9-20.2				Depress =6.0%, 95% CI= 3.1-10.2				Counsel = 13.5%, 95% CI= 9.1-19.0				Any =20.5%, 95% CI= 15.1-26.8			

*PTSD-positive = Screened positive on the Primary Care PTSD Screener (PCPS) scale.
OR = odds ratio; CI = confidence interval.

Table 2.
Multivariate Logistic Regression Predicting PTSD-positive Status,
Depression and Mental Health Service Use in the Past 6 Months (N =200)*

Study Variables	PTSD-Positive OR	(95% CI)	P-value	Major Depress OR	(95% CI)	P-value	Counsel OR	(95% CI)	P-value	Any Treat OR	(95% CI)	P-value
Age (in years)	0.98	(0.94-1.01)	0.139	0.94	(0.89-0.99)	0.022	0.98	(0.95-1.01)	0.263	0.99	(0.96-1.01)	0.312
Female Gender	1.26	(0.46-3.48)	0.659	0.72	(0.18-2.83)	0.638	0.63	(0.26-1.56)	0.322	2.79	(1.13-6.88)	0.026
Male Gender	1.00	--	--	1.00	--	--	1.00	--	--	1.00	--	--
Physical Limitations	2.52	(0.85 -7.50)	0.097	12.00	(2.67-54.97)	0.001	2.70	(0.99-7.36)	0.053	3.22	(1.31-7.89)	0.011
No Physical Limitations	1.00	--	--	1.00	--	--	1.00	--	--	1.00	--	--
High Storm Exposure	5.97	(2.25 -15.82)	<0.001	2.61	(0.63-10.74)	0.185	2.64	(0.97-7.17)	0.057	2.93	(1.16-7.39)	0.023
Low Storm Exposure	1.00	--	--	1.00	--	--	1.00	--	--	1.00	--	--
Environmental. Concerns	5.98	(1.86-19.21	0.003	2.29	(0.51-10.19)	0.277	2.94	(1.12-7.77)	0.029	2.06	(0.93-4.55)	0.076
No Environmental Concerns	1.00	--	--	1.00	--	--	1.00	--	--	1.00	--	--

*PTSD-positive = Screened positive on the Primary Care PTSD Screener (PCPS) scale. All models results
adjusted for variables shown in table.
OR = odds ratio; CI = confidence interval.

and having major environmental health concerns (p-values < 0.01). In multivariate logistic regression, having physical limitations (OR = 6.72, p < 0.001) and having environmental health concerns were significant in predicting post-storm psychotropic medication use (OR = 5.68, p = 0.005).

Since our PTSD measure was based on a diagnostic screener, as noted, we conducted additional sensitivity analyses using different PCPS cut-points. First, we assessed the total number of DSM-IV PTSD symptoms among those who screened positive using the 2-symptom PCPS criteria that we used in the current study. Second, we assessed the impact of 3 positive PCPS symptoms, vs. 2 positive symptoms. What we found was that those who screened positive on the PCPS 6 months after the storm using the 2-symptom PCPS criteria, had an average of 2.34 DSM-IV PTSD symptoms 6 months post-storm, vs. 0.43 for those who did not screen positive (t = 6.28, df = 198, p < 0.0001). When we used 3 positive PCPS symptoms to indicate a PTSD case, we found that 7.5% (95% CI = 4.26-12.1) of the population met criteria for PTSD (vs. 14.5% for 2-symptom PCPS criteria). However, when we cross-tabulated the results for the 2 positive PCPS symptoms vs. 3 symptoms, the Kappa statistic was reasonably correlated (K= 0.65). As a final comparison, we examined the bivariate and multivariate results using the 3-symptom PCPS criteria compared to the 2-symptom criteria. These results were essentially the same, except that the confidence intervals for PTSD were wider using the 3-symptom PCPS criteria, due to the smaller subgroup sample size.

DISCUSSION

As suggested, while most disasters are over relatively quickly, studies suggest that those characterized by a loss of life, economic disruptions, and large-scale events, such as hurricanes, can result in significant psychiatric disorders (Brewin, Andrews, & Valentine, 2000; Cerda et al., 2013; Galea et al., 2007; Galea et al., 2008; Pietrzak et al., 2013). On October 29, 2012, Hurricane Sandy made landfall on a densely populated region in the U S (Hurricane Sandy Rebuilding Task Force, August, 2013; Manuel, 2013). The areas that sustained the most damage were the small- to medium-sized beach communities along New Jersey's Atlantic coastline. In addition, as noted, the healthcare delivery system in the area was adversely impacted by the storm, limiting the provision of emergency services (Abramson & Redlener, 2012; Busch, 2013; Donohue, 2013; Redlener & Reilly, 2012; Traynor, 2012). In the current study, we assessed mental health outcomes at the Jersey Shore after Hurricane Sandy. To achieve this, we conducted telephone interviews among a random sample of community-based adults residing within 18 Jersey Shore beach communities approximately 6 months after the storm. As suggested, our study was guided by a "psychosocial-stressor model," whereby the availability of an individual's psychosocial resources were expected to influence the impact of environmental stressors and subsequent manifestation of mental health outcomes (Adams et al., 2006; Adams & Boscarino, 2011).

The current study suggests that 14.5% of community residents screened positive for PTSD and 6% met criteria for major depressive disorder 6 months after the storm. In addition, 13.5% received mental health counseling of some type and 20.5% received or sought some type of professional mental health help in person or online. Combined, 30.5% (95% CI = 24.2 - 37.4) of residents experienced PTSD symptoms, major depression, or sought some type of mental health support 6 months after the storm. In bivariate analyses, the best predictors of mental health outcomes and treatment seeking were having physical health limitations, as opposed to older age, experiencing recent stressful events, having low self-esteem, having high storm-event exposures, having received financial assistance, having contact with FEMA, and having environmental health concerns. In multivariate analyses, the key variables to emerge in predicting mental health outcomes were having physical health limitations, high levels of hurricane event exposures, and having major environmental health concerns.

Observations drawn from this study should be interpreted with some caution. Study limitations are that we used self-reported data collected by telephone among adult householders, raising the possibility of respondent recall and selection bias. With regard to the latter, our survey response rate was less than optimal. In part this was due to the fact that at the time of our survey, many of the Jersey Shore communities were still recovering from the storm and telephone service was not fully restored. Related to the latter, is the possibility that some residents most affected by the storm were unavailable to be surveyed. In addition, we surveyed only those who spoke English and male respondents were underrepresented in the study, since men constituted only 35% of the current survey (Table 1). Available US census data for this region suggest that this figure should have been closer to 45% (http://www.zip-codes.com). Another limitation is that we used a PTSD screener (i.e., the PCPS) to assess PTSD in the current study. While this instrument has been shown to be a very good diagnostic screener (Boscarino et al., 2011; Boscarino, Kirchner, Hoffman, Sartorius, Adams, & Figley, 2012a; Boscarino, Kirchner, Hoffman, Sartorius, Adams, & Figley, 2012b), this is a study limitation, nevertheless. Finally, this study was cross-sectional, thus, causal inference is limited.

Despite these limitations, we were able to interview a random sample of Jersey Shore residents in beach communities severely affected by the storm. Overall, our study results suggest that the Jersey Shore residents exposed to the storm were fairly resilient, given that the rates of immediate post-storm mental disorders and treatment seeking did not appear to be unusually high. However, it is noted that this was also observed in New York City following the terrorist attacks in 2001 (Boscarino et al., 2004). In that study, treatment seeking increased significantly two years later, together with delayed PTSD (Boscarino & Adams, 2009; Boscarino et al., 2011). This may be true for Jersey Shore residents as well. Anecdotally, it was noted that for 10 months post-Sandy, voluntary hospital admissions were down markedly, while involuntary admissions were up, at a major psychiatric facility in Monmouth County (Jersey Shore University Medical Center). These psychiatric admission rates only recently returned to pre-storm levels.

Previous research suggests that receiving immediate mental health services may be associated with better outcomes after a large-scale disaster. However, as noted elsewhere, the reasons for this association are unclear (Boscarino, Adams, Foa, & Landrigan, 2006), but may be due to indirect effects, such as later treatment-seeking or by facilitating professional referrals, or by some other indirect effect (Boscarino et al., 2011). In any case, additional research related to the impact of post-disaster mental health counseling is clearly needed at this time (Boscarino et al., 2006).

It is important to note that extensive mental health services were available in New York City following the World Trade Center attacks. At the time, it was unusual for mental health care to be made widely available to the general public (Felton, 2002). However, as previously reported, these services failed to have a major impact on service use immediately following the attacks (American Psychiatric Association, 2002; Boscarino et al., 2004). As demonstrated in the current study, there did not appear to be a huge surge in mental health service use at the Jersey Shore following Hurricane Sandy. This may change over time, as it did in New York after the Trade Center disaster (Boscarino & Adams, 2009; Boscarino et al., 2011). Persons with physical health limitations, those who have been exposed to high levels of hurricane-related events, and those who have environmental concerns or other ongoing stressors are worthy of longer-term surveillance (Cerda et al., 2013; Pietrzak et al., 2013). These subgroups may be at higher risk for mental health problems in the future (Boscarino & Adams, 2009). Finally, the longer-term psychological and financial impact of Hurricane Sandy on mental health status should not be underestimated, since this can be significant following such an event (Galea et al., 2008). Further research is advised.
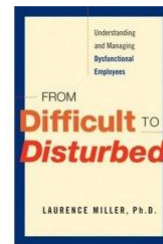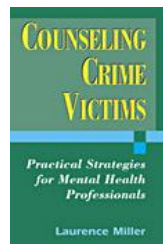
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A Pilot Investigation in Constructing Crisis Communications: What Leads to Best Practice?

Rachel M. Firestone
Loyola University Maryland

George S. Everly, Jr.
Loyola University Maryland,
The Johns Hopkins Bloomberg School of Public Health, and
The Johns Hopkins University School of Medicine

Abstract: *Crisis communications can play an important role in mitigating, or exacerbating, the psychological and behavioral reactions to critical incidents and disasters. Effective crisis communications can serve to mitigate anxiogenesis and direct rapid and focused rescue, recovery, and rehabilitative operations. Ambiguous and/or deceptive communications can serve to worsen mental health reactions and delay operational response and recovery (Everly, Strouse, & Everly, 2010). It seems, therefore, that inquiry into the content of acute crisis communications would be warranted. Said more simply, given limited time, cryptic messaging in social media, and the "sound bite" mentality that seems to govern news dissemination, it is important to identify the most important content to convey in the wake of critical incidents and disasters. This paper reports on a pilot investigation into "best practices" for the construction of acute crisis communications.* [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(3), pp. 159-164].

Key words: *crisis communications, social media and crisis, disaster communications*

The United States, and countries worldwide, have experienced many crisis situations over the course of the past 10 years. Such crisis situations include the outbreak of Severe Acute Respiratory Syndrome (SARS) in Hong Kong in 2002, the aftermath of Hurricane Katrina in 2005, the epidemic of H1N1, also known as the Swine Flu, which spread to over 70 countries in 2009, the devastating earthquake in Port-au-Prince in 2010, and the 9.0 magnitude earthquake and resulting tsunami, which hit the coast of Japan in 2011. Such crisis situations each have unique impacts and resulting demands on the physical infrastructure of identified areas, the individuals involved, and on the overall functioning of geographic regions. The responses to these crises carry with them specific messages, which in turn elicit various behaviors and responses. According to many researchers including Hobfoll, Watson, Bell, Bryant, Brymer, and Friedman (2007), "no evidence-based consensus has been reached supporting a clear set of recommendations for intervention during the immediate and the mid-term post mass trauma phases" (para. 1). It is with this in mind that this exploratory research serves to present information on what the individuals may need to know during and in the aftermath of a crisis.

Rachel M. Firestone is in the Department of Psychology, Loyola University Maryland. George S. Everly, Jr., PhD, ABPP, is Professor of Psychology (core faculty) Loyola University Maryland, and Associate Professor of Psychiatry and Behavioral Sciences, The Johns Hopkins University School of Medicine. Correspondence regarding this article should be directed to Dr. Everly at geverly@jhsph.edu

Crisis Communications

Many models exist regarding approaches to crisis communication in a number of varied situations. Nevertheless, they all strive to provide a model that informs the dissemination of the most vital information in the most efficient manner. Simply said, model of crisis communications strive to answer the question, "What do people need to know in a crisis?" A discussion of the history of crisis communication is appropriate to begin to answer this question.

Disabling and destructive fear is often associated with disaster. However, fear can be combatted. "Communication challenges are particularly pronounced when the fear spreads faster and farther than the actual threat. One of the most effective antidotes for fear is effective risk communication" (Brenner, Bush, & Moses, 2010, p. 61). This notion speaks to the psychological state of individuals following a crisis. It is therefore critical that effective crisis communication addresses both fear and other related emotions, as well as ensuring that the communication 'out-runs' the threat, both perceived and real. These perceived and real threats need to be managed via crisis communication, which in turn can lead to effective action. Some principles have been identified, which have been found to help in this aforementioned process.

Hobfoll and colleagues (2007), determined five principles which should guide intervention and prevention. These five principles include: 1) a sense of safety, 2) calming, 3) a sense of self and community efficacy, 4) connectedness, and 5) hope. Many researchers and experts in various fields have developed models, including the one just mentioned, which outline essential elements and goals of crisis communication. A review of these models, and their components, helps to portray how many crises situations are approached with regard to communicating with individuals. Information regarding a crisis comes from many different places; city-wide, state-wide, and even country-wide spokespeople may communicate similar or dissimilar information to a population in need of honest, strategically planned crisis communication. A review of some crisis communication models is therefore appropriate at this time.

Specific *information* has been found to be integral in effective crisis communication. Some models have been developed to structure and provide criteria for this communication. One model for crisis communication is Integrative Crisis Intervention (ICI). ICI includes 1) Information (rumor deterrence), 2) Reassurance, 3) Direction, 4) Motivation, and 5) A sense of connectedness and hope (Everly & Mitchell, 2008, p. 224). This model provides general categories, which should be addressed by leaders and authority figures when addressing the public. Each component of the ICI model serves a specific purpose. Some of the components include objective facts about the situation, while other components attend to the emotional needs of the individuals involved. This model is multifaceted, and provides larger 'bucket' categories where more specific, and situation appropriate pieces of information may be organized.

Other models provide additional information on the specifics of elements of this aforementioned model. For instance, communication strategist John Daly, suggests that the information, attempts at rumor deterrence, and direction should include clear indicators of why individuals should not panic, explicit instructions for appropriate precautions, and that all information provided communicates a single message (n.d.). Daly also suggests that reassurance can be created when the honest nature of the situation is communicated. For instance, communicating that "the risk is low" or, when applicable, "the disease is treatable" provides a psychological framework for individuals to work within, which does not generally induce panic. It is through information that crisis communication can elicit emotions conducive to effective action or, though hopefully not the case, action that results in greater damage. The nature of information processing is a mechanism worthy of discussion, as it is the mechanism by which presented information is transformed into action.

In considering the information provided to the public during a crisis situation it is important to consider the lens through which information is processed. Individuals operating in non-crisis situations do not process information the same way as those taking in and working with information following a crisis. The same information presented in each situation, crisis and non-crisis, can have two very different impacts. This understanding can also shape the type, quantity and nature of the information presented. Referring back to the need for reassurance and motivation, the Negative Dominance Model should be considered. This model posits that, "The relationship between positive and negative information is asymmetrical" (Brenner, et al., 2010, p. 44). That is, negative information tends to carry more weight than positive information during a crisis situation. Put another way, losses are tended to more readily than gains, or positive outcomes. It has therefore been found that it takes three to four positive pieces of information to counteract one negative element of

communication (Brenner, et al., 2010, p. 44). What does all of this mean for leaders addressing the public? While the negative aspects of the crisis may be glaring, it is critical to communicate the resources available and the inherent strengths of the area, including the assets individuals themselves may have. The Negative Dominance Model is not the only model, which should be considered when strategically planning a crisis communication plan.

Another model of communication, the Mental Noise Model, posits that "mental noise" is created by stress during and following a crisis (Brenner et al., 2010, p. 43-44). Brains do not function and process information in the same way during crisis situations. Therefore, it has been found that the quantity and quality of information presented to the public should be determined in large part by the degree of "mental noise" that may exist for many during and following a crisis. With regard to quantity, researchers recommend that no more than three messages be delivered to the public at any given point in time. The quality, or actual nature of the information should also be considered. It is recommended that information be presented well below the average education level of the public. A simplification of the information has been shown to be more effective. Lastly, the Mental Noise Model includes the fact that individuals tend to have temporally focused attention to information. That is, human beings tend to remember the first and the last pieces of information presented to them. Leaders should take this into account when initiating and concluding communication. Others in the field of crisis communication have studied the ways that the brain actually digests information, especially that, which can prove to be traumatic.

Clinicians and researchers, such as Everly and Lating (2002), have found that information processing in the face of a crisis includes what is known as cognitive appraisal as well as affective integration. According to Everly and Lating (2002), "Cognitive appraisal refers to the process of cognitive interpretation that is the meanings we assign to the world as it unfolds before it. Affective integration refers to the blending and coloring of felt emotion into the cognitive interpretation. The resultant cognitive – affective complex represents how the stressors are ultimately perceived" (p. 26). It is therefore clear that human processing of seemingly objective information is also impacted by subjective, emotional perceptions. Referring to the model discussed above, it has been found that "mental noise" is caused by the stress and the strong emotions associated with exposure to trauma

(Brenner et al., 2010, p. 43-44). The cognitive appraisal, the affective integration, and the "mental noise" present are the major factors, which determine the degree to which a crisis becomes a psychological stressor.

In addition to understanding the nature of human processing, those responding and communicating in crisis situations, may use specific modalities or strategies to actually develop the messages presented. Message Maps, which are "organized means of displaying layers of information", are one strategy (Brenner et al., 2010, p. 46). This particular strategy can help a leader, and his team, who are addressing the public to develop a message which, "contains hierarchally organized responses to anticipate answers to questions" (Brenner et al., 2010, p. 46). It is the development of a hierarchy of information, which is stressed in this discussion. A plethora of information can be communicated, however according to Neteen and van Someren (2011); missing information and information overload are key factors in the determination of success or failure of crisis communication. Specific models, or tools, can help in these efforts.

The development of the Message Map allows communicators to identify stakeholders, articulate a complete list of potential concerns and questions, identify themes throughout the concerns, develop key responses to stakeholder questions, compile supporting facts and evidence for the responses, test responses and check facts with experts in a field related to the crisis (e.g. doctors in the case of the Anthrax crisis), and plan for the delivery by trained spokespeople (Brenner et al., 2010, p. 47-51). Such a systematic approach taps into anticipation and hypothesizing the public's concerns. We propose that in addition to these hypothesized approaches, leaders and support teams should ask their stakeholders what information may be most important to them in the face of a natural disaster, disease outbreak, or a terrorist attack. If a process of collecting data on what individuals would like to know in a crisis were to occur, less guessing would be involved in determining the concerns of stakeholders, and therefore the resulting crisis communication. There are many more specific modalities to structure crisis communication, and many should be used to further work towards an evidence-based means of crisis communication.

Models exist to help develop crisis communication. It is in the context of these models, and with the perspective that new models may also serve to effectively guide both thinking and action, that the information presented is revisited. It is possible that revisiting what information is found to be most

salient, may help in this effort. This exploratory research serves to present information on what the average person may want to know during and in the aftermath of a crisis.

METHOD

Participants

Participants for this pilot investigation were obtained from individuals attending training in crisis and disaster response. Participation was voluntary, but part the educational experience. Data were obtained from 248 participants (85 men and 158 women reported gender, 5 participants did not report gender). The participants ranged in age from 20 to 79 years. The average age of the participants was approximately 33 years (12 participants did not report their age). According to their self-report, participants worked in a wide-range of professions. The participants consisted of nurses, members of the police force, those working and learning in the field of psychology, members of the clergy, and many other professions. Ethnicities were not reported.

