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The **International Journal of Emergency Mental Health** 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 **International Journal of Emergency Mental Health** 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.

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INTERNATIONAL JOURNAL OF
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The ***International Journal of Emergency Mental Health*** 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:

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ORIGINAL ARTICLES

EMERGENCY MENTAL HEALTH UPDATES - Jeffrey M. Lating, Associate Editor

BOOK AND MEDIA REVIEWS - Daniel Clark, Media Review Editor

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Editorial

Crises can affect individuals, small groups, larger organizations, or entire populations. Consequently, a commensurately broad range of crisis intervention methodologies are needed to deal with crises at different levels – often at several levels at once. The articles in this issue reflect the evolving critical incident stress management approach to multilevel crises at both the preventive and response stages.

As I write this, we're smack in the middle of a developing medical crisis that threatens not just our nation but the entire world: the H1N1 influenza ("swine flu") pandemic. Pamela Douglas and colleagues describe a program for dealing with an oft-neglected aspect of epidemiological crisis management, namely the mental health needs of victims and families affected by any large-scale crisis, whether it be a disease outbreak, natural disaster, or terrorist attack. To this end, we need our intervention programs to be informed by solid empirical and clinical evidence. But, in the real world, this must go beyond mere numbers to provide a feel for the human element, illustrated in this issue by Carl A. Maida and colleagues' article which emphasizes the necessity of incorporating qualitative research methods in studying the utility of disaster management strategies for children and families.

In an increasingly unpredictable world, organizations of all types must be prepared to respond to emergencies in a swift, efficient, and decisive manner. The kind of professional safety culture that characterizes High Reliability Organizations, such the air navigation services, is the subject of Leonhardt and Vogt's article. Traumatic events in any workplace challenge the coping resources of both individuals and the organization, and this is amply illustrated by the kinds of job-related trauma that occur in the police services, the subject of Martin and colleagues' article, which provides insight into the range of psychological responses experienced by officers in the wake of single and cumulative traumatic stressors.

But then, what to do about it? While professional mental health services are always useful to have in reserve, often the best help is self-help, assisted by one's colleagues and peers. The article by Cynthia Dowdall-Thomae and colleagues describes a Peer Support Action Plan developed for fire and rescue teams that enhances psychological equilibrium and bolsters coping skills. For any of the public safety and emergency response professions, perhaps few stressors are as shocking and demoralizing as becoming the subject of an investigation, disciplinary proceeding, or legal action by one's own agency and/or outside parties. Miller's article provides a set of practical coping strategies for professionals who find themselves under the microscope. Here is one area where the emergency and longer-term mental health strategies we utilize for the citizens we serve can be adapted to our own psychological survival. Sometimes, a little dose of our own medicine is what we need to keep doing the difficult and important work we've signed on for.

Laurence Miller, PhD
October 28, 2009

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Preparing for Pandemic Influenza and its Aftermath: Mental Health Issues Considered

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Abstract: *In November of 2005, President George W. Bush requested $7.1 billion dollars for a global influenza epidemic preparedness initiative (Brown, 2005). Preparation measures for a biological threat or influenza pandemic focus on rapid quarantine, vaccines, developing antiviral treatments, and economic concerns (Brown, 2005; Ferguson et al., 2006; Reina, 2008). Although these public health measures are vital, they do not consider the acute mental health consequences that could develop during a pandemic and its aftermath. The most recent H1N1 swine flu has now spread to more than 70 countries (CDC, June 2009), and as of June 11, 2009, is considered a Phase 6 pandemic by the World Health Organization, indicative of ongoing community level outbreaks in multiple parts of the globe. Following recent cases of swine flu, global concern of an influenza pandemic has risen, and it is critical that metal health considerations become an integrated part of the pandemic response. Here, potential mental health consequences and high risk populations are identified and reviewed. Mental health professionals, communities, businesses, and organizations can create an infrastructure to help mitigate mental health consequences. These issues, as well as familial stressors and coping methods, are reviewed. [International Journal of Emergency Mental Health, 2009, 11(3), pp. 137-144].*