Procedure

Individuals were asked to fill out a survey based upon the description of a critical incident. The following explanation was presented:

Critical incidents occur both on the personal and community levels. Nevertheless, there are certain universal questions we believe people seek to have answered in order to reduce their apprehension or anxiety concerning the incident. So, a community might be affected by an oil spill, or an individual might be affected by exposure to a toxic chemical, or an infectious agent (virus or bacterium).

Please rank order the following questions (1 being most important) as to how important they are for you to have answered in order to help reduce your apprehension, or plan for the future.

The Survey

The survey consisted of the following nine statements to be ranked from one through nine: *What time the event occurred…*, *What caused the event?*, *What exactly happened?*, *What is being done to remedy the problem?*, *How much is it going to cost?*, *What are the effects going to be?*, *What are the anticipated effects going to be in the future?*, *What*

needs to be done in the future to prevent this from happening again?, and *Who caused it?*.

Each item addressed a specific piece of information, which may serve to be important to an individual in the face a crisis situation. For each item participants ranked the importance of each question from 1 to 9. Ranking a question as one represented the most important information and ranking the question a nine represented the least important question in need of being answered. Participants were also given the opportunity to write other questions not included on the list, which they would want to have answered, following a crisis.

Results

Analysis of the data (see Table 1) revealed a preferential Hierarchy. On average, the most important question to be answered is *'What exactly happened?'* (*M*=2.08, *SD*=1.83). The question, *'What caused the event?'* (*M*=3.51, *SD*=1.76), ranked second most important. With an average very close to the previous question, the question *'What are the effects going to be?'* (*M*=3.56, *SD*=1.69), ranked third. See Table 1 for additional rankings.

DISCUSSION

This exploratory research is meant to inform future research regarding the nature of the information, which may be most salient to those individuals involved in a crisis situation. Consistent with many of the aforementioned crisis communication models, basic information, answering the question 'What exactly happened?', was found to be most important among these participants. From the results, there is a clear connection between individuals wanting to know the cause of the event as well as the resulting effects.

Given the advances in technology over the past decade, the use of various channels of communication may be worth exploring. However, more information does not always equate to better crisis communication. Those working to communicate in a way, which is conducive to information processing in the face of crisis, should strike a balance between the appropriate quantity of information, while utilizing the technological resources at their disposal. Different methods will most likely need to be created depending on the nature of the area in, which information is being disseminated. The channels by which information is communicated in developing countries will most likely differ from that of developed

Table 1. Means and Standard Deviations for Survey Items		
Question	**Mean**	**Standard Deviation**
What time did the event occur? (#6)	6.03	+/- 2.74
What caused the event? (#2)	3.51	+/- 1.76
What exactly happened? (#1)	2.08	+/- 1.83
What is being done to remedy the problem? (#4)	3.78	+/- 1.54
How much is it going to cost? (#9)	7.96	+/- 1.41
What are the effects going to be? (#3)	3.56	+/- 1.69
What are the anticipated effects going to be in the future? (#5)	5.37	+/- 1.83
What needs to be done in the future to prevent this from happening again? (#8)	6.43	+/- 1.79
Who caused it? (#7)	6.04	+/- 2.12

countries. According to an article published through the United Nations, there should be a focus on local technologies to, "help communities develop their own capacities and capabilities for disaster early warning, prevention and resilience is vital" (Stauffacher, 2011). Therefore, it seems there is no cookie-cutter approach. Instead, the resources within affected areas should always be considered, rather than working from a model, which focuses on bringing in new infrastructure or leaders. While some external resources may be necessary, the internal resources of particular areas should not be overlooked. Working towards evidence-based practice may include both a better understanding of the information to be communicated as well as the way in which it is delivered to individuals in need.

Interestingly, according to an article published through the United Nations, "It should be the leaders and the victims who decide what data and information we need [in a crisis situation]" (Stauffacher, 2011). This exploratory research seems to be in line with the approach that global providers of aid are taking. Rather than it simply being a top down approach, it seems that victims, and all impacted by the crisis situation, should have a say in the information presented to them. However, it is not in the wake of a tsunami or an outbreak of SARS that leaders should be asking their constituents what information is most pertinent to them. Leaders, and crisis communication experts, should take proactive approaches and poll citizens on what they would like to know.

Toward that end, our respondents, many of whom work in first responder organizations, indicated the most important content to be conveyed in crisis and disaster messaging is:

The nature of the critical incident, i.e., "What happened."

The cause of the critical incident, i.e., "What caused the critical incident."

The effects of the critical incident, i.e., What are the realized and anticipated effects."

What is being done to remedy the situation, i.e., "What authorities are doing."

There are limitations of this study, which should be noted and can be used to help others expand on the information presented. For one, those individuals who participated in this study were not screened for having experienced a traumatic, crisis situation. Given this, it is possible that these individuals answered somewhat differently with regard to the types of information might, hypothetically, be most important to them. Researchers looking to further understanding what information is most pertinent to communicate, may want to screen participants and choose those individuals who have lived through a crisis situation. These individuals may have a different outlook than those who have not experienced such exposure.

Additionally, each area where a crisis situation may occur has unique characteristics. It is possible that from one

city to another, one state to another, and among nations, the information desired may vary. It is therefore possible that future research focused on these unique demands may be useful to meet the specific needs of populations. Given that many models for crisis communication exist, future research could focus on an integration of existing models. While this research is exploratory in nature, it is hoped that future research will focus on deciphering between what the leaders think individuals would like to know and what in fact individuals, in states of fear, anxiety, and often helplessness, really want to know.

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Lay Mental Health in the Aftermath of Disaster: Preliminary Evaluation of an Intervention for Haiti Earthquake Survivors

Leah Emily James
University of Colorado, Boulder, CO and
University of Denver, Denver, CO

John Roger Noel
Soulaje Lespri Moun, Port-au-Prince, Haiti

Abstract: In the year following the 2010 Haiti earthquake, local earthquake survivors trained as lay mental health workers implemented a culturally-adapted, psychosocial and trauma-focused group intervention for residents of camps for internally displaced peoples (IDPs). Analysis of evaluation data collected at three Port-au-Prince IDP camps revealed decreased self-reported posttraumatic distress (measured using the Harvard Trauma Questionnaire) associated with participation in this intervention. Improvement occurred across all three PTSD symptom clusters (re-experiencing, avoidance, and hyperarousal). Female participants reported higher baseline distress, were more likely to participate in the intervention, and benefitted more than did men. Results provide initial support for the effectiveness of train-the-trainer interventions utilizing local lay disaster survivors. [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(3), pp. 165-178].

Key words: *Haiti, lay mental health, psychosocial, intervention, evaluation, trauma, disaster*

In the aftermath of Haiti's January 2010 earthquake, a million and a half residents of Port-au-Prince were displaced to camps for internally displaced peoples (IDPs). Many IDPs have faced chronic hardship in securing adequate shelter, food, and water, warding off physical and sexual violence, and weathering multiple natural disasters and a devastating cholera outbreak (IOM, 2012). The earthquake and resulting displacement affected a population already exposed to long-standing poverty, economic and social injustice, political

violence and corruption, and multiple natural disasters (Haiti Earthquake PDNA, 2010; IASC, 2010; WHO/PAHO, 2010).

Unsurprisingly, residents of IDP camps have demonstrated significant somatic and emotional distress, including sleep disruption, headaches and other body pain, flashbacks and intrusive memories of the quake, fear of another earthquake, hypervigilance, grief, irritability, social isolation, and drug and alcohol use (Budosan & Bruno, 2011; IASC, 2010). Despite clear need, by all available accounts Port-au-Prince lacks the resources or infrastructure necessary to efficiently provide mental health services to displaced individuals (Raviola, Eustache, Oswald, & Belkin, 2012; Sontag, 2010; WHO/PAHO, 2010).

While Haiti's circumstances are extreme, unmet mental health need is common in the aftermath of disasters worldwide (e.g., Kakuma et al., 2011; Tol et al., 2011). Overall, empirical evidence regarding effective and culturally-ap-

propriate methods of addressing post-disaster mental health and psychosocial need is relatively scarce, particularly in developing countries and other low-resource contexts. On one hand, this is unsurprising in light of the myriad of safety, ethical, logistical, and financial considerations that often make gold standard research methodologies unfeasible in the immediate aftermath of significant disasters. On the other, the existence of widespread, potentially preventable suffering makes post-disaster program evaluation, even using non-controlled methodologies, an immediate and pressing priority. The current paper aims to contribute to the small body of empirical literature in this area through the preliminary evaluation of a mental health and psychosocial group intervention implemented by local lay workers to decrease symptoms of distress among displaced Haitians.

In emergency, low-resource contexts such as that in Haiti, the international humanitarian community has historically stepped in to provide assistance (e.g., Tol et al., 2011). The majority of post-disaster mental health interventions in the Caribbean (including in the aftermath of the Haitian earthquake) have been "vertically-delivered" psychosocial programs enacted by foreign organizations, with little integration into local communities (Kutcher, Chehil, Roberts, 2005). Despite good intentions, some such programs have been criticized for being costly, unevaluated, lacking sustainability and cultural adaptation, and for making minimal effort to capitalize on or develop strengths in the local community (Mental Health and Psychosocial Support Network [MHPSN], 2010; Van Ommeren, Saxena, & Saraceno, 2005). Scholars and interventionists warn that programming that imports a Western psychological (or other outside) perspective without adapting to or integrating with the culture or context may not only be ineffective, but also has the potential to disrupt local explanatory and coping models, and therefore do harm (e.g. Almedom & Summerfield, 2004; Bracken, Giller, & Summerfield, 1995; Drozdek, 2007). In contrast, consensus regarding best practices, such as the *Guidelines on Mental Health and Psychosocial Support in Emergency Settings* developed by the Inter Agency Standing Committee, call for facilitating locally-managed and implemented programs, utilizing non-professional community workers and train-the-trainer methodologies, and incorporating local cultural practices into intervention (IASC, 2007).

Thus, in addressing both the problem of limited human and financial resources and the need for culturally and contextually appropriate services, there is growing acknowledgement of the need for "task shifting": the use of local non-specialists (e.g.; primary care physicians and community workers) to meet mental health need (Kakuma et al., 2011). This approach calls for brief training provided by professionals to local non-specialists and lay people in the identification, referral, and treatment of individuals with mental health need. Train-the-trainer approaches in which local community and healthcare workers make referrals and implement basic, culturally-adapted mental health interventions have been implemented in a range of post-disaster settings, including with tsunami survivors in India (Becker, 2007), Indonesia (Prasetiyawan, Maramis, & Keliat, 2006), and Sri Lanka (Kakuma et al., 2011), and with hurricane survivors in Grenada (Kutcher, Chehil, & Roberts, 2005).

Meta-analysis of 42 published studies revealed substantial improvements in patient outcomes (i.e. recovery, functionality, and severity) as a result of mental health case-finding, referral, treatment, and monitoring provided by non-specialist health workers, lay people, affected populations, and caregivers who were given brief training by specialists (Kakuma et al., 2011). Several studies focused particularly on the direct provision of psychosocial and mental health treatment by lay people, demonstrating positive mental health effects of psychosocial intervention by lay counselors in Goa, India (Patel et al., 2010), of counseling provided to Pakistani mothers by other local women (Ali, Ali, Azam, & Khuwaja, 2010), and of a sociotherapeutic intervention implemented by community leaders in Rwanda (Scholte et al., 2011). Only a few studies were conducted in post-disaster settings. In two non-randomized controlled studies conducted with tsunami survivors in India, psychosocial groups led by trained community members decreased symptoms of posttraumatic stress among women compared to a no treatment control group (Becker, 2009), and mental health support provided by trained lay volunteers decreased symptoms of depression, PTSD, and general distress among survivors who lost close family members (Vijayakumar & Kumar, 2008).

In Haiti, lay community workers have been active in recent years in raising awareness and providing supportive services focused on healthcare issues such as HIV (e.g., Ivers et al., 2011; Koenig et al., 2010), and social issues such as domestic violence and child-welfare (WHO/PAHO, 2010). After the earthquake, organizations such as Partners in Health (PIH), an international healthcare organization, and its Haitian sister organization, Zanmi Lasante (ZL), and the Mental Health and Psychosocial Support (MHPSS) Working Group trained community members and primary healthcare providers in basic mental healthcare (Raviola et al., 2012

(Budosan & Bruno, 2011). Neither project reported outcomes for individuals accessing care.

This current paper aims to begin to fill the gap in empirical evidence regarding disaster mental healthcare in Haiti, and more broadly, in a developing country, IDP camp setting, and non-Western cultural context, using a task-shifting approach employing lay disaster survivors as practitioners. The following studies present preliminary results of an assessment of a small-scale, grass-roots lay mental health worker intervention called *Soulaje Lespri Moun* (SLM; "Relief for the Spirit" in Haitian Creole), implemented in IDP camps in the two years following Haiti's 2010 earthquake. This project, housed by the Aristide Foundation for Democracy (AFD) in Port-au-Prince, entails a merging of mental health and psychosocial expertise contributed by US and Haitian mental health professionals, with the cultural and situational expertise of local lay earthquake survivors to create a culturally-sensitive and adapted model, driven by local needs and leadership. SLM utilizes a two-level train-the-trainer structure, in which professionals train local young people (themselves disaster survivors) to work as a core team of lay mental health workers. These lay workers then implement a group intervention for IDP camp residents, ultimately preparing them to serve as peer-leaders of ongoing support and problem-solving groups for other camp residents (James, Noel, Favorite, & Jean, 2012).

The Current Studies

At several time points throughout SLM's implementation, the SLM team assessed participant distress in order to inform intervention improvement using a brief self-report measure of PTSD symptoms administered before and after SLM participation as possible. In the following studies, we present secondary analysis of these measures collected at three IDP camps during the first eight months that SLM was implemented. These studies portray the evolving methods used to adapt intervention implementation and evaluation techniques to shifting conditions post-earthquake, while providing a preliminary test of hypothesized benefits of a psychosocial intervention model implemented by local disaster survivors.

Hypotheses

The primary aim of the following studies is initial evaluation of the hypothesis that participation in SLM will be as-

sociated with decreased symptoms of posttraumatic distress among IDP participants. In light of evidence of neutral or even detrimental effects of some post-disaster interventions (Bonanno, Brewin, Kaniasty, & La Greca, 2010; Katz, Pellegrino, Pandya, Ng, & DeLisi, 2002; McNally, Bryany, & Ehlers, 2003), an initial test is simply whether symptoms of SLM participants improve, stay constant, or worsen from start to finish. In Studies 1-3, outcome data is presented from SLM's implementation at three camps, each at different time points post-earthquake, and each using a slightly different intervention format in order to accommodate shifting circumstances due to the passing of time since the earthquake and conditions in particular camps.

Subsequent analyses pool data from all three camps and provide a more comprehensive assessment of SLM's influence on symptoms, including testing the prediction that SLM will be associated with improvement in each of three PTSD symptom clusters. Analyses conducted on aggregate data also speak to an additional hypothesis: that improvement among SLM participants is greater than the natural resolution of distress due to time passing. In partial compensation for a non-controlled design, aggregate data collected from both participants and non-participants across time and camp is used to control for the effect of time passing in assessing the impact of SLM.

Secondary hypotheses concern the role of gender on posttraumatic distress and engagement in and response to SLM. Women are disproportionately burdened by social factors, such as poverty and domestic and sexual violence, that commonly contribute to mental health problems, and are considered at increased risk in emergency contexts (IASC, 2007; WHO, 2000). These factors are especially relevant in IDP camp settings; notably, reports indicate significant rates of sexual violence in Port-au-Prince camps (Kolbe et al., 2011). In light of these contextual factors and considerable evidence that women are more susceptible to PTSD than men, including after disasters (Galea, Nandi, & Vlahov, 2005; Norris et al., 2002; Tolin & Foa, 2006), we predict higher distress among women than men reported in baseline measures collected at each camp (Studies 1-3). In line with evidence that women may be more likely to seek help after trauma (e.g., Gavrilovic, Schutzwohl, Fazel, & Priebe, 2005), (although little work speaks to the role of gender in post-disaster, IDP camp, or Haitian contexts), we also predict that women may be more likely to engage and benefit from SLM than men. Due to small sample sizes, interactions between gender and

participation in and benefit from SLM are presented only for aggregate data across Studies 1-3.

METHOD

Intervention

A thorough account of the theory base, development, and implementation of SLM is described elsewhere (see James, Noel, Favorite, & Jean, 2012). In brief, in April 2010, a US-Haitian team made up of social workers, psychologists, and researchers trained eight Haitian young people (4 female, 4 male; mean age = 25, range = 22 – 31) to work as lay mental health workers, called "Ajan Sante Mantal" ("Ajan" for short). Over the next 18 months, the Ajan, working in male/female pairs, conducted group seminars open to volunteer participants in seven IDP camps in the Port-au-Prince metropolitan area. While SLM participation was open to all adults with interest, those with serious mental illness (defined as psychosis, suicidality, or catatonic levels of depression) were given referrals for additional care.

SLM's model has both a trauma focus, incorporating techniques to relieve distress associated with earthquake trauma, and a psychosocial focus, geared at rebuilding social networks disrupted by stressful IDP camp conditions. Intervention format has evolved as situational factors and needs have shifted. In general, lay mental health workers run 12 group seminars covering earthquake safety, common somatic and emotional responses to stress and trauma, basic relaxation and self-soothing techniques, and other coping skills for adults and children, including meaning-making strategies such as spirituality. This evidence-informed content aims to promote a sense of safety and calming to counter the symptoms of physiological hyperarousal typical of posttraumatic distress, to encourage a sense of self and collective-efficacy, and to enhance social connectedness and hope for the future (Hobfoll et al., 2007). Content is consistent with guidelines promoted by the Inter Agency Standing Committee (IASC, 2007), the International Society for Traumatic Stress Studies (ISTSS) (Weine et al., 2002), the National Center for PTSD (Young et al., 2006), Psychological First Aid (Brymer, et al., 2006) and the World Health Organization (WHO, 2003). Despite being based in a model informed by Western psychology, content is culturally and contextually adapted by the SLM team, with the aim of acknowledging and reinforcing rather than disrupting beneficial local belief systems and coping mechanisms.

Measure

Assessments utilized the PTSD checklist portion of the Harvard Trauma Questionnaire (HTQ). The HTQ, created by the Harvard Program for Refugee Trauma, aims to assess the mental health of survey and interview respondents who have experienced displacement, disaster, and war (Mollica et al., 1992). It is designed specifically for cross-cultural use and has been implemented in a wide variety of settings (Mollica et al., 2004), including Haiti both before and after the earthquake (Kolbe et al., unpublished). The following assessments used only the 4th section of the HTQ, which consists of 16 self-report questions modeled after (PTSD) diagnostic criteria of the DSM-IV. The HTQ, like the DSM-IV symptom model of PTSD, consists of three criterion: re-experiencing/intrusion (sample item: "Recurrent thoughts or memories of hurtful or terrifying events"), avoidance/numbing (sample item: "Avoiding activities that remind you of the traumatic or hurtful event"), and hyperarousal (sample item: "Feeling on guard"; APA, 2000). Participants rate how much symptoms have bothered them in the last week on a four point scale ranging from "not at all" to "extreme." Scores are averaged for the 16 items, with those with scores of 2.5 or above meeting cut-off criteria for PTSD[1] (Mollica et al., 1992). A Haitian Creole version of the HTQ was used in these studies, originally developed by Kolbe and colleagues (unpublished), through translation, back-translation, and revision for clarity.

STUDY 1

Method

In April 2010, residents of an IDP camp near downtown Port-au-Prince were invited by members of the camp's leadership contingency (known as the "camp committee") to come to a centralized location to learn about the SLM project. These residents were recruited because they had children in mobile schools that were being run by the Aristide Foundation for Democracy (AFD) at the camp, and therefore had an existing relationship with the organization housing SLM. They were not selected based on any existing mental health concerns. After a brief overview of the project, residents determined

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[1]To aid in interpretability, results presented here include percentages of respondents surpassing the cutoff level specified by Mollica et al. (1992). However, these criteria have not been validated with this population and should be interpreted as a marker of severity of distress rather than as diagnostic of PTSD.

whether to consent to voluntary participation. Those who met criteria (age 18 or over, a resident of the IDP camp, and in Haiti at the time of the earthquake) and gave oral consent to participate were asked to complete paper versions of the Creole HTQ. While most participants completed the HTQ independently, the SLM team assisted those who requested help, including by reading it aloud in some cases. Participants also provided gender and age information.