Key words: *pandemic, emergency, preparedness, disaster, community, mental health, avian flu, H1N1*

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In the 20th century, three major flu outbreaks have occurred: Spanish flu in 1918, Asian flu in 1957, and Hong Kong flu in 1968 (Kilbourne, 2006). The Spanish flu, caused by an avian H1N1 virus was the most deadly, virulent flu outbreak in history; it swept the globe, save a few isolated Pacific island populations, and resulted in more than 50 million deaths (de Wit & Fouchier, 2008). Another pandemic could emerge and spread with rapidity due to increased globalization and frequency of air travel. Model simulations predict that death tolls could reach ~100 million in the United

States alone (Ferguson et al., 2006). In the present work, we examine risk factors associated with developing a mental health issue as a result of the acute fear and stress levels associated with such an outbreak. We specifically highlight mental health consequences of prolonged quarantine and social isolation, and potential mental health preparedness strategies that should be considered in the event of a pandemic.

The Influenza Virus and Modes of Transmission

The influenza virus has a variety of strains, ranging from mild to severe in clinical presentation (Kilbourne, 2006). Each winter, different strains of the influenza virus circulate, transmitted through respiratory droplets (i.e., small particle aerosols) that are produced in large quantities during sneezing, coughing, or even talking; typical incubation periods are 1-4 days (CDC, 2007; Wong & Yuen, 2006). According to the U.S. Department of Health and Human Services (2002), classic symptoms include fever, fatigue, muscle pains, dry cough and sore throats. Other strains may take a severe course, including pneumonia, pulmonary hemorrhage, pneumothorax, respiratory distress syndrome, multi-organ failure, and death. According to the HHS, while most people infected with the flu recover, the virus is responsible for approximately 36,000 deaths and 226,000 hospitalizations in the United States each year. Worldwide estimates are between 250,000 and 500,000 deaths per year.

Influenza pandemic could occur if the H5N1 influenza virus were to mutate. A high mutation rate and the large pool of viruses in birds and mammals have made the development of a permanent, long lasting vaccine difficult (Wong & Yuen, 2006). Novel influenza A viruses spread very rapidly compared to more common strains, since the general population has acquired certain immunity to seasonal viruses (NGA, 2006).

Psychological Consequences Following Crisis Events

Research studies have documented psychological effects due to natural disasters such as hurricanes, floods, and earthquakes (Lazarus, Jimerson, & Brock, 2002; Norris, 2005; Solomon & Green, 1992), and similar psychological consequences may occur following infectious disease outbreaks. The U. S. Department of Veteran Affairs National Center for Posttraumatic Stress Disorder (PTSD) conducted a meta-analysis on disaster mental health literature. Approximately one third of these studies noted severe effects on the population's mental status, high incidence rates of PTSD, major depressive disorders, and generalized anxiety disorders (US Department of Veteran Affairs, 2008). PTSD was found to be the most prevalent mental health issue following disaster, with depression being the second most common (Norris, 2005). Intrusive memories, recurrent dreams, and "flashbacks" of the traumatic event are only a few of the deleterious symptoms that are associated with PTSD (Liberzon, 1999). Related symptoms, such as suicidality and remorse, tended to increase with the severity of crisis exposure. Norris also found incidents of acute stress disorder in the immediate aftermath of a disaster (Norris et al., 2005).

Kessler and colleagues (2006) studied Hurricane Katrina victims and assessed the incidence of severe metal health disorders to include DSM-IV diagnosis of major depressive episode, panic disorder, generalized anxiety disorder, post-traumatic stress disorder, agoraphobia, social phobia, and specific phobia. The incidence of severe mental health consequences (global assessment function of >61) nearly doubled in this population following the disaster.

Recent functional magnetic resonance (fMRI) neuroimaging studies have revealed that PTSD is associated with long lasting deleterious effects to prefrontal, limbic, and paralimbic areas (Lanius et al., 2004), specifically the anterior cingulate region of the paralimbic system (Shin et al. 2001). Liberzon and colleagues (1999) found increased left amygdala and nucleus accumbens activity in Vietnam veterans with PTSD using single photon emission computed tomography (SPECT). Functional connectivity analysis demonstrated a greater nonverbal pattern of memory retrieval those patients effected by PTSD (Lanius et al., 2004).