One-hundred and thirty-nine residents completed HTQs. Those with missing data or with multiple items circled (n = 33) were not included in analyses, leaving a total of 106 participants[2] HTQ items formed a reliable scale (α = .88). There was a trend-level difference in HTQ score by gender, such that women reported higher HTQ scores than did men, $t(104) = 1.96$, $p = .052$. Table 1 presents sample size by gender, age, HTQ means standard deviations, and percentage of respondents exceeding the PTSD cut-off by gender for pre and post-SLM data for all three studies[3].

Six Ajan working in pairs conducted two-hour drop-in seminars three times per week over the course of two months. Participants attended as much as desired during this time. With the assistance of the camp committee, all participants were again invited to gather in July of 2010 to complete HTQs. At this time, 215 residents completed HTQs. Fifty-two of these were not analyzed due to missing data, leaving 163 remaining participants.

Results and Discussion

When asked to report whether they had participated in SLM, 46 of those surveyed reported doing so. Of those that reported participation, 17 (14 female, 3 male, mean age = 35.44, SD = 10.38) completed both pre and post-HTQs. Prior to SLM, these participants had a mean HTQ score of 2.79 (SD = .54; 82% met PTSD criteria), while post-SLM, mean score dropped to 2.22 (SD = .52; 29% met PTSD criteria), $t(16) = 3.60$, $p < .01$, Cohen's $d = .89$[4]. See Figure 1 for a graphical representation and Table 2 for mean pre-post differences.

A comparison between other participants (excluding those with within-subject data) who reported participating in SLM ($n = 32$) and participants who denied doing so ($n = 117$) at the July time point revealed significantly lower HTQ scores among SLM participants compared to non-participants, $t(147) = 3.74$, $p < .001$. See Table 1.

Figure 1. Posttraumatic distress pre- and post-SLM in Studies 1-3.
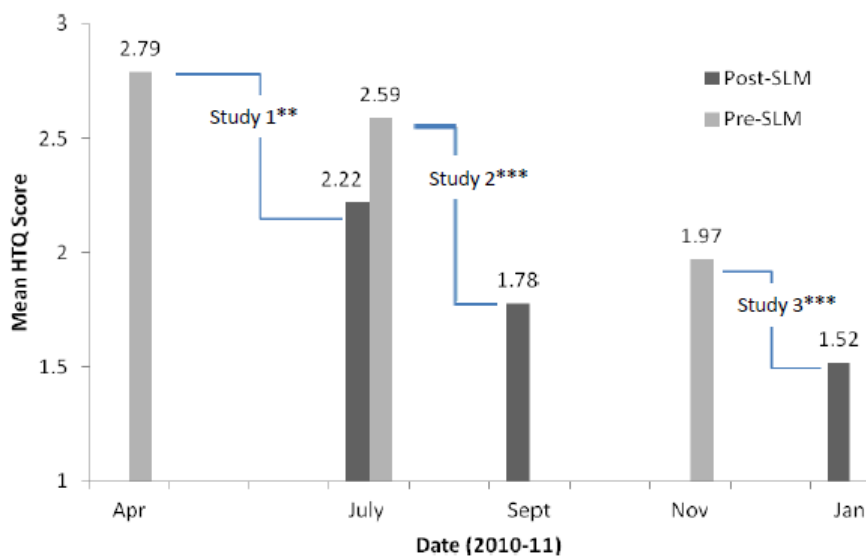
Y-axis represents mean scores on the Harvard Trauma Questionnaire (HTQ), using a 4-point response scale (1 = "not at all"; 4 = "extreme"). Only participants with paired (both pre- and post-SLM) data are presented here. Paired-samples t-test significance levels are represented by asterisks: ***p < .001 **p < .01. Sample sizes are as follows. Study 1: n = 17; Study 2: n = 13; Study 3: n = 30.

[2]In both Studies 1 and 2, number of missing data did not correlate with gender, age, or HTQ score, or differ by HTQ item, suggesting that items were missed randomly.

[3]Descriptive data and means for participants with both pre and post SLM are not included in Table 1, but rather are presented in the text.

[4]For Cohen's d, an effect size of 0.2 constitutes a "small" effect, 0.5 a "medium" effect, and 0.8 or above, a "large" effect (Cohen, 1988).

In sum, participants who completed both pre- and post-SLM HTQs (in April and July, respectively) reported significantly decreased HTQ scores following participation in SLM. Moreover, while HTQ scores for respondents overall were lower in July than in April, those who reported participating in SLM at the July time point had significantly lower HTQ scores than did those who denied doing so. The small sample of participants with both pre and post intervention data may be explained largely by the structure of the drop-in sessions; participants who began in May had received the entire content well before July and had likely stopped attending by the time post-intervention data collection occurred. Concerns about confidentiality and transience within the camp discouraged documentation of attendance and made it impossible to re-contact most of the participants originally surveyed, and the very public and often chaotic IDP camp environment made it difficult to limit the data collection to only legitimate participants who planned to or had completed SLM. Study 2 expands on these results by examining data collected several months later, in a somewhat more stable camp environment.

STUDY 2

Method

In July 2010, 137 residents of a camp in Bon Repos neighborhood of metropolitan Port-au-Prince completed the HTQ using the same procedure as in Study 1, with the exception that participants were not recruited due to their connection to AFD Mobile Schools (which were not run in this camp) but rather responded to widespread advertisement by the camp committee. Twenty-eight respondents were eliminated from analyses due to missing data, leaving 109 remaining respondents, for whom HTQ items formed a reliable scale ($\alpha = .85$). Pre-SLM HTQ scores did not significantly differ by gender, $t(107) = 1.09$, $p = .28$. As in Study 1, the SLM team ran drop-in seminars, but participants were able to meet in a large covered tent, allowing for more privacy. Additionally, because this was a smaller camp with greater stability, the same participants attended more regularly and content was not repeated as frequently, allowing for more

	Table 1.				
	Means and standard deviations of outcome and demographic variables by study[5]				
	n *Total (#, %* *female)*	Age *Mean (SD)*	HTQ score overall *Mean (SD),* *%PTSD*[6]	HTQ score women *Mean (SD),* *%PTSD*[7]	HTQ score men *Mean (SD),* *%PTSD*[8]
Study 1					
April 2010	106 (63, 59%)	35.76 (11.81)	2.58 (.58), 60%	2.67 (.54), 65%	2.45 (.62), 54%
July 2010 (total)	163 (81, 50%)	32.26 (12.26)	2.13 (.55), 28%	2.11 (.55), 30%	2.14 (.56), 28%
Non-participants	117 (50, 43%)	37.45 (13.75)	2.20 (.52), 32%	2.20 (.48), 34%	2.20 (.56), 31%
Participants (post-SLM)[9]	32 (21, 70%)	30.27 (11.30)	1.80 (.56), 18%	1.79 (.63), 14%	1.82 (.44), 9%
Study 2					
July 2010	109 (68, 62%)	34.7 (11.89)	2.52(.52), 51%	2.57 (.52), 54%	2.45 (.53), 44%
September 2010:					
Participants (post-SLM)[10]	37 (28, 76%)	39.17 (12.21)	1.87 (.42), 5%	1.92 (.44), 8%	1.73 (.38), 0%
Study 3					
Nov 2010 (total)	66 (32, 49%)	27.96 (8.23)	2.00(.42), 17%	2.14 (.41), 24%	1.88 (.41), 8%
Non-participants	36 (12, 30%)	28.0 (8.81)	2.03 (.38), 14%	2.23 (.28), 25%	1.93 (.39), 8%
Participants (pre-SLM)	30 (20, 60%)	27.83 (7.52)	1.97 (.48), 20%	2.08 (.48), 25%	1.75 (.43) 10%
Jan 2011:					
Participants (post-SLM)	30 (20, 60%)	27.83 (7.52)	1.52 (.50), 3%	1.56 (.44), 5%	1.46 (.32), 0%

[5] For participants with complete data only. See footnotes in Methods section for demographic information and means for participants with missing data.

[6-8] PTSD percentages were calculated using a cutoff score of HTQ score ≥ 2.5 (per Mollica et al., 1992). Cutoff criteria are not validated for this population so should be interpreted as a marker of severity of distress rather than as diagnostic of PTSD.

[9] Post-SLM data for participants with both pre and post SLM HTQ scores are not included here (allowing for a between-subject comparison between participants and non-participants). See Study 1 Results section in text for means for paired data.

[10] See Study 2 Results section in text for means for paired data

in-depth discussion and skills practice, and one month of seminars were provided rather than two.

Results and Discussion

Participants were re-sampled in September 2010, and because team members were able to form closer relationships with participants and to collect data in a more secluded location, only those who had in fact participated in SLM completed HTQs at this time. Of the 40 participants who completed post-SLM measures, three were excluded due to missing data, leaving 37 remaining participants with complete HTQ data (α = .79). See Table 1 for descriptives. Thirteen of these participants (10 female, 3 male; mean age = 39.92, SD = .48) completed both pre (M = 2.59, SD = .48; 54% met PTSD criteria) and post (M = 1.78, SD = .36; 0% met PTSD criteria) HTQs, demonstrating a significant decrease in HTQ scores between these time points, $t(12)$ = 5.33, $p <$ .001, Cohen's d = 1.51 (Figure 1; Table 2).

Results replicate those of Study 1, showing a significant decrease in HTQ scores for SLM participants. In the period between Study 2 and Study 3, the structure of the intervention was further modified due to increasing stabilization in camp life. Whereas drop-in groups were critical in the first

six months after the earthquake due to the transitory nature of peoples' lives, several months later, conditions had stabilized such that it was feasible to expect participants to attend a sequence of scheduled seminars. This allowed for the collection of a larger sample of within-subject data, as well as use of a feedback form to assess participant reactions to SLM. Additionally, precautions were taken to reduce missing data.

STUDY 3

Method

In November 2010, 66 residents of an IDP camp in the Delmas neighborhood of Port-au-Prince completed the HTQ using the same procedure as in Study 2 with one exception: in light of significant missing data in earlier studies, the SLM team took particular care to encourage participants to work slowly to complete every item accurately, and to ask questions when confused. There were no missing data, and items formed a reliable scale (α = .78). Pre-SLM HTQ scores varied by gender, such that women had higher scores than men, $t(64)$ = 2.56, p = .013. Seminars were again run three times per week for one month, although at this camp, participants were expected to attend as many sessions as possible and new participants were not permitted to join midway

Table 2.
Mean pre-post difference scores, significance levels, and effect sizes by study

	Study 1 (n = 17, 14 female)	Study 2 (n = 13, 10 female)	Study 3 (n = 30, 20 female)	Aggregate data (n = 60, 44 female)	
	Mean difference ± SE	Mean difference ± SE	Mean difference ± SE	Mean difference ± SE	ηρ² (partial eta squared)[11]
HTQ (total)	.54 ± .14**	.80 ± .54***	.45 ± .11***	49 ± .10***	.370
Re-experiencing	.70 ± .18***	1.15 ± .15***	.51 ± .12***	.65 ± .10***	.437
Avoidance	.57 ± .20*	.43 ± .20ᴵ	.42 ±. 14**	.42 ± .13***	.168
Hyperarousal	.39 ± .17*	1.05 ± .18***	.42 ±. 15**	.45 ± .12***	.207
HTQ (total) women	.65 ± .17**	.89 ± .18***	.53 ± .15**	.69 ± .10***	.517
HTQ (total) men	.05 ±.17	.50 ± .24	.29 ± .12*	.28 ± .10*	.083

Note. ***$p < .001$ **$p < .01$ *$p < .05$ ᴵ$p < .06$. Mean differences refer to change from pre- to post-SLM on the Harvard Trauma Questionnaire (HTQ), using a 4-point response scale (1 = "not at all"; 4 = "extreme"). Mean differences, standard errors, and significance levels are derived from paired sample t-tests for Studies 1-3 and from repeated measures ANOVAs (with gender and Study as between subject factors) for aggregate data. Effect sizes (partial eta squared) for aggregate data are also derived from repeated measures ANOVAs. Please see Results sections of Studies 1-3 for effect sizes (Cohen's d) for change in total HTQ from pre- to post-SLM for each study.

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[11] Partial eta squared represents the percentage of variance (effect + error) accounted for by the within-subject variable. Although there are not firmly established norms for what constitutes small, medium, or large effect sizes for partial eta-squared, a rule of thumb can be based on recommendations by Cohen (1988) of 0.01, 0.06, and 0.15 for the three cut-points for regular eta-squared.

through. At the completion of the seminar series, the Ajan gave written "exams" to assess knowledge, and received certificates of completion at a graduation ceremony. At this time, participants were also asked to complete HTQs and anonymous feedback forms. Graduates were then encouraged to run formal peer-led groups to further disseminate knowledge and provide ongoing support.

Results and Discussion

Thirty participants completed both pre and post SLM measures. These participants completed their post HTQ (α = .80) in early January, one month after the seminars' completion (two months after pre-measure). Participation in SLM was associated with decreased distress, such that pre-SLM scores (M = 1.97, SD = .48, 20% PTSD) were significantly higher than post-HTQ scores (M = 1.53, SD = .40, 3% PTSD), $t(29)$ = 4.19, p < .001, Cohen's d = .79 (Figure. 1; Table 2).

Thirty participants also completed brief feedback forms consisting of open-ended items that asked what they liked and disliked about SLM, and what they might change. The top three "liked" responses were relaxation exercises (48%), qualities of the Ajan (e.g. kindness, respect, determination to make sure all understood; 45%) and education about earthquake safety and common reactions to stress (29%). Top "disliked" responses were "nothing" (36%), that the intervention is too short, or was sometimes delayed or canceled due to weather or other circumstances (29%), and that other participants talked too much or were disruptive (28%). When asked what they might change about SLM, the most common response was "nothing" (43%), while others suggested having more handouts (17%), changing the schedule (17%), reducing disruptive behavior (7%) and integrating a role-playing component into the exam (7%).

Overall, results replicate those of Study 1 and 2, revealing decreased HTQ scores among SLM participants, this time with a somewhat larger sample size and more consistent intervention structure. Increased participant stability also allowed for the use of feedback forms, which provided preliminary data regarding participant satisfaction with various elements of the model, as well as clues regarding mechanisms by which SLM may reduce distress – namely psychoeducation and relaxation skills training, as well as the therapeutic presence of the Ajan. Responses regarding disliked elements and suggestions about change, such as the need for more handouts

and a role-playing element in the exam, were incorporated into subsequent iterations of SLM.

Analysis Across Studies 1, 2, and 3

In order to assess the effects of SLM across studies and to increase the overall sample of within-subject data, analyses were conducted on aggregate data from all three studies. Overall, 60 (44 female, 16 male) participants completed both pre and post-SLM HTQs.

PTSD symptom scores. A repeated measures ANOVA was used to compare pre- and post-intervention HTQ scores. Gender was included as a between-subjects variable, as was Study, as the participants in each study varied according to time since earthquake, camp of residence, and the particular intervention structure used in that study. This resulted in a 2 x 2 x 3 analysis. Results revealed a significant main effect of the intervention, such that PTSD symptom scores decreased from pre to post-SLM, $F(1, 54)$ = 32.83, p < .001. There were also main effects of gender, such that women were more distressed than men, $F(1, 54)$ = 7.07, p = .010, and of Study, such that participants in Studies 1-3 demonstrated progressively less distress overall, $F(1, 54)$ = 24.75, p < .001. There were no significant effects for interactions between intervention and Study, gender and Study, or the three-way interaction, all Fs ≤ 1.07, all ps ≥ .350. However, a significant interaction between intervention and gender revealed that that women demonstrated more symptom reduction than did men, $F(1, 54)$ = 4.30, p = .043. A simple effects analysis (controlling for camp) revealed that SLM participation was associated with a statistically significant symptom decrease for women, $F(1, 54)$ = 58.32, p < .001, and a trend-level decrease for men, $F(1, 54)$ = 2.76, p = .102. See Figure 2.

PTSD symptom clusters. Analyses were also conducted separately for each of the three subscales of the HTQ, representing the three PTSD symptom clusters as specified by the DSM-IV (APA, 2000). Baseline distress (averaged across studies) was similar across each of the re-experiencing (M = 2.39, SD = .71), avoidance (M = 2.32, SD = .66) and hyperarousal (M = 2.32, SD = .72) subscales. A repeated measures ANOVA with gender and Study as between subject factors revealed significant reduction in pre- to post-SLM scores for all three subscales: re-experiencing symptoms (e.g. intrusive memories, flashbacks, and nightmares), $F(1,54)$ = 41.83, p < .001; hyperarousal symptoms (e.g. sleep and concentra-

tion difficulty, irritability, hypervigilance, startle response), $F(1, 54) = 18.78$, $p < .001$; and avoidance symptoms (e.g. avoiding trauma memories and places that trigger memories, emotional numbing, lack of interest in activities), $F(1,54) = 14.61$, $p < .001$.

As in the results for the overall HTQ, there were also significant main effects of gender (Fs ≥ 4.41, ps $\leq .040$) and Study (Fs ≥ 4.62, ps $\leq .014$) for all three symptom clusters. Results also revealed significant interactions between gender and intervention, such that women demonstrated more improvement than did men for the re-experiencing and hyperarousal subscales (Fs ≥ 7.05, ps $\leq .010$), but not for the avoidance subscale, $F(1, 54) = .476$, $p = .493$. Finally, results for the re-experiencing subscale also a revealed a significant interaction between intervention and Study, $F(1, 54) = 4.62$, $p = .014$, such that Study 2 showed a larger decrease in symptom severity than did Study 1 or 3.

In order to assess whether SLM affected the subscales differently, the three subscales were entered into a single model (again with gender and Study as between subject variables). Results revealed a trend-level interaction between subscale and intervention, $F(2, 53) = 2.53$, $p = .089$, such that re-experiencing symptoms decreased somewhat more sharply than did avoidance symptoms, with hyperarousal symptoms in between. See Table 2 for mean differences between pre and post scores and effect sizes.

Comparison to effects of time. A linear regression analysis conducted on non-SLM participants with months since the earthquake as the independent variable revealed a significant effect of time on HTQ score, $B = -.069$, $t(322) = 4.72$, $p < .001$, implying a gradual decline in PTSD symptomology as time passed[12]. In order to assess the effect of intervention while controlling for the effect of time passing, a second linear regression analysis, using both non-SLM participant

Figure 2.
Interaction of intervention and gender on posttraumatic distress among SLM participants.
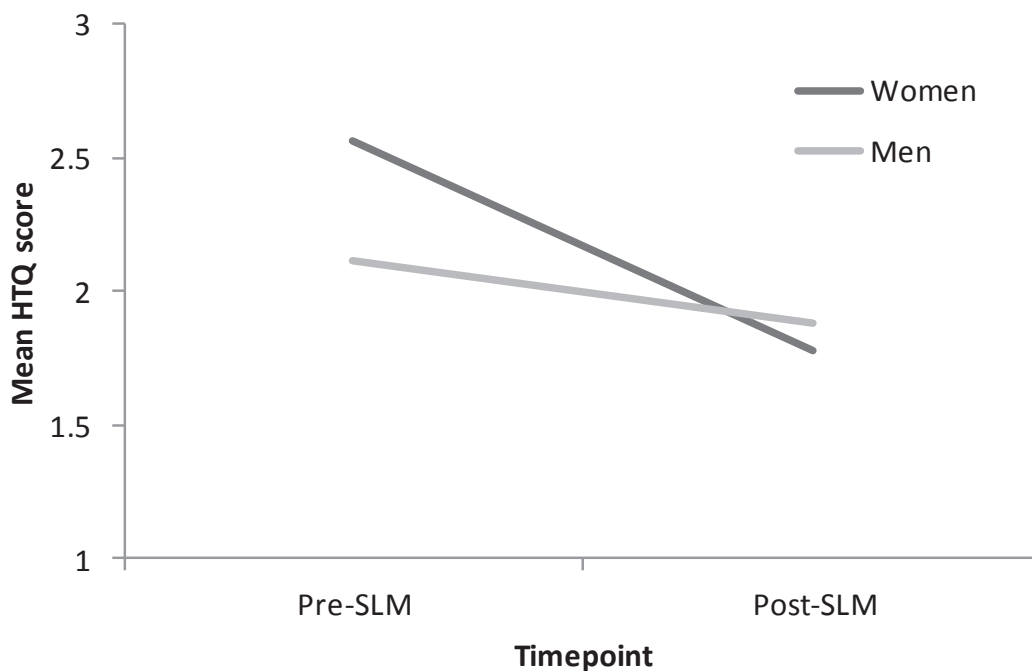
Figure is derived from aggregate within-subject data from Studies 1-3 (n = 60); the Y-axis represents mean Harvard Trauma Questionnaire (HTQ) scores collapsed across these three studies), using a 4-point response scale (1 = "not at all"; 4 = "extreme").