SARS as an Archetype

Severe acute respiratory syndrome, or SARS, was the first novel infectious disease to present in the 21st century (Sim & Chua, 2004), and a surprising number of mental health studies have been carried out in the wake of this outbreak (Table 1). Stress, anxiety, and stigmatization were commonplace in infected individuals (Maudner, 2003; Zheng, 2005). The NGA (2006) reported a survey of 129 people quarantined

in Toronto, Canada during a SARS outbreak. Their findings showed PTSD in 28.9% and depression in 31.2% of the quarantined people. Healthcare workers made up 20% of SARS infections globally (Sim & Chua, 2004). Nickell and colleagues (2004) noted that 45% of nurses showed probable emotional stress, as indicated by the GHQ-12. These studies suggest that, while psychological consequences are widespread, not all individuals are affected universally.

Table 1.
Summary of mental health related symptoms in patients and health care workers during and in the immediate aftermath of the severe acute respiratory syndrome (SARS) outbreak. Abbreviations: Impact of Events Scale (IES), Davidson Trauma Scale- Chinese Version (DTS-C), 12 item General Health Questionnaire (GHQ-12)

SARS Effected Mental Health	Men	Women	Number Affected	Scale	Study
Symptoms of PTSD	13.3%	18%		IES Cutoff	Lau et al. (2005)
Medical staff that experienced trauma			93.5%	DTS-C	Lin et al. (2007)
Increased Stress	36.8%	37.8%		Self Report Survey	Lau et al. (2005)
Stress among physicians			45.7%	Survey	Grace et al. (2004)
Hospital Staff emotional distress			29%	GHQ-1	Nickell et al. (2004)
Nurses emotional Distress			45%	GHQ-1	Nickell et al. (2004)
Sleep Disorders/Insomnia			18.6%, 19 SARS patients	Self Report Survey	Lau et al. (2005) Maunder et al. (2003)
Diminished Social Life			37.2%	Self Report Survey	Lau et al. (2005)
Depression and Impact on College Life, Stigmatization			60%	Questionare	Zheng (2005)
Poorer Emotional State			26.5%	Self Report Survey	Lau et al. (2005)
Fear, Anxiety, Loneliness, Stigmatization			19 SARS patients		Maunder et al. (2003)

Preparedness Measures for a Positive Mental Health Response to Pandemic Flu

Identify High Risk Populations for Developing Mental Health Disorders

Identification of high risk and specific needs populations may facilitate developing an infrastructure of response groups prior to onset of a crisis. Risk factors for mental health issues include poor mental health prior to a crisis, bereavement, injury to self or a family member, life threat, panic, or similar emotions during a disaster, and separation from family, especially among children (Lazarus, Jimerson, & Brock, 2002). Middle-aged adults, females, and those of lower socioeconomic status are more prone to PTSD (U. S. Department of Veterans Affairs, 2008). Protective factors in mental health response include being a mentally healthy individual prior to the disaster (Freedy & Simpson, 2007), and strong social support systems in the time periods before, during, and after the traumatic event (Gibson et al., 2002).

Survivor's guilt. Survivors in a family may experience guilt, and are thus considered at high-risk for mental stress (Serok, 1985). A conceptual frame of a "healing crisis" could be used to address survivor guilt. For many, these acute issues, calling for closure, are signals of "unfinished business" of partially resolved issues in life (Serok, 1985). These types of themes can lead to unshakable feelings of remorse and guilt without mental health intervention. Often, those who do not recover from crisis are those with unresolved survivor guilt. Kubany and Manke (1995) have suggested that trauma-related guilt can be helped with psychoeducation programs as well as cognitive therapy. Guilt is often a result of irrational thinking and faulty conclusions. Once the previous perceptions of the events are sequentially reassessed, guilt associated with responsibility can frequently be diminished or eliminated (Kubany & Manke, 1995).