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[12] Sample sources and sizes for non-SLM participant data are as follows: April: Study 1 ($n = 89$); July: Study 1 non-SLM participants/Study 2 ($n = 199$); November: Study 3 ($n = 36$). To allow for between subject comparisons in the following analyses, pre-SLM data for participants who later went on to complete SLM are not included in these samples.

[13] Sample sources and sizes for post-treatment SLM participant data: July: Study 1 ($n = 46$); September: Study 2 ($n = 37$); January: Study 3 ($n = 30$).

and post-treatment SLM participant data[13], was conducted with SLM participation and months since the earthquake as predictors. The full model R^2 was significantly greater than zero, $F(2, 408) = 39.93$, $p < .001$, $R^2 = .16$. Results also revealed significant effects of both intervention, $B = -.39$, $t(408) = 5.85$, $p < .001$, Cohen's $d = .58$, and time, $B = -.07$, $t(408) = 4.81$, $p < .001$, Cohen's $d = .47$ implying that benefit associated with SLM cannot be explained by the passing of time, and rather that SLM contributes its own unique effect. The interaction between intervention and time was tested in separate model and found to be non-significant, $B = .013$, $t(407) = .54$, $p = .587$.

Gender. In addition to assessing the role of gender in response to SLM as discussed above, analyses were conducted to assess gender differences in baseline HTQ and in participation in SLM. More women than men completed SLM (73% of within-subject participants, 62% of SLM completers overall). However, although women reported higher HTQ scores (50% met PTSD criteria) at pre-SLM time points overall than did men (35% met PTSD criteria), $t(382) = 3.55$, $p < .001$, this did not account for differences in SLM participation. Across studies, there was no relationship between HTQ score at pre-SLM time points and participants' completion of SLM, $t(382) = .65$, $p = .514$. However, 59% (53% of those with complete data) of all respondents who completed HTQs at pre-SLM time points were female, suggesting that women were also more willing to show interest in SLM initially. There was no gender difference at post-SLM time points, $t(58) = 1.30$, $p = .199$.

DISCUSSION

Data collected at three camps, at three time points post-earthquake, revealed significantly decreased symptoms of PTSD among SLM participants. Despite small sample sizes, effect sizes calculated from within-subject data were medium to large (Table 2). A comparison of SLM to non-SLM participant data over time revealed that benefits associated with SLM participation cannot be explained by the passing of time. Thus, in spite of challenges associated with data collection in chaotic post-disaster circumstances, these results present preliminary evidence for the effectiveness of SLM as a treatment of posttraumatic distress in a post-disaster cross-cultural context. More broadly, results suggest positive effects of a mental health and psychosocial group model implemented by young, local lay people who are themselves

earthquake survivors – an area in which research thus far is lacking (Kakuma et al., 2011).

All three studies showed decreased PTSD symptoms in association with SLM participation. However, the average difference from pre to post HTQ score in Study 2 (.80) was somewhat larger than in Study 1 (.54) or Study 3 (.45) (although this difference was statistically significant only for the re-experiencing symptom subscale). Although differences in effects by Study were not predicted and the small sample size limits interpretability, in hindsight, this is potentially explained by the timing and circumstances of Study 2. Baseline HTQ scores were still quite high when Study 2 began (six months after the earthquake), yet increased stability in IDP camp life made it possible to run a more formalized seminar series in which a small group of participants attended regularly. Additional work is needed to further explore the timing and contextual conditions most conducive to optimal outcomes.

All three PTSD symptom clusters showed significant improvement associated with SLM participation. There was a trend-level interaction among symptom clusters, such that re-experiencing symptoms improved somewhat more steeply than avoidance symptoms (with hyperarousal symptoms in between). This was not hypothesized and cannot be explained entirely by differences in baseline levels, or by floor or ceiling effects. However, SLM content does focus more directly on strategies for reducing re-experiencing and hyperarousal symptoms (e.g. processing trauma memories; relaxation techniques), than on decreasing avoidance symptoms. Moreover, avoidance and numbing symptoms have been found to have more cultural variability and to be less easily assessed using DSM-IV criteria across cultures than other symptom clusters (Drozdek, 2007; Hinton & Lewis-Fernandez, 2010). Additional work is needed to further unpack the applicability of these PTSD symptom clusters to a Haitian IDP population and SLM's influence on each.

In replication of literature showing increased vulnerability to PTSD among women, data collected prior to SLM being run in a camp revealed greater posttraumatic distress among women than men overall (although not in Study 2). Women were also more likely to participate in SLM than were men. There was no relationship between HTQ scores and participation, suggesting that this gender difference in participation is not due to greater need. In fact, some of this effect may be due to a larger baseline population of women

in IDP camps (53% compared to 47% male) (IOM, 2010), or more availability during the day due to not working. Additional research is needed to assess other possibilities, such as whether women felt more comfortable participating in a mental health intervention. Moreover, while both women and men showed decreased HTQ scores following SLM participation, this drop was larger for women, implying that they may benefit more from the intervention (Fig. 2). However, because there was no gender difference in post-SLM HTQ scores, greater improvement for women may be attributed to their higher pre-existing distress, rather than resistance to treatment benefits among men. Moreover, the small sample of men with both pre and post SLM data limits the interpretability of results. Nevertheless, results imply the need for additional research to determine how mental health intervention may more effectively serve male IDP camp residents.

A useful side effect of data presented here is that it provides a descriptive account of the extent of posttraumatic distress among IDP camp residents at multiple time points post-earthquake, in multiple settings. Few studies speak to the course of distress, including PTSD, among disaster survivors. Those that do paint an inconclusive picture, showing both decrease and increase in PTSD over time, but do suggest that disaster-related PTSD is a chronic condition (e.g., Neria, Nandi, & Galea, 2008). Results presented here provide further evidence of the chronicity of posttraumatic distress among displaced survivors, as well as gradual reduction in distress as time passes; across four time points during the year after the earthquake, HTQ scores ranged from 2.54 to 1.91, and percentages of individuals exceeding the PTSD cutoff of 2.5 ranged from 50% to 38% (Fig. 1).

Limitations and Future Directions

Despite promising preliminary findings, these initial evaluations exhibit short-comings related to the challenges of conducting research in the aftermath of disaster, at an IDP camp, and in a developing country. Limitations include small samples of participants with both pre and post intervention data and the use of volunteer rather than randomly selected participants. Additionally, despite efforts to take into account the role of time passing on the resolution of post-earthquake distress, we were unable to fully control for the influence of time or other changing circumstances in the camps on participants' distress. Anecdotally, lay mental health workers, who were in the camps on a regular basis, denied awareness

of large shifts in fortune, such as additional aid, which might significantly affect mental health. While during the first year of services, hectic circumstances within the camps made it unrealistic to effectively and ethically run a controlled trial, future work may be able to adopt more rigorous methods.

A potential limitation in this work is the use of a close-ended PTSD checklist as a primary source of outcome data. Researchers such as Bracken, Giller, & Summerfield (1995) have argued that PTSD checklists may force participants to conform to a Western conceptualization of distress, obscuring true responses, and inviting inaccuracies as a result of demand characteristics and differences in item interpretation. However, because there is also evidence that symptoms associated with PTSD do occur cross-culturally (Kagee, 2004; Marsella, 2010; McCall & Resick, 2003; Neria, Nandi, & Galea, 2008), and because use of a standardized measure allows for communication between researchers and clinicians regarding severity of distress, we do see the HTQ as an appropriate preliminary measure of distress. In January 2011, when conditions had become more stable, the SLM team conducted a needs assessment consisting of a qualitative assessment of symptoms and of interpretations of HTQ symptoms among both IDP camp residents and lay mental health workers, which informed the development of a tailored instrument incorporated during SLM's second year.

Outcome data presented here was collected at only one time point after the content of the seminars had concluded, likely before SLM graduates had fully initiated peer-led groups. Although anecdotal evidence suggests that some participants (especially at the Delmas camp, when conditions were relatively stable) continued meeting in peer-led groups, rates of doing so are as of yet unknown. Future work can assess the attendance and activities of peer-led groups, as well as the effects of running their own seminars on SLM graduates, in order to determine if, as hypothesized, this has therapeutic benefits above and beyond that of simply participating in the seminars run by the lay mental health workers.

An additional branch of research concerns assessment of the effects of running SLM on the lay workers themselves, especially in light of their status as earthquake survivors. Quantitative and qualitative self-reports of PTSD symptomology, compassion fatigue, and posttraumatic growth collected periodically suggest positive effects on their own mental health (James, Noel, & Jean Pierre, in press). Further investigation regarding both negative and positive consequences

of this work is critical for the expansion of the lay mental health care model.

Conclusion

Soulaje Lespri Moun is a small-scale pilot intervention designed to address mental health and psychosocial need in a low-resource post-disaster setting. These studies provide preliminary evidence for its effectiveness in decreasing distress among IDP camp participants, while also portraying the challenges associated with intervention research in a post-disaster setting. Thus, the work described here aims first to benefit Haitian IDP camp residents, but also to add to the small body of empirical research focused on cross-cultural mental health treatment and evaluation. Results suggest that a collaborative US-Haitian group model, incorporating train-the-trainer framework, local and lay staff, and a culturally-adapted curriculum, is an effective approach to decreasing distress among displaced disaster survivors.

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Suicide and the Internet: The Case of Amanda Todd

David Lester
The Richard Stockton College of New Jersey
Galloway, NJ

Stephanie McSwain
The Richard Stockton College of New Jersey
Galloway, NJ

John F. Gunn III
The Richard Stockton College of New Jersey
Galloway, NJ

Abstract: *In a previous article in this journal, Gunn, Lester and McSwain provided evidence that the ten warnings signs for suicide proposed by the American Association for Suicidology are valid for predicting suicidal ideation and behavior. A video posted on YouTube by a 15-year-old girl scored 8-9 out of 10 for these signs. Thirty-nine days after positing the video, the girl killed herself.* [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(3), pp. 179-180].

Key words: *Suicide, Social Media, Suicide Prevention*

Gunn and Lester (2012) noted that media guidelines for reporting suicide have become out-of-date. They were appropriate when the primary media were newspapers and magazines, but the Internet age has made print media obsolete, especially for adolescents and young adults who use smartphones to access YouTube, Twitter, Facebook and other online websites. A recent example of this and the problem it presents is the case of Amanda Todd.

Amanda was a 15-year-old Canadian teenager who posted a video on YouTube in which she presented a sequence of flash cards to tell of her experience of being blackmailed and bullied. She had sent a picture of her breasts to a man she met online who then circulated it around the Internet. She uploaded the video to YouTube on September 2, 2012, and committed suicide on October 10, 2012. By October 13, her video had received 1.6 million views. It is impossible to remove the video from such a website because others make copies and circulate these copies. Interestingly, when we asked the college's IT unit to download the video onto a flash drive, it took them over an hour to find out how to do it. Students at the college know how to do it immediately, with the appropriate software already downloaded on their computers and smart phones.

When in 8th grade, Amanda had sent the picture of her breasts to a man she met on video chat. He then blackmailed her by threatening to circulate it. He did so, and the police informed Amanda and her family about this. Amanda experienced anxiety and depression and had panic attacks. The family moved to a new home, and Amanda attended a new school. Amanda began to use alcohol and drugs. A

David Lester, PhD, is Distinguished Professor of Psychology at the Richard Stockton College of New Jersey. Stephanie McSwain, BA, and John F. Gunn, III, MA, are independent researchers in New Jersey. Correspondence regarding this article should be directed to David Lester at lesterd@stockton.edu

year later, the man created a Facebook page with Amanda's photo as the profile image and circulated it to her classmates. Amanda attempted suicide with bleach, but was treated at an emergency department, after which abusive messages were posted on her own Facebook page. The family moved again, but Amanda began to engage in self-mutilation and again attempted suicide. Eventually she killed herself.

Amanda's suicide received worldwide attention in the media. On October 19, a vigil was held across Canada. A Facebook memorial page was created which has received millions of "likes," but abusive postings still occurred. Amanda's mother has established a trust fund in Amanda's name to fight cyber-bullying. Guidelines from the Centers of Disease Control and from suicide prevention organizations state that sensationalizing and glorifying suicide makes it more likely that a suicide will generate more suicides in the community. However, sensationalizing and glorifying suicide is often the norm today.

What is also noteworthy is that Amanda uploaded a YouTube video five weeks prior to her suicide. The messages on the flash cards outlined her plight and that she had already made two prior suicide attempts. This video ends with a picture of her mutilated arm with cuts. She provided, therefore, thirty-nine days in which people could have intervened. The American Association of Suicidology has recommended the use of ten warning signs for impending suicidal behavior, using the mnemonic IS PATH WARM: suicidal ideation, substance abuse, purposelessness, anxiety, trapped, hopelessness, worthlessness, anger, recklessness and mood changes. Previous research by Gunn, Lester and McSwain (2011) has shown that these signs are valid for predicting suicidal ideation and behavior. For the present analysis, two judges read

Amanda's flash cards from her YouTube video, and scored 8 to 9 of these signs as present. Anger was missing, the two judges did not agree on purposelessness. (Previous research on these signs [Lester, McSwain & Gunn, 2011] has shown that judges have a difficult time distinguishing between hopelessness and purposelessness). It is clear, therefore, that Amanda would be judged to be at high risk for suicide by a suicide expert viewing her video. However, there is no indication that any of those who viewed the video attempted to intervene and prevent Amanda's suicide.

Gunn and Lester (2012) proposed that the Internet portals and websites, such as Wikipedia, Facebook and YouTube have suicide prevention links posted on the pages of content that are related to psychological distress and suicide. Furthermore, law enforcement agencies need to become better at identifying Internet postings that indicate possible suicidal behavior, perhaps by using a network of adolescents as consultants.

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Psychological First Aid Training After Japan's Triple Disaster: Changes in Perceived Self Competency

Linda Semlitz
TELL Counseling Center and
International Medical Corps

Kaori Ogiwara
TELL Counseling Center and
International Medical Corps

Inka Weissbecker
TELL Counseling Center and
International Medical Corps

Elizabeth Gilbert
Dulce University Hospital

Maiko Sato
TELL Counseling Center and
International Medical Corps

Machi Taniguchi
TELL Counseling Center and
International Medical Corps

Chikako Ishii
TELL Counseling Center and
International Medical Corps

Chie Sawa
TELL Counseling Center and
International Medical Corps

Abstract: *International Medical Corps and TELL, a local mental health non-profit organization in Japan, collaborated to develop localized Psychological First Aid (PFA) training of welfare and volunteer organizations supporting survivors of the Japan March 11, 2011 triple disaster. The trainings significantly increased participants' perceived competency in applying PFA principles and in interacting with the disaster affected populations in a safe manner. The collaboration between International Medical Corps and TELL in developing, implementing and evaluating the training has potential to inform PFA activities in other disaster affected settings.* [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(3), pp. 181-196].

Key words: *Psychological First Aid, PFA, mental health psychosocial support, disasters*

The Japan Context

The magnitude 9 Great East Japan Earthquake on March 11, 2011 was the most powerful earthquake in Japan's recent history and resulted in a destructive tsunami and the subsequent Fukushima nuclear disaster. As of January 1st 2012,

15844 people have been killed and 3451 are missing in 11 prefectures including Tokyo (Daniell & Vervaeck, 2012). Between 300,000 and 550,000 people were homeless at some point during 2011 as a result of the disaster, including local government officials, health care workers and other professionals, which significantly affected delivery of services . The combined disasters caused estimated direct economic losses of $335 billion, and further indirect losses of approximately $259 billion (Daniell & Vervaeck, 2012).

Japan has considerable expertise in responding to disasters after the earthquakes in Kobe (1995) and Niigata (2006). Although the national response to the 2011 triple disaster was prompt, the magnitude of this event overwhelmed Japan's significant resources which resulted in additional relief ef-

Mental Health after Disaster

Survivors of natural disasters are subjected to various inter-related stressors and have an increased risk of developing mental health problems (Norris, Friedman & Watson, 2002). In Japan, uncertainty about the future and other ongoing stressors were exacerbated by physical injuries, health problems, continued aftershocks, and radiation threats. This has reportedly led to feelings of anxiety, fear, or hopelessness among the affected population, as well as stress related physical complaints such as headaches and muscle pain, nausea, dizziness and difficulty sleeping. Furthermore, the disaster impacted regions with a previously high suicide rate, and also highlighted the overall shortage of mental health professionals in Japan (Yamazaki et al., 2011).

The World Health Organization (WHO) estimates that after large scale emergencies such as natural disasters, the incidence of severe mental disorder increases by one per cent over the baseline of two to three per cent, while common mental disorders such as depression may increase by five to ten per cent above an estimated baseline of ten per cent (World Health Organization, 2005). Pre-existing individual, family and community risk and protective factors are important determinants of mental health and well-being (Norris et al., 2002). However, the most important resources may be the possession of strategies to cope and adapt during the aftermath of a disaster (Norris et al., 2002). Early intervention to provide general support and positive coping strategies is crucial in order to promote protective factors and reduce risk factors for developing mental health problems such as PTSD or depression (Shalev, 2009).

Organization and planning for mental health and psychosocial support is often neglected in the immediate aftermath of a disaster, as communities struggle to provide clean water, food and shelter to affected populations. Furthermore, affected areas can be inundated by non-governmental organizations (NGOs) providing psychosocial support and mental health training and interventions which may not follow global guidelines and evidence based practices, and may be delivered by unqualified staff (Porter & Emmens, 2009). Although such activities may be well intentioned, this can can lead to further harm among affected populations (Wessells, 2009). A recent survey revealed for example that over a third of organizations provide training used Critical Incident Stress Debriefing (Porter & Emmens, 2009). However, a Cochrane review of 15 Randomized Clinical Trials (RCTs) has concluded that "psychological debriefing is either equivalent to, or worse than, control or educational interventions in preventing or reducing the severity of PTSD, depression, anxiety and general psychological morbidity. There is some suggestion that it may increase the risk of PTSD and depression. No evidence has been found that this procedure is effective" (Rose et al., 2002). Therefore, debriefing is not recommended by international guidelines (e.g. IASC, 2010).

In addition, NGO staff and especially lay volunteers are at risk for mental health problems while working in the field (Perrin et al., 2007). Available evidence suggests that disaster preparedness training for relief workers before they enter the field reduces the risk of developing PTSD two to three years after the event (Perrin et al., 2007), yet such training or in house mental health support are rarely provided (Porter & Emmens 2009).

Psychological First Aid

Current global guidelines on Mental Health and Psychosocial Support in Emergency Settings (IASC, 2010) recommend that relief workers and health providers interacting with affected populations should be trained in Psychological First Aid (PFA). PFA revolves around three main principles based on research and expert consensus for supporting disaster survivors. These strategies include: helping affected individuals to feel connected to others and remain hopeful; to provide them with access to emotional, social, and physical support; and helping affected populations to help themselves, both as individuals and as whole communities (Kelly, Jorm & Kitchener, 2010). Recently developed PFA training guidelines (WHO, 2011) include information on normal stress responses to extraordinary events such as disasters, information on how to listen in a supportive and empathetic way, information on how parents can help children cope, ways of linking people to needed services, how to recognize individuals experiencing more severe distress (e.g. significant impairment in daily functioning, danger to self or others; WHO, 2011) and when and how to refer to specialized mental health services. PFA training also includes a module of self-care for helpers in the field. PFA helps service providers to be prepared, to know how to be supportive, and to do no harm. Responses to disasters and available formal and informal resources can vary by culture, and thus interventions for those that seek help

must be tailored to fit local contexts in order to be effective and to not cause further harm (Norris et al., 2002; Rose et al., 2002; Vernberg et al., 2008; Haskett et al., 2008; Rao, 2006). PFA main principles of support can be adapted to different cultural and emergency contexts.

There have been few formal studies on the effectiveness or perceived usefulness of PFA. Anecdotal evidence from Hurricane Katrina has shown earlier versions of the PFA guidelines to be helpful, both in emotional support of the affected individuals, also as a guide for connecting people to existing resources (Vernberg et al., 2008; Haskett et al., 2008). Relief workers working with children and adults affected by Hurricanes Gustav and Ike who received PFA training reported increased confidence and that the training was helpful and not harmful (Allen et al., 2010).

A study in Haiti found a short PFA training by World Vision International (WVI) to be perceived as helpful by non -professional relief workers (Schafer, Snider & van Ommeren, 2010). Zanmi Lasante and Partners in Health used PFA as part of a wider emergency mental health response to the 2010 earthquake in Haiti, though no outcomes were reported (Raviola et al., 2012). After the 2008 Cyclone Nargis in Myanmar the International Organization for Migration (IOM) worked with local community organizations to disseminate "emotional first aid" which included training on listening and talking skills, information on normal stress responses, and ways to recognize individuals who are in extreme distress (IOM, 2008). Community level volunteers in India reported anecdotally that short training sessions in an approach similar to PFA enabled them to successfully provide psychosocial support after natural disasters (Rao, 2006). A five day PFA training for professional and volunteer disaster responders in China resulted in increased confidence in using PFA immediately after the course but no follow up data has been published (Ng et al., 2009). Preliminary data from a three month follow up of a randomized controlled study of PFA trainings provided to emergency medical responders in China revealed that participants continued to view the trainings positively and as helpful (Cheung et al., 2011). In the United States, a more specialized version of PFA has been used with children in a group setting, which revealed a statistically significant decrease in some PTSD symptoms after the training (Cain et al., 2010).

 There remain significant gaps in the research on PFA. A recent review on mental health research in humanitarian settings concluded that the majority of studies have focused on interventions that are infrequently implemented (e.g. more specialized interventions for PTSD) while less research exists on commonly implemented non-specialized programs aimed at preventing mental disorders, and promoting and protecting psychosocial well-being such as PFA (Tol et al., 2011).

While recommendations for implementation of PFA exist (Forbes et al., 2011, IASC, 2010), and some studies report adapting PFA for use in specific populations and cultures (Brown et al., 2009; Cain et al., 2010; Schafer, Snider, & van Ommeren, 2010; Tait, 2011), few have documented the process used to adapt PFA for use in international settings (Rodriguez & Kohn, 2008), which can guide others implementing similar programs (Ruzek et al., 2007).

This program evaluation study is intended to help address that gap by providing information on the strategies used by Tokyo English Life Line (TELL) and International Medical Corps (IMC) to adapt PFA training to Japanese culture. In addition, this evaluation provides insight into the perceived effectiveness of PFA training, and documents the use of local community organizations and their connections to disseminate PFA training and increase the reach of global guidelines.

METHODS
PFA Training Implementation

The PFA training was organized and implemented by TELL with technical assistance by International Medical Corps. International Medical Corps is a global humanitarian non-profit organization with experience implementing relief and development projects, including mental health and psychosocial support in various countries affected by disaster and crises worldwide. In planning response activities, International Medical Corps coordinated with the Inter Agency Standing Committee (IASC) Mental Health and Psychosocial Support Reference Group co-chairs and other group members involved in the emergency response as well as with national governmental agencies and other organizations (e.g. Japanese Society for Psychiatry and Neurology), and coordination bodies in Japan. One of International Medical Corps' objectives in Japan was to build capacity of local partners in responding to mental health and psychosocial issues according to locally identified needs and consistent with global guidelines (e.g. IASC, 2007). IMC was directed by local and national leaders in the mental health field towards working with TELL. TELL is a registered and accredited non-profit organization

that provides counselling and support to the international and Japanese community. TELL has a confidential lifeline in addition to a professional counselling center, and numerous outreach programs. TELL was ideally situated to execute this project due to their extensive resources, including 40 years of training expertise, and a staff of Western trained and licensed bilingual mental health professionals.

With the assistance of International Medical Corps, TELL collaborated with Japanese governmental agencies and coordination bodies (The Japan NGO Centre for International Cooperation (JANIC), Japan Platform), and international organizations to assess gaps in disaster relief efforts. Assessments revealed a significant need for mental health and psychosocial considerations in the provision of relief and support services. A decision was made for TELL to train welfare and non-governmental organizations working in affected areas in PFA to promote mental health and psychosocial support which would complement more specialized mental health services.

PFA Training Content and Structure

Source materials

The content for the PFA training was adapted from several sources including an unpublished Pre-Final draft version of the "Psychological First Aid Field Guide" by World Vision International, War Trauma Foundation and the World Health Organization (2011), previous PFA training materials from International Medical Corps and content from the IASC Mental Health and Psychosocial Support in Emergency Settings guidelines (2007).

Adaptation of the training to fit the local context

Tailoring training to the local context required consideration of multiple factors. As mental health issues are highly stigmatized in Japan, trainings emphasized the goal of helping welfare organizations to do their job better while enhancing the support for the survivors. In addition, the majority of the most severely affected population in Northeast Japan lived in more rural areas, and many were elderly. Thus trainings had to address appropriate responses to the needs and of this population. Specific challenges included the need to proactively respond to population subgroups that were unlikely to assert their needs due to their cultural norms. Some elderly in the shelters experienced difficulties reaching public toilets or accessing food but remained "stuck" on their tatami mats,

unwilling to "make a fuss". Often, mothers had to care for their parents as well as their children, leading to exhaustion. The crowded shelters frequently restricted each family to only a few tatami mats, and mothers of children with behavioral problems were additionally challenged to prevent their active children from disturbing others. Many mothers moved with their children to live in their cars. Furthermore, the massive loss of life made it impossible to perform many important largely Buddhist rituals. Lastly, many missing and deceased victims were never located, thus increasing the level of distress.

Changes made to training materials

A team of four bilingual therapists worked with the TELL Clinical Director and Life Line Training Director to localize PFA training. Firstly, some items covered in the original PFA training were modified to better fit the Japanese (and more specifically the Northeast) culture. Modified items included those that involved non-verbal communication (e.g., being cautious about use of eye-contact), encouraging positive coping and self-care (e.g., considering how cultural expectations like putting others first can inhibit engagement in these activities), and community linking (e.g., being sensitive to inter- and intra- community dynamics existing in local culture). Secondly, additional discussions were introduced to address problems specific to the 2011 triple disaster. These included difficulties with mourning due to ambiguity of loss, supporting elderly survivors, and relief delivery difficulties due to the wide geographic area affected by a combination of natural and man-made disasters as well as the ongoing fear about the aftershocks and radiation exposure from the Fukushima nuclear power plant. The Japanese version of PFA used the term "kokoro no care" (mental care) interchangeably with the Japanese translation for "mental health and psychosocial support (MHPSS)" ("seishin hoken shinri shakai teki shien") since the former is more widely used to describe activities aimed at enhancing emotional well-being.

Initial training of trainers

Seven TELL staff and therapists completed a two-day training-of-trainer (TOT) workshop which covered the content of PFA training. The content was reviewed with TELL staff (English and Japanese speakers) and adjusted to the Japanese context as elaborated previously. Training and materials were pilot tested with TELL and Inochi No Denwa (IND) phone counselors and modified based on process evaluation

and feedback. TELL then began the process of scaling up training among pilot groups and other organizations. TELL also planned adding PFA training into the existing phone counselors' curriculum.

Training format and duration

Training sessions were attended by groups of 15 to 20 participants and initially occurred over two five-hour days. However, the trainings were shortened to one seven-hour day after complaints of time constraints from NGOs, relief workers and other individuals attending the trainings.

Training participants

TELL initially trained phone counsellors from TELL and the Sendai subsidiary of Inochi no Denwa in order to support those phone counsellors in their daily work. Many of the Sendai Inochi no Denwa counsellors were also survivors thus placing them at particular risk for emotional distress.

Contact and selection of organizations for PFA training

TELL actively approached organizations with potential interest in PFA. The majority of the welfare organizations were introduced to TELL by IMC, AmeriCares, and the American Jewish Joint Distribution Committee, Inc. Other organizations were introduced to TELL during weekly JANIC meetings. TELL interviewed the leadership of interested organizations and selected those that were well organized, had an established plan with regard to their work in the affected region, and were willing and able to take time for the one day PFA training (See Table 1). Five organizations additionally committed to participating in the Training of Trainers module with the goal of training other staff or volunteers within their organization and increasing the level of awareness of PFA principles.

Coordination and information sharing

Since the Great East Japan Earthquake, TELL has participated regularly in meetings and networking activities with JANIC and Japan Platform. Through those networks, TELL obtained information about other disaster related mental health and welfare activities while sharing the information about its experience delivering PFA training.

Measures

Training needs

Before PFA training, all participants completed a training needs questionnaire (see Appendix A) inquiring about most common challenges, roles, and training needs. The responses were used to inform training content including interactive examples demonstrating how PFA principles could be applied to real life situations. These examples were tailored to address the specific needs and concerns of each training group based on their activities in the field. Responding to elderly in shelters who were unwilling to make their needs known, connecting socially isolated male survivors to appropriate support, maximizing accessibility to support for survivors who are not in shelters, how to approach survivors who get in line many times for receiving supplies were some examples discussed in the interactive group exercises.

PFA knowledge and perceived competency

Pre and post questionnaires (see Appendix B) examined the effects of the training on the participants' knowledge of PFA principles which consisted of true or false questions. The questionnaire also assessed perceived PFA competency conceptualized as an individuals' judgment about their knowledge and ability to use different PFA principles when interacting with populations affected by the earthquake, rated on a five-point scale. The knowledge and perceived competency scales were specifically designed for the evaluation of this training. Perceived self-competence was used as a proxy for competence in the actual disaster setting, which has been used in other studies to assess the effectiveness of PFA training, as well as in other situations where direct observation or assessment is impractical (McCabe et al., 2011). This is based on evidence that increases in perceived self-competency is associated with increased performance of the behavior in question (Sheeran, Trafimow & Armitage 2003).

Qualitative questions asked participants to list three things that might help children, and three things that might help adults and organizations cope after disaster, as well three things that might be harmful for people affected by the disaster. These open questions were meant to confirm acquisition of specific skills discussed during the training as well as to examine specific issues trainees were facing. International Medical Corps analysed the data from the initial trainings and compiled a series of recommendations that were incorporated into later trainings. Discussions after each training helped

	Table 1. NGOs trained in PFA since April 2011 to January 2012 *number in ( )=TOT participants			
	Org	**City**	**#**	**Main activities of the organization**
1	TELL	Tokyo	50	Phone counseling in Tokyo for foreigners
2	Kanto IND	Tokyo	21	Phone counseling in Tokyo
3	Sendai IND	Sendai	77 (4)	Phone counseling in affected area
4	Link Japan	Tokyo	12	Digging mud, providing supplies and food
5	AAR Japan Association for Aid & Relief Japan	Morioka, Sendai	27	Providing appliances, supporting temporary housing residents
6	Recovery For Japan	Tokyo	59 (1)	Sending counselor to survivors, free school bus service, taking care of children
7	Fukushima IND	Fukushima	20	Phone counseling in affected area
8	JAM (Japanese Association of Mental health svcs.	Tokyo	54 (3)	Phone counseling and face to face counseling in Tokyo and affected area
9	PCAT Japan Primary Care Assn.	Tokyo	39 (4)	Primary care and counseling for evacuees in shelters and at home
10	Mejiro University	Tokyo	18	Active listening (university students volunteer)
11	JEN	Ishinomaki	11	Gardening, cleaning, providing supplies
12	Jochi University	Tokyo	11	Conversation partner, play with children
13	SHARE Svcs. for Health in Asian & African Regions	Tokyo	3 (2)	Public health and medical support
14	Rikkyo Univ.	Tokyo	15	Volunteering to clean up, digging mud
15	Peace Boat	Ichinoseki	6	Gardening, cleaning, helping out fishery and
16	Shanti Volunteer	Ichinoseki	10	Mobile library, supporting elderly, disabled, and children
17	JANIC	Ichinoseki	1	Coordinating NGOs in Iwate prefecture. Holding meetings, disseminating information
18	Hyogo Kokoro no Care Center	Tokyo	1	Disseminating information about mental health
19	Kapatiran	Tokyo	14	Phone counseling, face to face counseling for Philipino community
20	Peace Winds Japan	Ichinoseki	14	Distribution of emergency items, building temporary bathing facilities

Total participants: 463
Total number of trainers trained in TOT: 14

trainers improve the interactive examples for participants in subsequent trainings (e.g. how to respond to elderly in shelters who were unwilling to make their needs known). In addition, a post-training questionnaire sought feedback on the content, structure and usefulness of the training.

RESULTS

In total, TELL provided PFA training to 463 individuals and 20 NGOs and volunteer groups from different fields of assistance in multiple affected areas (see Table1).

Training Needs

A qualitative analysis with coding of primary themes from the training needs questionnaires was conducted by International Medical Corps. Results of the qualitative analysis revealed that trainees perceived common challenges faced by survivors to be issues relating to loss (of people, materialistic possessions, normalcy of daily life), emotional suffering (of fear, worry, grief, hopelessness, helplessness, anger, guilt), relational difficulties (with close others, and among survivors), physical symptoms (illnesses and complaints, disrupted sleep), and cognitive impairment (trouble concentrating and thinking clearly). The primary perceived training needs of the relief workers included gaining accurate and up-to-date knowledge about disaster relief activities, learning how to support people who are highly distressed, and ways for communicating with such population in helpful and effective ways.

Knowledge of PFA Principles

Pre and post assessments examined the effects of the training on the participants' knowledge of PFA principles. 393trainees out of 463 trainees fully completed the true-false sections of pre and post tests. The overall average test scores increased from 14.58 out of 17 on the pre-training test to 15.94 out of 17 on the post-training test.

This indicates that on average, trainees were able to answer most questions correctly before the training. However, only 39.95% knew that psychological debriefing is not recommended for individuals who experience a disaster while 91.58% answered correctly after training. After training, more participants also knew that most survivors do not need specialized mental health treatment immediately following a disaster and that sharing other peoples stories with those affected may not necessarily be helpful. Prior to training,

Knowledge of PFA Principles
Average Score of True-False Items
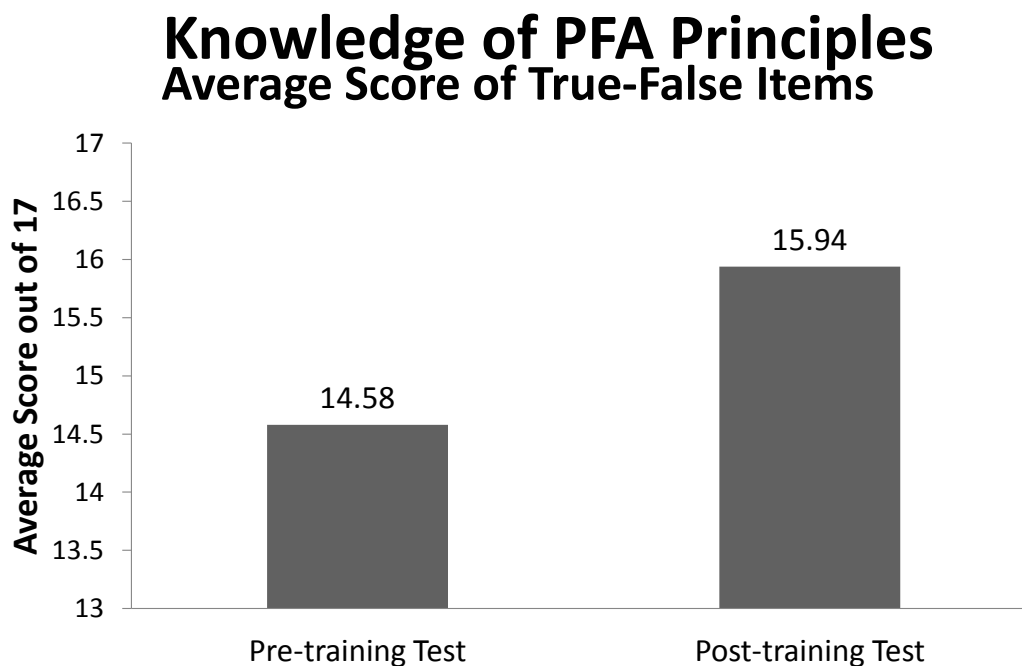
Figure1   p<0.0001

participants already had sufficient understanding that helpers need to refrain from judging the reactions of survivors and that first responders need to provide referrals and link people with basic services. Surprisingly, after training, participants more often answered incorrectly that most people do not experience psychological distress after a disaster. We believe this may have had to do with the wording of the question and confusion that on the one hand most people do not need specialized mental health treatment right after a disaster but that most will experience psychological distress. It is important to note that participants also significantly improved their understanding of the need for self-care and recognized that getting angry should not be considered a normal part of a stressful job.

Perceived Self- Competency in the Use of PFA principles

Results showed that participants rated their ability to use PFA principles significantly higher post-training as compared to pre-training (all increases statistically significant, one sample two-tailed t-test, $p<.001$, see Figure 3).

Improved self-competence was endorsed by 255 out of 360 trainees in at least half of all areas queried and 10% endorsed improvement in all areas. The greatest increases occurred in understanding positive and negative coping mechanisms, followed by overall knowledge of stress and stress reactions, ability to identify harmful interventions and activities, and ability to support people affected by disasters and other stressful events.