Challenges for children and adolescents. Children face a number of challenges during a pandemic, including trauma, loss of parental support, and illness. Children's sense of security is lost during a crisis, and parents may be unavailable due to death or isolation. According to Healthlink (2008), young children may have regressive behaviors, such as thumb sucking and bedwetting. Elementary children might exhibit disruptive behaviors, including aggression, nightmares, inability to pay attention, outbursts of anger, and withdrawn behaviors. Stress in adolescents may be more insidious and manifest in sleep disturbances, problems with peers, isolation, and depression (Solomon & Green, 1992). Stressful life events are correlated with parents' emotional distress and, in turn, are linked to harsh and punitive parenting (Taylor, Roberts, & Jacobson, 1997). This abuse can lead to emotional pain and trauma in children and could increase the potential to become an abuser in adulthood (Craig & Sprange, 2007).

Quarantine and Social Distancing: Impact of Isolation on Mental Health

School closing and social distancing may be the best defense against an outbreak before an effective vaccine can be developed and produced in large quantities (See Appendix A). A typical wave of the pandemic is expected to last 6-8 weeks. Secondary and tertiary waves can also occur (CDC, 2007). Sequestration and social isolation may occur for prolonged periods of time. Pressman and colleagues (2005) found a strong correlation between social isolation and degradation in physical and mental health. Specifically, if one is suffering from the pandemic flu, one's health may be further compromised by social isolation. Baumeister and Leary (1995) contended that human beings need frequent contacts, and crisis events further stimulate a need for affiliation and intimacy. According to Suedfeld (1974), heightened stressful events create a desire to seek out the company of others, especially those who are experiencing a similar level of anxiety and trauma.

Mental Heath Preparedness Measures for Possible Flu Pandemic

Social networks and community support. Communities, school systems, and mental health agencies can provide a support network to increase coping ability. Since children are considered high risk, (Lazarus, Jimerson, & Brock, 2002) teacher training provided by mental health professionals may provide teachers with a framework for helping children cope with the aftermath of a disaster. Training teachers in empathetic listening skills will provide a safe, reassuring environment for children to discuss their experiences. Sharing experiences creates a sense of universality, allowing a sense of relief (Yalom, 1980, 1995).

Communication. While community and business plans have been established, a pandemic event will, almost inevitably, cause panic and chaos. With the many unknowns, there may be scenarios not expected. Yet, having communication networks available to disseminate new, evolving information is critical. As an example, businesses and service agencies

will likely rely on communication networks available to disseminate new information and directives as changes occur. In the event that communication networks, such as cell phones and, perhaps, even the internet are not available to all, contingency communication plans, perhaps using landlines, may be considered. If internet websites are unavailable, service agencies may want to create alternative forms of communication, such as hotlines, to disseminate information and answer questions. Alternative means of communication may be necessary to sustain individuals during the pandemic flu crisis. During critical times, such as the pandemic influenza, communications are vital (Lasky, 2007).

Leadership style during the time of the pandemic flu outbreak. Appropriate communication and leadership style are imperative in high-velocity settings (Hogan & Kaiser, 2004). Typically, autocratic and directive leadership are best received during times of stress (Yumi, Faraj, & Sims, 2005; Gibson, Ivancevich, Donnelly, & Konopaske, 2002). Hogan and Kaiser (2005) suggest that the directive approach is most effective in apprehensive and uncertain situations. One of the key leadership abilities in a time of crisis is adaptability (Yumi, Faraj, & Sims 2005). Training to further enhance adaptability for those in leadership positions may include creative problem solving, willingness to try new ways of doing things, cooperation with others, and flexibility exercises (Gibson, Ivancevich, Donnelly, & Konopaske, 2002). Transformational leaders put in place can also be effective in crisis (Murphey & Riggio, 2003; Bass & Avolio, 1993).