Change in Knowledge of PFA principles

Figure2   p<0.0001
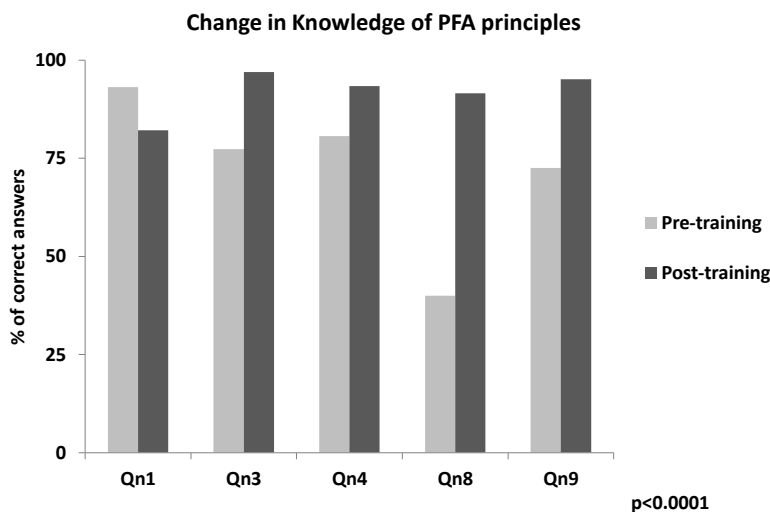
Qn 1   Most people affected will experience psychological distress. (Pre-93.13%, Post-82.19%)

Qn 3   Most people affected will develop mental illness. (Pre-77.35%, Post-96.95%)

Qn 4   Most people affected will recover from distress on their own using their own supports and resources. (Pre-80.66%, Post-93.38%)

Qn 8   Conducting psychological debriefing (assembling a group of people and asking them to share their stressful experience. (Pre-39.95%, Post-91.58%)

Qn 9   Telling them the story of someone else you just saw so that they know they are not alone. (Pre-72.52%, Post-95.17%)

Perceived Self-Competency in the use of PFA Principles
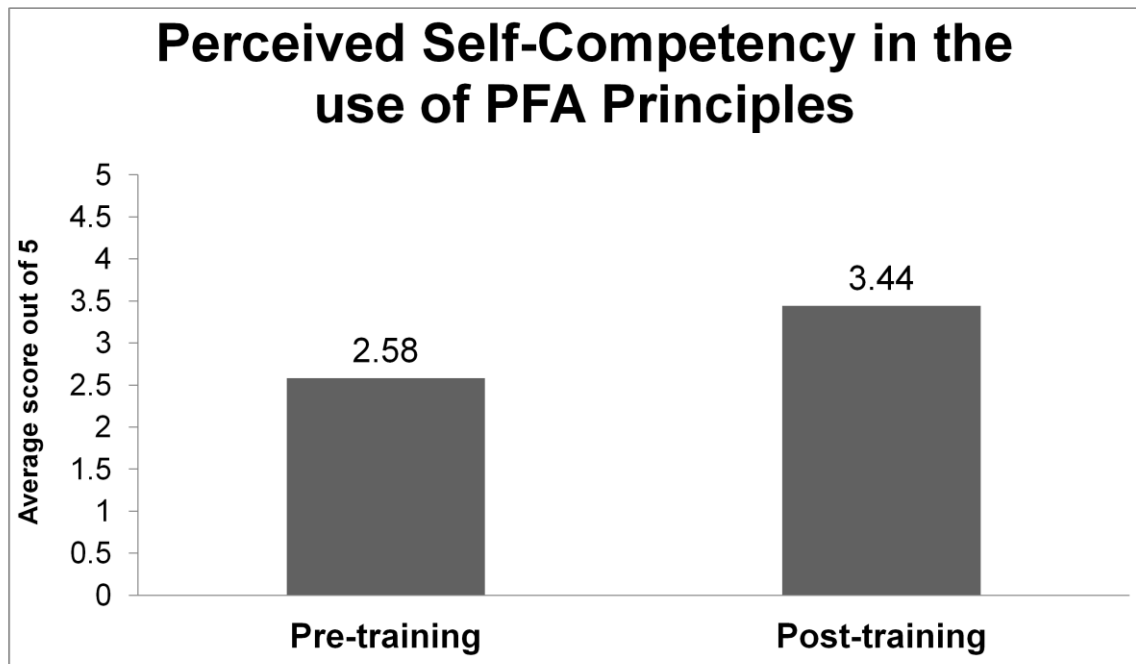
Figure3   **p<0.0001**

Training Evaluation

Participants anonymously filled out a training evaluation immediately after the training. On a five point scale rating almost all participants rated the PFA training positively, and over 80% acknowledged that the training was useful for performing their role as aid workers. Many positive comments were provided by the respondents such as "Learning what to expect in a disaster setting made me feel more prepared as a helper", "I felt reassured to learn that stress responses are normal responses to an abnormal situation", "I hope to continue my relief work with more belief in people's resiliency" "I felt that the training validated my relief efforts".

DISCUSSION

This program evaluation study examined the utility and effectiveness of culturally adapted PFA training among staff of 20 organizations that responded to the 2011 Great East Japan Disaster.

PFA is designed to be tailored to individual need, which makes standardization difficult (Forbes et al., 2011). This paper outlines strategies for adapting PFA training to Japanese culture as well as challenges that were encountered during this process in the hopes of informing future work in using PFA in diverse cultures and contexts. This paper also describes dissemination of PFA training through partnerships with local community organizations. While most of the studies on PFA describe a collaborative approach involving some type of partnership, few have formally assessed the effectiveness of these collaborations (McCabe et al., 2011; Ng et al., 2009). International Medical Corps has significant expertise and experience in responding to mental health needs in disaster settings while keeping up to date and contributing to best practices in mental health relief efforts. As one of the main mental health NGOs in Japan, TELL frequently works with other NGOs, schools, and foreign embassies. By partnering with TELL, International Medical Corps was able to adapt PFA to the Japanese context, build local capacity reach a wide audience. Thus, individuals from a variety of different

Perceived Self-Competency
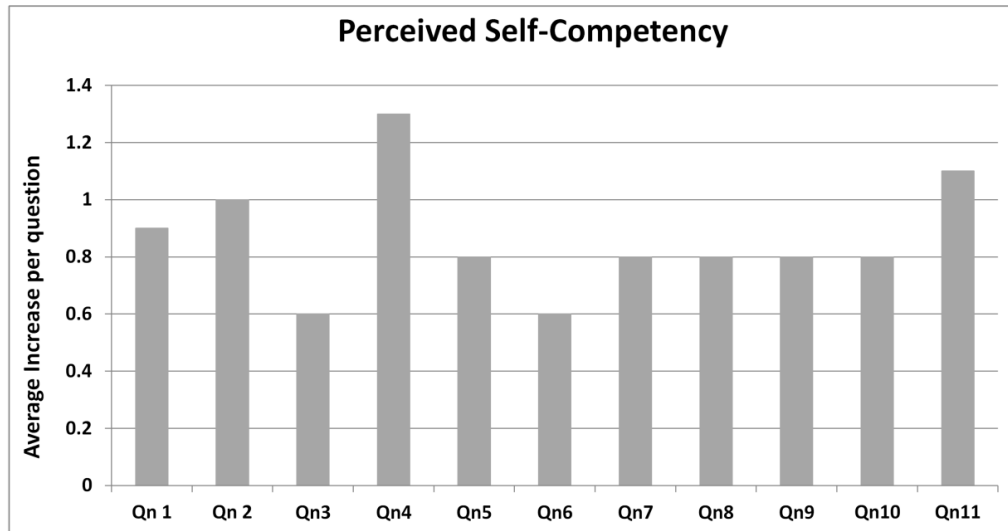
Figure4
p<0.001

Qn 2   Overall knowledge of stress and stress reactions

Qn 4   Overall knowledge of positive and negative coping skills

Qn 11   Ability to identify what types of interventions or activities may be
harmful for people affected by disaster

Table 2. Changes in perceived self-competency in the knowledge and use of PFA principles after PFA training (N=360)			
Question	**Pre-**	**Post-**	**Increase**
1. Ability to support people who have experienced disasters and other stressful events other stressful	2.3	3.2	0.9
2.Overall knowledge of: Stress and stress reactions	2.6	3.6	1.0
3.Overall knowledge of: Communication skills	2.9	3.5	0.6
4.Overall knowledge of: Positive and negative coping	2.3	3.6	1.3
5.Ability to take care of myself and prevent burn out when assisting people affected by disaster	2.8	3.6	0.8
6. Ability to listen in a supportive way	3.3	3.7	0.4
7. Knowledge of what information to find out to help people affected by a disaster	2.3	3.1	0.8
8. Ability to link people affected by disaster to needed	2.3	3.1	0.8
9. Ability to distinguish between normal stress reactions and mental health problems	2.4	3.2	0.8
10. Ability to do no unintended harm when helping people affected by disaster	2.6	3.4	0.8
11. Ability to identify what types of interventions or activities may be harmful for people affected by disaster	2.5	3.6	1.1

organizations that had been working with disaster survivors were trained in accordance with international guidelines.

This model successfully demonstrated the effectiveness of using local community organizations and their connections to disseminate PFA training and guidelines with technical support from an expert international organization.

PFA training improved trainees perceived competence in their knowledge and ability to use PFA principles when interacting with disaster survivors . The greatest increases in perceived competence occurred in understanding positive and negative coping, stress and stress reactions, how to identify harmful interventions and activities, as well as ability to support people affected by disasters and other stressful events. PFA trainees also showed improved understanding that psychological debriefing is no longer recommended as an intervention after disaster. This is especially important given that debriefing has been shown to be ineffective or even harmful and can hinder natural recovery. Also, knowing that specialized mental health services are not needed immediately after a disaster and that active listening, linking to services, and understanding normal responses to very distressing events may allow for workers to provide support and referral more effectively and to refer to specialized services only when necessary.

The findings from the pre-post testing are supported by additional data obtained from the positive training evaluation. Overall, it appears that the PFA training participants understood the core components of PFA, perceived its usefulness in providing effective disaster support, and reported increased knowledge and confidence as a result of training.

Challenges and Lessons Learned

PFA time/delivery modifications

Despite introductions, convincing organizations to take time for training in PFA was a challenging process. NGOs and aid workers were reluctant to   interrupt their disaster relief efforts for PFA training. The initial two-day training was reduced to a single long day training to manage this concern. Ultimately, only organizations that fully committed received the PFA training.

Many of the organizations relied on changing teams of volunteers making it difficult to train all volunteers. As a result, TELL and International Medical Corps additionally developed a brief "Volunteer Dos and Don'ts" for distribution to various organizations.

Fit of PFA and TELL's mission

The collaboration with International Medical Corps to roll out PFA training required TELL to broaden its core activities beyond the Life Line and professional face-to-face counselling. As TELL continued to provide its original core services while providing PFA training, staff became over-extended, and it became clear that continuing all activities was unsustainable with existing staffing. Hiring a full time disaster coordinator and two part time disaster assistants to organize and track trainings and funding helped ameliorate this problem.

Perceived need for PFA

Some international NGOs underestimated cultural differences in Japan and did not fully acknowledge Japan's experience in meeting past disasters. In addition, many organizations felt that the demands to provide relief work outweighed the benefits of obtaining additional training.

PFA timing

Although the first PFA training was held five weeks after the disaster, several trainings took place six to seven months later, with the last PFA training being held nine months after the disaster. This meant that few participating relief workers received their training before they went to the field. It is unclear whether the delay in providing PFA training may have had any impact on its efficacy.

Challenges of self-care

Given the culture within Japan to put others first, it was extremely challenging to implement self-care practices among NGO's and other organizations. However, many participants indicated their interest in learning more about self-care in their feedback forms immediately after training. Transfer of learning to actual behavior was difficult for cultural and organizational reasons. We also underestimated the impact of management changes amongst NGOs once international teams started to retreat and replaced their teams with a combination of experienced and inexperienced new hires. This was further complicated by the fact that many of the new hires were also recent survivors. Some traning participants commented that they often felt guilty when regions where affected co-workers had resided were not selected for intervention.

TOT and scale-up

The TOT method for PFA allowed further scale-up. In order to extend the reach of the training, TELL provided additional training to representatives of interested organizations so that these individuals could in turn train additional colleagues within their organizations. However, it should be noted that, only five organizations used this approach. We suspect that some organizations felt they had insufficient expertise to become trainers. In addition, a certified trainers were required to provide two supervised PFA trainings, which may have felt to be too large a burden for organizations struggling to meet the demands of humanitarian disaster relief needs.

Limitations of This Evaluation Study

Impact of PFA

Due to the nature of disasters and other extremely distressing situations such as armed conflict, it is difficult to evaluate the actual performance of individuals using PFA in the field. For this reason, we used perceived self-competency as proxy to attempt to evaluate the likelihood that participants would use what they learned from PFA training. While there is some supporting evidence that perceived competency in behaviour is connected to later performance of that behavior (Hughes, Galbraith, & White, 2011), there are clear limitations to this method given the lack of direct observation or a control group. Furthermore, the pre-post questionnaire was specifically developed for this project and would need further refinement and psychometric testing.

Limited follow-up period

The data presented is limited to immediate feedback before and immediately after PFA training. Follow up data has been obtained in surveys months after PFA training and will be the subject of a future article. The PFA training provided was a slightly modified shorter version of the manual based two-day training originally planned and was also provided several months after the disaster began. However, it should aso be noted that the Japan disaster included both immediate consequences (the earthquake, aftershocks and tsunami) as well as continued exposure as a result of the uncertainty of the nuclear disaster risk and consequences. In addition, PFA training in Japan was limited to 20 NGOs and welfare organizations that were willing to interrupt their disaster relief work to acquire new skills and thus represents a self-selected non-random group of organizations.

Conclusions

The recommendations and published manual for PFA in global settings are relatively recent, and the practice of PFA has not yet spread widely. In addition, there are few reports in the literature on its actual use in disaster settings, especially in diverse cultural settings.

The collaboration between International Medical Corps, an international NGO with expertise in mental health relief efforts, and TELL, a local mental health organization in Japan, enabled the dissemination of recent evidence based, international PFA guidelines. This partnership was successful in systematically adapting and disseminating PFA training to the Japanese and foreign community by training welfare workers and NGOs interacting with the affected population. The resulting trainings significantly increased participants' knowledge and confidence in their ability to perform PFA and work with disaster affected populations in a safe and participatory manner. The collaboration between International Medical Corps and TELL could be used as a model to adapt PFA to other international settings. In addition, this model could potentially be adapted to disseminate other evidence-based practices.

To date, no published studies have directly assessed the impact of PFA on the affected population. Future research is needed which employs rigorous study designs such as randomization to further examine impact of PFA training on trainee performance as well as on the populations affected by the disaster.

Appendix A:
TELL & IMC Training Needs Questionnaire –General Version

Please indicate the following about yourself:

❏ Male   ❏ Female

Occupation/ _____

Staff Role/ _____

1)   What are the most common challenges for people who have been affected by the earthquake, Tsunami and radiation threats?

2)   What are the most difficult challenges you face in your work in the context of those recent disasters?

3)   What kinds of activities or services do you most commonly provide or engage in?

4)   Is there anything you want to learn more about or problems you want to better deal with in relation to the Tsunami/ Earthquake/Radiation? If yes, which?

a) Skills you want to build?

b) Interventions or activities you want to learn more about?

c) Specific Problems you want to better address?

d) Dealing with specific groups of people you want to learn more about?

Appendix B:
Pre-Post Test: Psychological First Aid (PFA) TrainingPre – Post Test

Name : _____   Date: ___/___/2011

Organization: _____   ❏ Pre-Test

Gender : ❏ Male   ❏ Female   ❏ Post-Test

1) Please rate your perceived …

Fields	Very Low	Low	Medium	High	Very High
1. Ability to support people who have experienced disasters and other stressful events	1	2	3	4	5
2.Overall knowledge of: Stress and stress reactions	1	2	3	4	5
3.Overall knowledge of: Communication Skills	1	2	3	4	5
4.Overall knowledge of: Positive and negative coping	1	2	3	4	5
5.Ability to take care of myself and prevent burn out when assisting people affected by disaster	1	2	3	4	5
6. Ability to listen in a supportive way	1	2	3	4	5
7. Knowledge of what information to find out to help people affected by a disaster	1	2	3	4	5
8. Ability to link people affected by disaster to needed services	1	2	3	4	5
9. Ability to distinguish between normal stress reactions and mental health problems	1	2	3	4	5

10. Ability to do no unintended harm when helping people affected by disaster	1	2	3	4	5
11. Ability to identify what types of interventions or activities may be harmful for people affected by disaster	1	2	3	4	5

2) Please check the best correct answer for each of the following statements (17 questions)

Which of the following is the case regarding people who have experienced humanitarian conflict or crises?	Yes	No
1. Most people affected will experience psychological distress		
2. Most people affected will develop mental illness		
3. Most people affected will need specialized mental health services		
4. Most people affected will recover from distress on their own using their own supports and resources		
Which of the following can be helpful for people who experienced very distressing events?	Yes	No
5. Providing referrals and linking people with basic services (e.g. social services)		
6. Asking people to recount traumatic experiences in detail		
7. Listening in a supportive way without interrupting		
8. Conducting psychological debriefing (assembling a group of people and asking them to share their stressful experiences)		
9. Telling them the story of someone else you just saw so that they know they are not alone		
10. Making promises to make people feel better (e.g. your house will be rebuild soon)		
11. Telling an affected person that everything will be fine and they should not worry		
12. Judging the person's actions and behavior (e.g. you should have stayed)		
13. Finding out more about the situation and available services so that you can assist people in getting needs met		
14. Tell an affected person how they should be feeling (e.g. you should feel lucky you survived)		
As someone providing assistance to others you should…	Yes	No
15. Find ways to relax such as smoking or drinking alcohol when you feel distressed		
16. Practice self-care by taking regular breaks		
17. Not worry about getting angry and irritated as this is a normal part of a stressful job		

3) Name three things that can be done to help children cope who are affected by disaster

a)

b)

c)

4) Name 3 things that people or organizations may do which can be harmful for people affected by disaster

a)

b)

c)

5) Name 3 things that people or organizations may do which can be helpful for people affected by disaster

a)

b)

c)

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Hopeless, Burned Out, and Questioning: Achieving Personal Resilience in the Midst of Organizational Turmoil

Abbey-Robin Tillery

Abstract: There are not many personal reflection pieces about professional resilience published as health care professionals are still among the least likely to raise their own personal problems- especially in the field of emergency health care. Writing a first person piece about the journey to finally finding professional resilience, I describe factors faced by many new and mid-level professionals that are not written about in academic journals yet contribute to: premature career termination, poor customer service/ patient care, and lack of motivation. I conclude with a way forward that could be a map for others currently struggling with their career choice. As a mid level psychologist, I can now look back on the past 8 years of my development and see the obstacles I was faced with. The irony is that at the time I knew they were challenging times, but I lacked a context for them, and did not know what normal was. Now that I am a relatively safe distance away from those hard years, I can appreciate more fully what resilience means to me, and respect the years I spent secretly in crisis. This article is a blend of academic information about professional resilience and compassion fatigue, contrasted by those very concepts playing out in my own life. The recommendations I provide for leaders and those in the thick of a professional burn out are concepts I know would have made a difference to me, even in survival mode. [International Journal of Emergency Mental Health and Human Resilience, 2013, 15(3), pp. 197-202].

Key words: *provider burnout, provider resilience, professional development, leadership challenges*

Since the pioneering work of Dr. Charles Figley on Compassion Fatigue, providers have been more open about discussing the causes and consequences of compassion fatigue (Figley, 1995). The conversation surrounding compassion fatigue's etiology made its way to the training and doctrine commands within the military, much to my delight and surprise while working as a military psychologist. Over the past decade scores of programs were developed to make troops (and those who provide their behavioral health support) more resilient to situations that would be difficult for anyone to handle. The Warrior Resiliency and Thriving Work Book (Jarrett, 2005), Provider Resiliency Training (US Army AMEDD, 2007), and the Global Assessment Tool (US Army AMEDD 2009) were designed to assess and/or promote wellness throughout the deployment cycle and military life in general. These programs strove to survey and promote resiliency - training which was also intended for behavioral health providers to participate in. However as a personal recipient of many of these resiliency programs, one criticism I would share is that they often concluded with generalities

Abbey-Robin Tillery, PhD, is the staff psychologist for the Joint Military Attache School, in Washington D.C. and has worked in military and government settings since 2004. She specializes in organizational consultation and program development in the fields of Prevention, Resilience, Operational Stress, and Early Intervention. The views expressed in this article are those of the author and do not reflect the official policy or position of the US Govt., the Dept. of Defense, or any of its components. Correspondence regarding this article should be directed to abbey-robin.tillery@dodiis.mil

like "eat well, get enough sleep, and exercise." That level of advice struck me well as insufficient to address the insidious factors specific to me, my peers, or many other soldiers forced to attend these mandatory briefs.

To be fair, the conversation about provider resiliency cannot be remedied by a few specific programs; it is experienced by many types of providers, and is brought about by more factors than deployment or military life. Improving understanding about providers requires a better understanding of the stressors they experience, as well as the factors that enhance their quality of life. Many may not suspect that the suicide rate for civilian doctors is nearly 2 times that of general public, half of all physicians regret choosing medicine as a career, 20% of nurses experience severe burn out, and 8-12% of health care professionals develop a substance related disorder (Miller, McGowen, 2000). The formation of provider stress I have experienced started well before operating as a professional, and grew for many years despite my efforts. It was influenced by factors I never anticipated, such as personal life experiences I managed privately, an overwhelming desire to serve others, and a negative organizational climate. The anecdote I have found to successfully working in a highly stressful, chaotic, political environment is not impossible to obtain, but it does take more than computer based training, stereotyping, or passive digestion of elementary concepts. It takes self awareness, courage, and hope.

Reason for Being

Working as a clinical psychologist since 2005, I have found that there is a pervasive burn out that manages to touch each one of us differently and for different reasons. For me, I was drawn to the field of trauma, and like so many new psychologists, I wanted to make a difference. I have always wondered 'if we know so much about the aftermath of trauma in the brain, why can't we do something beforehand to help prevent PTSD?' I was captivated by these questions surrounding why a group of individuals- both (unrelated and familial) can experience the same event, yet each member responds so differently.

My adolescence was spent fighting the poverty line, and a very dysfunctional family, so to find peace I emancipated myself at 16. Having personal experience with multiple personal traumas, as well as seeing my family affected by trauma, the diversity of our reactions made an indelible impression on me growing up. I was a gifted student, graduating

from the International Baccalaureate program, however none of my peers or teachers knew what was going on privately. I began to wonder why I was succeeding in spite of my past, struggling with a sort of survivor guilt. At the university I read everything about trauma psychology that I could, even things that seemed unrelated, because I loved feeling of information networking in my brain. Passion does not always translate into a livelihood, so I set about to find that nexus between my personal interests, abilities, and something that actually generated enough income to support myself. However along the way I encountered more massive personal obstacles: I was enmeshed with a very abusive relationship which continued on to graduate school, resulting in an unplanned pregnancy, living homelessly on a sailboat with only 30 amps of dock power, and the only bathroom was at the marina about 1/8 of a mile away. I was excelling in school but leading a double life. I was propelled through graduate school with such a sense of urgency to get out of my personal difficulty that my professors would often tell me I was taking on too much and I should slow down. I couldn't slow down because for me there was no "plan B," I was too afraid to tell them or anyone. While I was intellectually strong and motivated, personal stability could not have been farther from me, and so I went into overdrive.

As I started working in the field as a student-clinician it struck me that for the first time my relationship with trauma was not as a victim or as a passive student, but as a healer as far as everyone else was concerned. I felt more certain about my desired identity and was excited by the variety of ways I could apply myself. I was also trying with every ounce of strength to become a strong provider, and leave the trauma and dysfunction behind me; surely that was possible. I created practicum sites for my school, co-founded an early intervention clinic, and linked professionals to my graduate school in new and exciting ways; but the personal struggles were ever-present.

Shock and Awe

During my second to last year of graduate school, I was commissioned as a Captain in the U.S. Army which secured my internship. I could not have been happier, finally living my dream of being a military psychologist. I had succeeded in the first big step of taking back control of my personal life, and could see my hopes for contributing as a professional materializing. I thought I would be able to apply my educa-

tion in service of my country by serving a population that needed it most, and in turn find safety and stability for myself.

I discussed that I made many erroneous assumptions going into this work. Perhaps the biggest was that other officers and doctors would be working with that same sense of gratitude for their place in society the military afforded them. However I met many who did not want to be there, looked down on military doctors as being below their civilian counterparts, and seemed bothered by the troops themselves. After the nearly homeless state I had been living in for 3 years, receiving WIC under the radar of my peers for my baby, I could not fathom why people would take their stability, free housing, or their opportunity to call themselves "doctor" for granted. I saw them as both sheltered and jaded- a combination I simply did not understand. The professed boredom and complaining of my peers greatly impacted their patient care, relationships with others, and their own professional development. I could not imagine why people would stay in a job as important as clinical work if they did not possess a passion or personal experience to relate. The thing in my life that I was most proud of, was actually a bit of a nuisance to others. Many said "it's a job", "I owe money/ the military for my degree", "I have to provide for my family too," and/or "there are not many other options out there in this economy." I was outnumbered by these attitudes and started to second guess myself, so I wondered if I was abnormal. I wondered if I should have a colder relationship with people, maybe that is what being a *real* psychologist was. Maybe being in the "in crowd" in the hospital meant hating your job and feeling constantly annoyed by patients, and using gallows humor.

I realize now part of my confusion was that I felt indebted to my career because it was providing the mechanism I needed to better my life and my newborn son. Most other providers and officers did not have that personal history I did. I was not looking at my job in an unbiased way, but as someone who was truly grateful for every day. I had a home for the first time, and felt honored to call myself an officer for reasons most of my peers could not relate to; part of that was my own fault because I was too afraid to tell them.

Watching the hospital dysfunction, the poor medical care system, the crisis at Walter Reed unfold, and how that impacted patients, it seemed like I was surrounded by leadership failures at every level and no way to fix it. I found detachment and eventually crossed over to join my bitter colleagues. Frankly it felt good to finally have a peer group

of sorts. I was not financially destitute as I once was, I wasn't living with food anxiety, scarcity as a single parent, but the one thing that had been a source of joy and strength (genuinely being proud of what I did and where I worked) was getting seriously questioned. It felt wrong.

I was sent to another assignment which was an organizational psychology billet with some clinical assessment work. I thought that would be the respite I needed, as my second erroneous assumption was that the clinical world was the cause of this burn out. What I found was that there were some additional causes of burnout: serious leadership dysfunctions, unethical practices, and unhappy people. The military, as it seemed to me then, was perpetually in crisis and many people were unhappy. Every environment I had worked in was dealing with major changes in leadership (sometimes due to deployments). Nonsensical policy implementation and reorganization were made with little regard for the impact that stress puts on providers, who were often already overwhelmed privately.

After four years I was due to get out of the military, which was exciting and scary. I thought the grass would be greener as I could function as a better single parent without having to deploy away from my son or travel all the time- my third erroneous assumption. I decided to pursue a contracting job that offered me a chance to contribute nationally. This position that had all the buzz words I was emotionally attached to, and sounded like the military values I had genuinely espoused and had protected me during some of the worst points of my adult life. After about 3 months in this position I was dismayed to learn that the buzz words were hollow. The managers viewed those values simply as parts of a marketing strategy, and again I was burning out. While I was no longer trying to privately fix a life torn apart, now I was starting to look at the world as my first group of peers may have- as someone who had choices for work and was operating from a place of normalcy.

I made a decision that I was not going to change what mattered to me, that I would persist until I found my group of peers, even if it meant self employment. I believed there had to be others who were dedicated, professional, and really cared.

I started spending every free minute looking for jobs, and found one in the federal government that appeared promising (this is right before all the furloughs and sequestration!). Once

in this new position, it turned out to be chaos; the management was vetting a serious personnel complaint and I was hired into the middle of it. I wondered if I had made a huge mistake, dialing my doubt all the way back the beginning of my decision to become a psychologist.

However I had to admit that this time my "crisis" was intellectual and I had done the gut wrenching personal work to know the difference. Even though my job was not working out, it felt much more manageable this time because I was able to see all I had survived, and that my core values and interests were still intact. The difference was that now I had battle scars and could relate to many other colleagues who had been there.

A Way Forward

The decision not to quit has borne fruit; I am strong enough personally to be proud of my job even when surrounded occasionally by people who were not. My recipe for professional resilience includes surviving and recognizing hardships. The small victories are noticed and cherished and gratitude can be felt. It also includes disclosing painful times, and not toiling alone.

Having been through many harrowing personal and professional fires over the past decade, I share my experience to underscore a quote from Plato: "*Be kinder than necessary*, for everyone you meet is fighting some kind of battle." For the majority of my life no one knew my personal battles. I regret not telling more people what I was dealing with, because I was enveloped in empathy immediately after I started sharing. The reason I didn't say anything is in part because of the people with critical natures I with, as well as the professional pressure to lead the model life when working as a behavioral health provider. I was scared that if I was to open about my personal struggles I would not be allowed to continue in training or get my license. Fear that I know now is totally unfounded.

For leaders, I implore you to create that environment where people can be authentic, and imperfect, work without fear when they come forward for help or to express hardship. Be aware that those around you may be experiencing the glow of real professionalism for the first time. Nourish that. Learn how to complain in a way that carries suggestions and solutions, and avoid dumping on people in a way that crushes their spirit. Do not allow others to be belittled who are grateful for their job, their life, and their achievements- no matter how small. Pass on your success stories- especially to those new providers, but also please share your failures. Mentor, even when there is nothing in it for you. Many people are bearing unimaginable burdens while caring for others; even though they may be doing it with a smile. They may be the workaholic I was.

I am happy to say that I have finally started to work with groups of people who share my values, encourage professional contributions, and work for a purpose bigger than themselves on a daily basis. Others still find things to complain about, but now I know the difference between big and small. I can genuinely look forward to coming to work every day, seeing my peers and supervisors, and producing things that I am proud of. I can care for many projects and people because my reservoir is no longer on empty or overdrive, and it is a feeling I am enjoying for the first time in my career.

One of the best tips I can give is for providers who are on this journey, is to fully acknowledge their imperfections, and understand that their organizations are also imperfect. Neither your faults nor the faults of your organization erase all that is good about you. Cherish your inner values, it is important to verbalize your battles to people you trust. Never quit searching for the environment that best nourishes you. The truth is that past hardships makes us more relatable, effective, down to earth, and captivating to our client groups, than safely regurgitating book knowledge or pretending to be perfect ever could.

DEFINITIONS

AMEDD: US Army Medical and Dental Command

Provider Resiliency Training (PRT): As directed by OTSG, the Soldier and Family Support Branch (SFSB) developed the Compassion Fatigue program in 2005 to deal with issues of Provider Fatigue and Burnout. In 2007, the program was redeveloped into the Provider Resiliency Training (PRT) Program and was endorsed by OTSG for all Providers. This comprehensive program currently includes four different modules beginning with Introduction to PRT in the format of a 20 minute video. PRT Level 1 includes two hour didactic training for both military and civilian providers. PRT Level 2 includes four to eight hours didactic training, expanding on PRT 1 and includes practical application of self assessment and self care plans. PRT Level 3 includes 2-3 day training for Clinicians who treat fatigued Providers. http://www.armymedicine.army.mil/about/tl/05-prt.html.

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Elearn1 productions and Dr. Jeff Mitchell have developed a variety of new video based training programs on critical incident stress management. Go to www.DrJeffMitchell.com to view DVD samples and purchase online.

FEATURED DVD:

Critical Incident Stress Management

Strategic Planning On the Street!

An intense training program featuring Dr. Jeff Mitchell discussing why good CISM is based on a strategic plan, and how to create that plan.

Three scenarios are accompanied by questions for discussion.

The program opens with suggestions on training applications for team leaders.
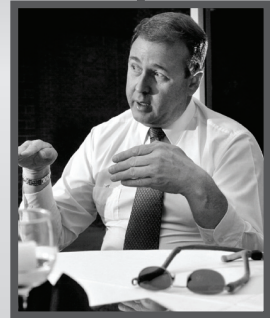
ALSO AVAILABLE:

Crisis Management Briefing
Dr. Jeff Mitchell offers information about the nature and uses of a CMB, and then conducts a demonstration with a group of traumatized employees in a business setting.

Debriefing
Dr. Mitchell explains the rationale for using a CISD and describes, in detail, the seven steps in the process. Following a Crisis Management Briefing demonstration, he leads a traumatized group of business executives through a CISD.

Lessons From Experience
In this series, CISM professionals share their experiences and lessons with Dr. Jeff Mitchell. Program One concentrates on working with schools and working in circumstances where the event is separated from the intervention.

Defusing
Dr. Jeff Mitchell describes the defusing process and it benefits. Following a crisis management briefing, he conducts a demonstration of a defusing with a small group of business executives.

Each program includes study questions that can be used for discussions among CISM team members.

Selected Annotated Journal Resources

Jessica Batinjane, M.S. and Brenton M. Roman, B.A.

Walter, C., Bradley, D., Olge, A. D., Eonta, S. E., Pyle, B. L., & Santiage, P. (2013). Resilience training in a population of deployed personnel. Military Psychology, 25, 148-155. doi:10.1037/h0094956

TYPE OF ARTICLE

- Empirical investigation

OBJECTIVE/PURPOSE OF THE STUDY

- To add to the descriptive evidence on the Master Resilience Trainer (MRT) program by reporting results from pre and post assessments used in conjunction with a command-level implementation of MRT in a deployment environment and among a military population assigned to stressful duty.

- MRT trains service members in developing and maintaining self-confidence and mental toughness by incorporating principles of positive psychology (i.e., optimism, self-efficacy, emotional awareness, and empathy).

METHODS
Participants

- A senior noncommissioned officer, responsible for command of a detention facility for enemy combatants in Afghanistan, was assigned to be a Master Resilience Trainer, and then completed a 10-day MRT course at the University of Pennsylvania prior to deployment.

- Once deployed to the detention facility in Afghanistan, the officer provided the MRT program to all personnel at the command.

- No comparison group was available because MRT was administered to all personnel at the command.

- The sample consisted of 160 soldiers who had pre and post training, and was comprised of 27 females and 133 males, a mix of Army and Navy personnel, and a range of military occupations and ranks. Age and other demographics were anonymous and thus not provided.

Materials

- The Connor Davidson Resilience Scale (CD-RISC) is a 25-item scale that has five identified factors: competence, trust in intuition, accept change, control, and spiritual influence.

- A 30-item locally created inventory of coping behaviors also was administered (i.e., family support and cognitive behavioral techniques to promote resiliency such as working out, post-trauma debriefing, family contact, sleep medication, and writing in a journal) in which respondents noted "how effective the behaviors were to help you cope and perform well during this deployment" on a five-point Likert-type scale. There also were three items for self-report of Stress Load, Morale, and Job Performance.

Procedure

- Over a 12-week period in 2010, all personnel at the command received structured weekly resilience training by the certified MRT instructor.

- Self-report data were collected before and approximately 90 days after the 12-week training.

RESULTS

- Analyses of 143 matched CD-RISC responses yielded overall scores that were lower following MRT training, suggesting a decrease in resilient thinking.

- There was no clear change in cognition associated with resilience training as measured by the CD-RISC.

- The coping behaviors of "Professional Therapy" and "Stress Medications" increased significantly following MRT, while there was a significant decrease from pre-training to post-training in reported Morale on the behavior inventory.
- There was a slight positive correlation between change in resilient thinking and change in reported Morale (r = .21) on the behavior inventory.
- Nine of the 30 coping behaviors listed in the behavior inventory showed more than a 25% increase in use following MRT (i.e., professional massage, prescription medications, professional therapy, video games, sleep medication, schoolwork, posttrauma debriefing, volunteer time, attend religious services). However, none showed commensurate improvement in reported helpfulness of the behavior after receiving MRT.

CONCLUSIONS/SUMMARY
- This study was the first to describe early use of MRT in a deployment setting and used a validated measure (CD-RISC) to assess resilience training effects in a combat zone.
- Only Morale showed a decline following MRT.
- The increased use of therapy and medication post-training may reflect the significant increase in these resources that have been introduced by the Army policy changes over the past few years. It is notable that their use is not related to MRT principles.

CONTRIBUTIONS/IMPLICATIONS
- To inform expectations of military commanders in their use of MRT and similar programs.
- The lower Morale scores appear consistent with a decline in Morale across the course of many Operation Enduring Freedom (OEF) deployments. These scores might reflect typical patterns toward less resilient thinking and less perceived helpfulness of coping behaviors perceived by commanders and offer an impression to them that such programs are not beneficial.
- Systematic evaluations are needed of resilience prophylactic interventions and the government's operational implementation of various programs similar to MRT.
- Beneficial effects should be researched and considered paramount for the justification of resources needed to support such programs.

TYPE OF ARTICLE
- Correlational design

OBJECTIVE/PURPOSE OF THE STUDY
- To investigate associations among peritraumatic reactions, including the triad of fear, helplessness, and horror, and how each reaction was related to PTSD diagnostic status, severity, and symptom expression in a sample of juvenile justice-involved adolescents.

METHODS
Participants
- Participants were 555 adolescents recruited from a county juvenile detention center in the Midwestern United States.
- The sample was comprised of 188 girls and 367 boys, ranging in age from 11 to 17 years (M = 15.52). Of the sample, 68.9% were Caucasian, 24.1% were Black, 2.9% Hispanic, and approximately 4% were Native American, multiracial, and Asian.
- Of the participants, 72% were charged with multiple offenses, ranging from misdemeanors to felonies.

Materials
- The *University Of California at Los Angeles Posttraumatic Stress Disorder Reaction Index for DSM-IV – Adolescent Version* (PTSD-RI) was used to assess exposure to traumatic events and symptoms of PTSD.
- The second set of questions on the PTSD-RI assesses Criterion A2 of the PTSD diagnosis by inquiring if the respondent experienced each of the six peritraumatic reactions, including fear, helplessness, horror, disorganized behavior, confusion, and dissociation, during the "most distressing" event reported.
- A third set of questions on the PTSD-RI measures the presence of symptoms experienced by the respondent in the most recent 30 days, corresponding to the DSM-

IV-R clusters of PTSD: Reexperiencing, Avoidance, and Arousal. Respondents rated each item on a Likert-type scale from 0 (*None of the time*) to 4 (*Most of the time*). These ratings result in a total PTSD symptom score, as well as scores for each symptom cluster.

- A repeated finding across culture and age is that the avoidance cluster is comprised of two independent factors involving active avoidance versus emotional numbing. Further, recent research suggests that a 5-factor model of Intrusion/Reexperiencing, Avoidance, Numbing, Dysphoric Arousal and Anxious Arousal fits better with the structure of PTSD than to the DSM-IV-TR three-part typology. Thus, the authors rescored the PTSD-RI to correspond to these 5 factors.

Procedure

- At parent visitations to the Butler County Juvenile Justice Center (JJC), parents of eligible adolescents were invited to provide signed informed consent for their child's participation, and the adolescents also were invited to provide signed assent.

- Research assistants conducted all interviews in a private room within the JJC.

RESULTS

- Regarding Criterion A1 of the PTSD diagnosis, 86.6% of the sample reported experiencing more than one type of event such as natural disasters, accidents, witnessing domestic violence, harm to a loved one, or seeing a dead body.

- Peritraumatic reactions were less strongly associated with non-interpersonal trauma exposure for girls than boys, with a significant difference for dissociation, such that dissociation was more strongly associated with interpersonal trauma among girls than boys.

- Girls were more likely than boys to meet Criterion A2 by endorsing fear, helplessness, or horror. Girls were also significantly more likely than boys to endorse each of the peritraumatic reactions assessed, and meet criteria B, C, D and a PTSD diagnosis.

- For girls, A1, disorganized behavior, confusion, and dissociation were the only peritraumatic reactions associated with PTSD symptoms. For boys, helplessness, horror, disorganized behavior, and confusion were associated with PTSD.

- Regardless of gender, those who endorsed the peritraumatic reactions of helplessness, disorganized behavior, and confusion were more than one and a half times more likely to meet PTSD criteria than were those who did not endorse these reactions.

- Helplessness and disorganized behavior were associated with whether respondents met DSM-IV-R criteria for the symptom cluster of Reexperiencing. Disorganized behavior and confusion were associated with the Avoidance cluster. Helplessness and disorganized behavior were associated with Arousal. None of these relations were moderated by gender.

- The following associations between symptom clusters derived from the 5 factor model and peritraumatic reactions were significant: Intrusion and helplessness, disorganized behavior, and confusion; Dysphoric Arousal and helplessness, disorganized behavior, and confusion; Avoidance and helplessness, disorganized behavior, and confusion; Anxious Arousal and horror; Numbing and disorganized behavior and confusion. None of these relations were moderated by gender.

CONCLUSIONS/SUMMARY

- The DSM-IV-R triad of fear, helplessness, and horror was insufficient for delineating the reactions of traumatic events that are associated with posttraumatic stress.

- For delinquent adolescents peritraumatic reactions associated with a sense of loss of control and self-regulation were most strongly associated with PTSD than was fear.

- This study showed that peritraumatic reactions of criteria A2 in the PTSD diagnosis were associated with four PTSD symptom dimensions of the 5-factor typology of PTSD, excluding Numbing. The peritraumatic reaction most consistently associated with the four PTSD symptom dimensions was disorganized behavior.

- There was a trend for respondents to endorse more peritraumatic reactions in the face of interpersonal rather than non-interpersonal traumas, with dissociation more often reported by girls in the context of interpersonal traumas and dissociation and confusion more often reported by boys in the context of non-interpersonal traumas.

- Girls were not more likely than boys to report having experienced a Criterion A1 event, and yet were more likely than boys to endorse the A2 criteria of fear, helplessness, and horror, as well as each of the other criteria

of PTSD DSM-IV-TR diagnosis.

- The current results are consistent with findings in adult samples that suggest the DSM-IV-R A2 criteria of fear, hopelessness, and horror do not fully capture the range of peritraumatic reactions that are associated with increased risk for PTSD. Girls also were more likely than boys to endorse each of the additional peritraumatic reactions included on the PTSD-RI.