Combating stress. Combating stress, to the best degree possible during these difficult times of uncertainty and isolation, albeit very difficult, is important. Parents who have a handle on their stress and who are more supportive and healthier are likely to provide the needed comfort to their frightened children. Stress experienced by adults is often mirrored in children; children look to parents and significant adults regarding how to manage their emotions and react following a disaster (Lazarus, Jimerson, & Brock, 2002). In contrast, over protectiveness, family conflict, and infantilization of children following a traumatic event are harmful in the recovery process; all are predictive of the level of PTSD symptoms (Bokszczanin, 2008).

Conclusion

A major pandemic could occur; mental health consequences could be severe. Preparedness is vital (see Appendix B); communities, schools, and mental health agencies could provide specific trauma-related training to teachers and counselors in advance so that they will be best equipped to assist others during and in the aftermath of a pandemic. Organizations can embark on developmental programs to enhance adaptability and creative problem solving skills so that they will be better equipped psychologically to cope during high velocity situations, such as a pandemic. Organizations can also ensure that the right leaders are at the helm to both communicate directives and provide needed encouragement during times of crisis. Communication networks and various communication contingencies and policies can be established and considered ahead of time. Parents can also plan for how they can best guide their children in coping during a prolonged period of isolation and during high stress situations.

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Appendix A: Social Distancing Information

In "The Community Strategy for Pandemic Influenza Mitigation," the CDC established guidelines that community government and health officials can employ to reduce contact between people. The steps to be taken at the onset include the following: isolating and treating those with probable or confirmed influenza, when appropriate. with antiviral medications; voluntary home quarantine of members of households with probable or confirmed influenza; dismissal of students from schools and school-based activities and closure of children's programs, coupled with protecting children and teenagers through social distancing in the community to achieve reductions of out-of-school social contacts and community mixing; and the use of social distancing measures to reduce contact between those in community and workplace. These measures include: cancellation of large public gatherings; alteration of workplace environments and schedules to decrease social density. The intent is to preserve a healthy workplace to the greatest extent possible without disrupting essential services.

The NGA Center for Best Practices (2006) also suggested that large public gatherings such as sporting events, parades, and festivals should be minimized or cancelled as part of the social distancing measures. In addition, smaller gatherings such as religious services and weddings should also be candidates for cancellation. Also identified for closing were both public facilities such as libraries and public buildings as well as private facilities such as restaurants and theaters.

Examples of some of the social distancing measures and interventions are listed in the table on the next page:

Table 1.
Summary of mental health related symptoms in patients and health care workers during and in the immediate aftermath of the severe acute respiratory syndrome (SARS) outbreak. Abbreviations: Impact of Events Scale (IES), Davidson Trauma Scale- Chinese Version (DTS-C), 12 item General Health Questionnaire (GHQ-12)

Limit/no face-to-face meetings	Utilize conference calls, Microsoft Meeting Maker, iChat, and similar methods to continue to conduct business.
Abide by the 3 ft. rule	In cafeteria settings or public facilities, maintain a minimum of at least 3 feet between you and the next person.
Work-at-home	This would be the very best, if the person's work is applicable.
No shared office space	Should 2 or more people be in the same cubicle, the staggering of work hours would help preclude transmission between office mates.
Cleaning at the workplace	Cleaning phones, doorknobs, railings, water fountains, and any other commonly touched items/areas.
If ill, stay home from work	Preclude employees from coming to the workplace, should they have a temperature or early onset symptoms
Wearing masks when out in public	Both symptomatic and non-symptomatic individuals could wear surgical masks to prevent inhalation of aerosols
No hand shaking	Often we touch our eyes, nose, and mouth with our hands. Consequently, our hands are a conduit for viral spread from one person to another.
Avoid public gatherings	Not going to the movie theatre, crowded malls or large gatherings reduces exposure.

Appendix B: Preparing for a Pnademic

The HHS's Pandemic Influenza Plan Supplement 8, Community Disease Control and Prevention, suggested establishing interventions such as hotlines in those communities experiencing a disease cluster. These medical hotlines may be able to assist individuals in conducting self-assessments as well as conducting "community triage" to direct persons with symptoms to appropriate sites. As an example, community members may be asked to monitor the temperatures of household members. Those with temperatures above a certain level, for example, may be asked to call a designated hotline for a medical referral or perhaps proceed to a specified clinic. In addition, telehealth technologies may also be put in place so that medical personnel, as an example, may be able to monitor patients remotely without adversely affecting the healthcare infrastructure by infecting the providers.

New and updated information regarding preparedness is frequently being provided by CDC, HHS, and the American Red Cross as well as other agencies. It is recommended that communities, organizations, and families monitor these sites, download pertinent information, take the necessary steps and acquire needed supplies in order to be prepared!

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Qualitative Methods in the Development of a National Child and Family Disaster Mental Health Research Training Program

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Abstract: *Conducting research in the aftermath of disasters is complicated by chaotic conditions, competing priorities, and resource constraints, and raises a variety of ethical concerns. Ultimately, research should extend our understanding of the impact of disasters on children, families, and communities and translate findings into improved services and public policies that afford enhanced protection and promote recovery. Unfortunately, the existing research base on children and disasters has not been adequate to inform the development of effective psychosocial services and interventions, and decision-making about the allocation of behavioral health resources. To improve research capacity, the Child & Family Disaster Research Training & Education program provides child disaster mental health research training for mental health and public health professionals. The program has engaged a national faculty to develop a comprehensive modular disaster research curriculum covering basic concepts, current knowledge, clinical issues and interventions, research and ethical issues, public health structures, and response options. Focus groups were held prior to training to elicit the participants' knowledge of and attitudes about child and family disaster mental health research, to understand training needs, to identify research topics of interest and perceived barriers to generating and conducting research. The results were then used to refine the curriculum. [International Journal of Emergency Mental Health, 2009, 11(3), pp. 145-154].*

Key words: *disaster mental health, research training, children and families, qualitative methods*

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Conducting research in the aftermath of disasters is complicated by chaotic conditions, competing priorities, and resource constraints, and raises a variety of ethical concerns (Steinberg, Brymer, Steinberg, & Pfefferbaum, 2006). Ultimately, research should extend our understanding of the impact of disasters on children, families, and communities and translate findings into improved services and public policies that afford enhanced protection and promote recovery. The importance of addressing these issues in research has been acknowledged, but the execution of such research continues to lag. Unfortunately, the existing research base on children and disasters has not been adequate to inform the development of effective psychosocial services and interventions, and decision-making about the allocation of behavioral health resources. Research related to children requires an appreciation of the ecology of childhood and adolescence, with its numerous individual, parental, familial, peer, school, and community influences upon which is imposed a disaster service network, involving government, health and mental health, faith-based, community, and media organizations.

The Program

The Child & Family Disaster Research Training & Education (DRT) program (Pfefferbaum et al., in press) is part of a five-year federally funded initiative – "Developing Disaster Mental Health Research Capacity Through Education" – to enhance interdisciplinary disaster mental health research through training and education (National Institute of Mental Health [NIMH], National Institute of Nursing Research [NINR], & Substance Abuse and Mental Health Services Administration [SAMHSA], 2003). This grant mechanism allowed the establishment of a program in the Department of Psychiatry and Behavioral Sciences at the University of Oklahoma Health Sciences Center and within the Terrorism and Disaster Center and the UCLA-Duke National Center for Child Traumatic Stress, which are all part of the National Child Traumatic Stress Network (NCTSN). The NCTSN is a collaboration of academic and community-based service centers, whose mission is to raise the standard of care and improve access to services for traumatized children and their families across the United States (Pynoos et al., 2008). The DRT program uses the infrastructure of the NCTSN, and the resources of its 70 member centers, in order to develop and provide child disaster mental health research training for local, state, and national professionals, including psychologists, psychiatrists, mental health educators, nurses, public health workers, disaster responders, and researchers.