CONTRIBUTIONS/IMPLICATIONS

- The results of this study may help to inform the DSM-5 by suggesting that removing consideration of peritraumatic responses from the PTSD diagnostic criteria might be ill advised. Particularly for adolescents, subjective appraisals are central to determining whether a given event is considered traumatic and thus likely to cause posttraumatic stress.

- This study highlights the importance of continuing to expand developmentally sensitive and empirically based indices of PTSD in young people.

Galatzer-Levy, I. R., Brown, A. D., Metzler, T. J., Neylan, T. C., & Marmar, C. R. (2013). Positive and negative emotion prospectively predict trajectories of resilience and distress among high-exposure police officers. *Emotion, 13,* 545-553. doi: 10.1037/a0031314

TYPE OF ARTICLE

- Longitudinal empirical study

OBJECTIVE/PURPOSE OF THE STUDY

- To examine whether patterns of adaptation among police officers can be predicted by levels of positive and negative emotion assessed during academy training prior to experiencing potentially traumatic events (PTEs), including threat of injury or death to themselves, their colleagues, and people in the communities they serve.

METHODS
Participants

- Officers were recruited from four urban police departments (New York, San Francisco, Oakland, and San Jose) during academy training. Trainees who previously served in the military, law enforcement, or other first-responder professions were excluded. The sample ($N = 234$) was primarily male (86.8%), with relatively high education (53.4% with a bachelor's and 6% with a master's degrees), and young when they started police service ($M = 27.4$ years, ranging from 21-43 years).

- Officers were included in the analyses if symptomatic distress data were available on at least three of five designated time points.

Materials

- Critical Incident History Questionnaire (CIHQ) is a 39 item self-report measure designed to assess exposure to PTSD Criterion A events typically encountered by police officers in the line of duty. On the measure, 14 items assess exposure to PTEs (e.g., being shot at, attacked, or being seriously injured) in the line of duty.

- Work Environment Inventory (WEI) is a 68-item self-report measure of exposure to routine police-specific stressors (e.g., safety issues, relations with courts) that excludes PTEs.

- Hopkins Symptom Checklist 90 – Revised (SCL-90 R) was used to measure psychological symptoms and psychological distress across nine dimensions or indices.

- PTSD Checklist – Military Version (PCL – M) was modified to measure symptoms of PTSD related to police service rather than military service. PCL – M is a 17-item self-report measure that coincides with the 17 symptoms of PTSD according to the DSM-IV-TR.

- Positive and Negative Affect Schedule (PANAS) assessed positive and negative emotions during academy training. Participants rated the extent to which they experienced 20 emotion items that comprise the Positive Affect (PA) subscale (active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, strong) and Negative Affect (NA) subscale (afraid, ashamed, distressed, guilty, hostile, irritable, jittery, nervous, scared, upset).

Procedure

- Participants were assessed at baseline during academy training, and at 12, 24, 36 and 48 months into active duty.

- Based on the literature, response to PTEs and other stressful life events are clustered into discrete prototypical patterns.

- A latent class growth analysis was employed to construct trajectories of general distress for the present sample, over five time points, starting during academy training and then every 12 months through the first 48 months of active duty police work using maximum-likelihood estimation to estimate class parameters.
- Covariates were assessed prior to examining PA and NA, the primary variables of interest. Overall, PTEs over 4 years of active duty, work environment in those years, gender, age, and level of education were examined in a multinomial logistic regression in the LCGA (conditional model).
- To assess whether baseline levels of psychopathology modeled in the classes accounted for negative emotion findings, mean levels of both depression and anxiety were examined with corresponding SCL-90 indices.

RESULTS

- Of the 234 participants, 67.5% reported being exposed to at least one personally life-threatening event by 12 months, 83.8% by 24 months, 88.9% by 36 months, and 91% by 48 months.
- The CIHQ results showed that 88.9% reported a DSM-IV-TR Criterion A event by 12 months, 94.4% by 24 months, 95.7% by 36 months, and 97% by 48 months.
- Mean exposure to life-threatening events through 48 months was 11.58 incidents ($SD = 13.98$)
- Based on the regression analyses, responses to PTEs for the assessed officers were categorized into four classes according to the significant differences among the course of stress response: resilient, chronic-distress recovering, anticipatory distress recovered, and reactive worsening.
- The class known as resilient is characterized by a trajectory of consistently low stress from academy training through 48 months.
- The class known as chronic-distress recovering is characterized by distress in the first two years of police service followed by full recovery to pre-exposure levels by 48 months.
- A similar trajectory was observed in the anticipatory distress-recovered class that is characterized by higher levels of anticipatory stress observed during academy training prior to active duty.
- The fourth class, reactive worsening, describes officers who displayed increasing chronic stress and a pattern

characterized by consistently increasing distress up to 36 months before returning to baseline by 48 months.
- Results showed that both lower levels of negative emotion and higher levels of positive emotion prior to active duty stressor exposure predicted resilience.
- With positive emotion, the reactive-worsening class demonstrated significantly lower levels of self-reported positive emotions during academy training compared with the resilient class.
- The trajectory classes were analyzed to better understand how each related to PTSD symptom severity. Results showed that classes differed significantly on PTSD symptomatology levels at the different markers in time after beginning active duty, with the resilient class consistently demonstrating significantly lower PTSD symptom severity compared with all classes at both 12 and 24 months.

CONCLUSIONS/SUMMARY

- By modeling trajectories from academy training through four years of active duty, officers experiencing frequent PTEs and high-level routine work stress closely conformed to prototypical response patterns to PTEs based on the literature.
- The similarities in responses for the chronic distress recovering and anticipatory distress recovered trajectories might characterize adaptation to significant stressors regardless of whether they are discrete or chronic.
- Resilient and reactive-worsening were not different in their levels of distress during academy training or by their level of exposure or work stress.
- Positive emotion predicted differences only between the resilient class and the reactive-worsening class, where the latter class demonstrated significantly less positive emotion during academy training.
- A higher level of self-reported positive emotion prospectively predicted resilient responses prior to PTEs exposure and provides evidence that positive emotion serves to promote resilience.
- Lower levels of positive emotion predicted the development of chronic and worsening distress.
- Patterns of general distress may not equate directly to specific-related psychopathology such as depression or PTSD, as the authors examined broad negative and positive emotion and not specific emotions.

CONTRIBUTIONS/IMPLICATIONS

- The observed trajectory patterns are consistent with those of PTSD symptom severity that were observed in officers following their first exposure to a PTE.

- This study provides evidence that variability in positive and negative emotion prior to exposure to significant stressors prospectively predicts patterns of adaption following exposure.

- Identifying prospective predictors, both positive and negative self-reported emotion, may provide information about individuals at the greatest risk for maladaptive stress responses, which can inform policy decisions concerning fitness for active duty, or help identify individuals in need of mental health services.

Breen, L. J., O'Connor, M., Hewitt, L. Y., &Lobb, E. A. (2013). The "Specter" of cancer: Exploring secondary trauma for health professionals providing cancer support and counseling. Psychological Services. Advance online publication.doi:10.1037/ a0034451.

TYPE OF ARTICLE

- Qualitative design (grounded theory analysis)

OBJECTIVE/PURPOSE OF STUDY

- To explore the emotional consequences of work-related stress, particularly burnout and secondary stress, of health care professionals who provide psychological care and support in the context of cancer or palliative care.

METHODS
Participants

- The sample consisted of 38Western Australian professionals (six men, 32 women) who provide grief support for patients affected by cancer.

- More specifically, the sample was comprised of psychologists (n= 11), social workers (n= 10), pastoral carers/chaplains (n= 7), nurses (n= 6), group facilitators (n= 3), and a medical practitioner (n= 1).

Materials

- A semi-structured interview guide was used to interview each participant.

- The interview included topics such as day-to-day practice, approach/style of interventions, and criteria for referral.

- By targeting topics of loss, the effects of work on their personal life and the factors that impede or facilitate their work, an indirect approach was used to elicit information regarding secondary trauma and burnout.

- Participants were asked to provide examples during the interviewfrom practical experience to ensure qualitative data accuracy.

RESULTS

- Data were analyzed by grounded theory analysis, utilizing codingand diagramming techniques.

- Four major themes emerged from the analysis that highlighted the work challenges that the participants' faced: role of counseling for grief and loss, working with patients and their families, unique qualities of cancer-related loss and grief, and emotional demands and associated self-care.

CONCLUSIONS/SUMMARY

- In line with previous literature, this study demonstrated that health professionals who provide cancer support and counseling face unique challenges specific to their patient population that can lead to secondary stress and burnout. Particularly salient was the emotional demands that the health professionals faced managing their patients, their patients' families, and their own reactions to their patients' pain, suffering, and death.

- Programs at organizational, individual, and group levels that addressself-care strategies and grief and loss should be developed and studied to measure their efficacy for health professionals that provide cancer support and counseling, while tailoring to the different disciplines that provide care for this population.

CONTRIBUTIONS/IMPLICATIONS

- This study provided a detailed analysis of the challenges that health care professionals face when providing palliative care, and how their work with cancer patients

might affect their personal levels of distress.

- Future studies should pose direct questions about secondary trauma and burnout in the context of cancer care, while incorporating valid measures of secondary trauma and burnout.

Cieslak, R., Shoji, K., Luszczynska, A., Taylor, S., Rogala, A., &Benight, C. C. (2013). Secondary trauma self-efficacy: Concept and its measurement. Psychological Assessment, 25(3), 917-928. doi:10.1037/a0032687

TYPE OF ARTICLE

- Multi-study, empirical design assessing practitioner's responses of whom workswith civilian populations and military populations.

OBJECTIVE/PURPOSE OF STUDY

- To assess secondary trauma and self-efficacy in American mental health professionals treating military personnel and Polish social workers and other healthcare professionals providing services to a civilian population.

- To increase knowledge of the relation between secondary stress and self-efficacy.

- To assess the psychometric properties of the Secondary Trauma Self-Efficacy (STSE) Scalein health care professionals working with different populations.

- To measure the relation between STSE and other key cognitive processes associated with PTSD symptoms.

- To measure the relation between STSE and secondary post-traumatic growth.

- To measure the cultural differences of the STSE Scale.

Study 1
METHODS
Participants
Inclusion criteria

- To be included in the study, American participants were required to have served at least one year as a behavioral health worker and wereindirectly exposed to trauma through interaction with patients.

Demographics

- The sample consisted of 247 participants (66.2% female, 33.2% male), with an average age of 48.59 years(SD = 13.02). Moreover, 47% were psychologists, 29.6% were counselors or psychotherapists, and 23.5% were social workers.

Measures

- The STSE Scale, which is a7-item measure that assesses how able clinicians believe they can cope with the demands related to secondary exposure to trauma.

- The Secondary Trauma Exposure Scale is a10-itemmeasurethat assesses the level of trauma an individual has experienced.

- TheSecondary Traumatic Stress Scale (STSS)is a 17-item measure that assesses the frequency of secondary stress symptoms in the previous month.

- The Multidimensional Scale of Perceived Social Support (MSPSS)is a 12-item measure of the availability of social support

- The Posttraumatic Cognition Inventory (PTCI), modifiedis a14-item measure of negative cognitions after traumatic events.

- The Posttraumatic Growth Inventory- Short Form (PTI-SF), modified, is a 10-item questionnaire that assesses positive life changes resulting from indirect exposure to trauma.

- Also, a demographics form designed specifically for this study was administered (e.g., birth year, gender, intimate relationship status, profession, and highest academic degree)

Procedure

- Potential participants were contacted via email from the director of the Department of Behavioral Health at Evans Army Community Hospital at Fort Carson Colorado, and from the Psychology Consultant for the U.S. Army Surgeon General, or by e-mail through an online newsletter sent by TriWest Healthcare Alliance. Respondents completed an online survey consisting of all the measures.

RESULTS

- The STSE scale was positively correlated with social support and secondary traumatic growth, and negatively

correlated with secondary traumatic stress and negative cognitions.

Study 2

METHODS

Participants

- To be included in this part of the study, Polish participants were required to work at least one year as a health care provider or social worker, provide services to a civilian population experiencing trauma, and have been indirectly exposed to trauma through interaction with patients or clients.

Demographics

- The sample consisted of 309 participants (23.2% men, 74.8% women) with a mean age of 35.41 years (*SD* =8.59*)*. Moreover, the sample included Health-care providers (48.4%), social workers (37.6%), and other professionals (12.3%)

Measures

- The same measures reviewed above were administered to this sample, with the stipulation that Polish versions of the scales were prepared using back-translation procedures.

Procedure

- Participants were recruited by handing out flyers at national meetings of professional organizations, through advertisements in professional journals, and posted on web sites for specialists and professionals working with traumatized clients.
- Participants completed measures twice, six months apart, via a web-based survey.

RESULTS

- Internal consistencyfor the STSE Scale, as measured by Cronbach's Alpha was .89 for Time 1 and .88 for Time 2.

- Test-retest reliability was adequate (*r* = .65).
- The STSE was negatively correlated with secondary traumatic stress and positively correlated with social support, and with secondary traumatic growth.

CONCLUSIONS/SUMMARY

- The STSE was developed as abrief 7-item measure toassess how an individual perceives his or her ability to handle secondary stress, including ability to handle work-related difficulties and control emotional and cognitivereactions to indirect trauma exposure.
- The STSE demonstrated high stability over six months.
- A one-factor structurewas established in both language versions of the STSE Scale.
- As hypothesized, both studies found STSE to be negatively related to secondary stress at moderate levels, and with negative cognitions at low to moderate levels. Additionally, as hypothesized, the STSE was positively related to social support at moderate levels.
- These findings support that the STSE Scale has predictive power of psychological distress for those exposed to secondary trauma

CONTRIBUTIONS/IMPLICATIONS

- The STSE seems toserve as a predictor for the level of secondary stresshealth professionals may face following indirect exposure to trauma.
- This study supports the use of the STSE Scale as a valid measure assessing STSE in individuals working with civilians and military personnel who have experienced trauma.
- Future research should investigate the validity of the STSE with individuals working with different populations (e.g., oncology nurses, juvenile justice education workers).

Handbook of Forensic Assessment: Psychological and Psychiatric Perspectives
Edited by Eric Y. Drogin, Frank M. Dattilio, Robert L. Sadoff & Thomas G. Gutheil
Hoboken, NJ: John Wiley & Sons, 2011, 824pp.

Reviewed by Laurence Miller, PhD

Readers of this journal know that, where emergency mental health goes, the legal system often follows, whether in the form of a personal injury lawsuit following a disaster or criminal charges related to a violent crime. The Handbook of Forensic Assessment is a refreshing addition to the forensic psychology and psychiatry literature precisely because the editors have succeeded in sidestepping the turf battles that often exist between these two disciplines, in order to develop a truly collaborative and integrative approach.

This is a big book with a big mission: to cover virtually all the applications of psychology and psychiatry to the fields of criminal and civil law, and in meeting this challenge it manages to avoid the redundancy that often creeps into to multiple chapters in large handbooks of this type. Criminal law topics covered include evaluation of criminal competencies, criminal responsibility and the insanity defense, sentencing guidelines, and juvenile justice evaluations. Civil law applications include personal injury assessment, employment issues and fitness for duty, violence risk assessment (although one might argue that this belongs in the criminal law section), family law, disability determination, civil competencies and guardianship, abuse and neglect, and psychological autopsies. Additional chapters address the practicalities of forensic mental health practice and the assessment of malingering (again, this latter topic might have been placed in the criminal or civil law section).

Consistency and uniformity are maintained by having each chapter provide a scholarly review of the subject matter, followed by an organized sequence that explains how the evaluator (1) prepares for the assessment; (2) gathers relevant data; (3) interprets the findings; and (4) communicates the results. Each chapter is written by at least one psychologist and one psychiatrist, but the reader never detects a whiff of parochialism, and the interdisciplinary voices mesh seamlessly throughout the narrative.

Busy professionals who have previously slogged through turgid tomes will understand that for a "handbook" of anything to be useful, it must be engaging and accessible. Happily, whether through careful selection of skilled chapter authors or meticulous editing (probably both), this book reads clearly and crisply across the many topic areas, making its perusal a pleasure, not a chore.

Don't let this volume's heft scare you away: the flowerpot you displace on your bookshelf will thank you for its new sunlit place on your windowsill. In addition to serving as a comprehensive summary for professional practice, this book can be used as a primary or supplementary text in graduate courses in forensic psychology and psychiatry, as well as a valuable reference source for research. No matter how long you've been doing this, there is enough juice in this volume so that virtually every reader will learn something new.

Military Psychologists' Desk Reference

Edited by Brett A. Moore & Jeffrey E. Barnett
New York, Oxford University Press, 2013, 356pp.

Reviewed by Laurence Miller, PhD

The psychological impact of the Iraq and Afghanistan wars on our military service members and veterans will be felt for decades to come. In addition, we are still dealing with the aftermath of the First Gulf War, the Vietnam War, and, to some extent the Korean War and WWII. If anything positive has come out of the more recent conflicts, it is a renewed interest in military psychology and an increased willingness of civilian mental health providers to become involved in this challenging area of clinical practice. Although several fine books on various scholarly and applied topics within military psychology have emerged within the last decade (Figley & Nash, 2007; Freeman et al., 2009; Hall, 2008; Kennedy & Moore, 2010; Kennedy & Zillmer, 2006; Lukey & Tepe, 2008), up to now, there has not been a single, one-stop-shopping source to provide quick, practical advice to the busy practitioner.

The *Military Psychologists' Desk Reference* fills that need. By assembling a passel of knowledgeable and experienced authors and paying close attention to format and style, the editors have achieved that rare balance in an edited volume of being both concise and comprehensive. All of the 69 chapters in this book are about 5-6 pages long, and, within them, not a word is wasted. Thus, the busy clinician who needs to find out fast about military trauma, family issues in deployment, operational assistance in interrogation, depression and suicide, traumatic brain injury, aging veterans, military women's issues, or practical techniques of hostage negotiation can literally pull this aptly fatigue-green-colored volume off the shelf and peruse a particular area of interest in the time it takes to suck down a cup of joe.

The chapters are grouped into sections, including military history and culture; military psychology specialties and programs; ethical and professional issues; clinical theory, research, and practice; and a section on further resources for understanding the structure, ranking system, and terminology of the different branches of service. Some of the chapters, for example, those on psychological assessment and therapy, will be of broad interest to clinicians who treat military service members, while others, including operational topics related to organizational consulting or working with elite forces, will appeal to psychologists with more specialized spheres of practice. Again, a key feature of this book is that it can be used productively by military psychologists who are active service members as well as civilian psychologists who may just be starting to work with service members and veterans, and who need some quick, pithy, and authoritative advice on a particular topic.

The *Military Psychologists' Desk Reference* will not replace existing volumes on assorted topics within military psychology, but it best serves to summarize and supplement the latest available knowledge. The bibliographies in each bite-sized chapter enable the reader to find more extensive data nourishment on each of the topic areas where this is needed. If you're a mental health clinician who is going to have any contact with military service members and their families, you need this volume close by. For the beginner, it is a clear-sighted introduction to the field of military psychology. For the seasoned soldier doc, it's a great refresher and review.

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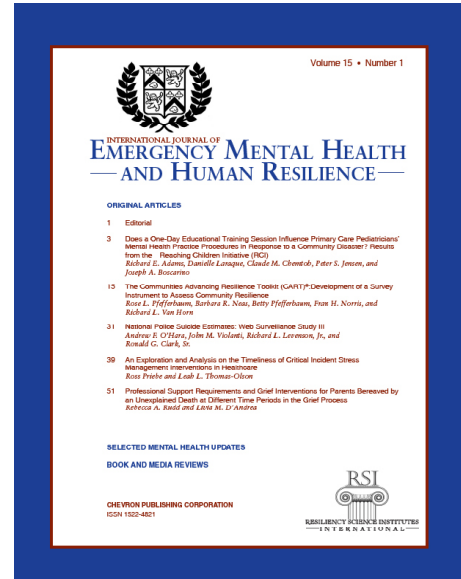
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