In order to enhance the quality of child and adolescent disaster mental health, ten local multidisciplinary research teams throughout the nation are currently being trained to conduct rapid response research in their local regions and other parts of the country. The teams were selected as complementary models, varying not only in terms of geographic location and demographic profile (large metropolitan vs. suburban vs. rural area) but also on an organizational basis (e.g., health care system, school-based system, academic programs). Each team has a unique system and research focus and includes regional and local professionals representing mental health, public health, nursing, education, social services, biomedical research and statistics, emergency first responders, and faith-based providers. Geographic distribution of the teams is designed to address regional differences in hazards, including potential natural and man-made disasters, and to facilitate relationships for post-event response. Together, the heterogeneous foci of the research teams and the synergies of teams located within NCTSN centers and in academic programs have yielded a set of partners who can both work together wherever a disaster strikes, and integrate disaster research training and projects into existing programs and future planning in their local communities.

Formative Research

The project has engaged a national faculty, including NCTSN colleagues, to develop a comprehensive modular disaster research curriculum covering basic concepts, current knowledge in the field, clinical issues and interventions, research issues and approaches, ethical issues, public health structures, and response options.

As part of our formative research, focus groups were held prior to training, in order to elicit the participants' knowledge of and attitudes about child and family disaster mental health research, to understand training needs, to identify research topics of interest and perceived barriers to generating and conducting research. The results were then used to refine the curriculum. The focus group is regarded as an effective and inexpensive format for identifying the underlying attitudes, feelings, beliefs, and behaviors for each of the multidisciplinary teams (Stillman, 1992). For the most part, focus groups are comprised of individuals with a common

interest in the topic of focus. This is therefore an effective method for conducting a stakeholder analysis, where the members have a "stake" in the topic of child disaster mental health research. Focus group methodology uses a standardized set of questions to elicit individual responses in a group setting (Kitzinger, 1995). The group structure allows for enhanced discussion and an exploration of the uniformity/diversity of the group opinion. This paper will summarize the findings from focus groups held with one of the local multidisciplinary teams, and show how these findings informed the training curricula and project goals for this project.

METHODS

Site and Participants

The North Shore-Long Island Jewish Health System (NS-LIJHS), located in Long Island and New York City, was chosen as the first multidisciplinary research team site and was designated to lead the development of a "health system prototype" for our training program. NS-LIJHS, with fifteen hospitals and 35,000 employees, has a service area of 5.2 million people on Long Island, Queens, and Staten Island in the New York Metropolitan Region. The NCTSN Adolescent Trauma Treatment Development Center, which is located at the NS-LIJHS, is developing a health system-based model for acute child disaster mental health readiness and response. This model emphasizes collaboration between behavioral healthcare providers and emergency and primary healthcare personnel, to address the immediate psychological impact of disasters on children and families. A trained multidisciplinary research team in this setting holds the promise of generating knowledge through appropriate collection of data during the acute phase of a disaster at health system service sites; this will eventually enable practitioners to identify and implement effective disaster mental health triage and early interventions.

Focus Group Method and Data Collection

Two focus groups were conducted with stakeholders, in order to gather information and recommendations on increasing awareness and understanding of disaster mental health research with children and families, and to inform the development of the curriculum content and delivery of research training. One group included 11 hospital and clinical care administrators and regional response leaders, and the second included 17 behavioral health researchers and research administrators. Informed consent was obtained by focus group participants prior to data collection. A moderator conducted the discussions using predetermined protocols with a set of broad questions allowing participants to elaborate and consider their knowledge and attitudes (Tables 1, 2). Study investigators were present as observers. Following the focus groups, the investigators described the disaster research training program to focus group participants.

Table 1.
Administrator Focus Group Questions

1. How can the existing emergency management plan facilitate research activities and rapid needs assessment for children and families?
1.1. What are the potential benefits of rapid research?
1.2. What can promote more positive attitudes among administrators and decision makers toward disaster mental health research with children and families?
1.3. What would hinder your ability to facilitate this type of research in your institution or agency?

2. What research findings about children and families would be most useful to you after a disaster or other mass casualty event?
2.1. How have you used previous research findings to guide your agency or department's policies and practices?

3. What are the problems in the exchange of information on the disaster related mental health needs of children and families in the current response system?
3.1. What hinders information exchange between departments and agencies (e.g. HIPAA requirements; no formal assignments for information transfer and follow-up; absence of well-defined procedures and forms, etc.)

4. How should disaster mental health research funds be provided?
4.1. Would you have difficulty identifying sources of funding for rapid disaster research?
4.2. How is contingent disaster mental health research budget planned now?

5. Do you have pre-approved research protocols and prior agreements with IRBs for disaster mental health research with children and families?

6. What training could be offered to administrators and department heads to help create a comprehensive rapid response research program focused on mental health needs of children and families?
6.1. What are the gaps in knowledge?
6.2. What issues should training cover?
6.3. Given time constraints, what would be the most effective way to provide training (live seminars and training sessions, directed reading, on-line courses, etc.)?

Table 2.
Researcher Focus Group Questions

1. What disaster research and evaluation projects (i.e., emergencies, disasters, terrorism) focusing on children and families have you conducted in the past?
1.1. How did previous findings influence attitudes and goals toward disaster research activities in the community, among service providers and government officials?
1.2. How can disaster research and evaluation help identify the needs of children and families and improve disaster mental health interventions?
1.3. What are the greatest challenges to disaster research and evaluation?
1.4. What can be done to promote disaster research and mental health intervention efforts?
1.5. How was data exchange carried out among agencies in the past?

2. What was the practical impact of research findings?
2.1. What research-based recommendations, including needs assessment recommendations, were rejected or were difficult to implement?
2.2. How were disaster research findings publicized and analyzed beyond the scientific circles?
2.3. What recent disaster research findings and recommendations resulted in policy changes?

3. What are the necessary resources you would need in order to plan and conduct disaster rapid research with children and families?

4. How should disaster mental health research funds be provided?
4.1. Would you have difficulty identifying sources of funding for rapid disaster research?
4.2. How is contingent disaster mental health research budget planned now?

5. Do you have pre-approved research protocols and prior agreements with IRBs for disaster mental health research with children and families?

6. What can be done to help researchers to effectively plan, organize, and implement rapid post-event mental health disaster research?

7. What training could be helpful to researchers in planning, organization, and implementation of rapid post-event research?
7.1. What are the gaps in knowledge to be addressed by training?
7.2. What specific issues should training cover?
7.3. What form should this training take (live seminars and training sessions, directed reading, on-line courses, multimedia courses, etc.)?

8. What are the problems in the exchange of information on the disaster related mental health needs of children and families in the current response system?
8.1. What hinders information exchange between departments and agencies (e.g. HIPAA requirements; no formal assignments for information transfer and follow-up; absence of well-defined procedures and forms, etc.)

9. In what settings will this research be conducted?
9.1. What are the barriers to gaining access in these settings?

Coding and Analysis

The focus group sessions were audiotaped and then transcribed. Transcriptions were coded by an independent member of the project staff who was not present at the groups. A qualitative research software package, NVivo version 2.0.163 (QSR International, 2002), was used to analyze participant responses. The broad issues explored in the discussions were coded as "coding nodes," allowing us to document frequency of expressed concerns, related to a particular theme or topic, and to analyze relationships between these concerns based on a number of attributes. Within each coding node, specific content was coded as pertinent to more general and/or more particular issues. This allowed a multi-level analysis of links both within and outside the primary coding node (i.e., within and outside the scope of the original broad issue that evoked the original responses). This method affords qualitative analysis of both existing links among the spectrum of attitudes and concerns expressed in the focus group. The approach helps to uncover less obvious interconnections between ideas and motivations that otherwise may escape participants and facilitators, and to highlight the relative significance of these various schemas based on the number of references to the attitude or concept throughout

the discussion. This method also allows analysis of variations between attitudes and concepts based on their authorship or another attribute, while allowing for anonymity. The method thereby augments and standardizes analysis, while not limiting its expansion capabilities for repeat studies with different cohorts (e.g., new focus groups with other constituents or in other locales). Retaining the coding and analysis scheme, it is possible to analyze responses efficiently across groups and to assess response dynamics over time.

The following summarizes qualitative findings and the salient issues regarding the value of and hindrances to rapid research derived from the focus group discussions. The longer transcripts and reports from which this summary is derived reflect participant opinions and attitudes concerning development of the disaster research training initiative focused on the needs of children and families; and participants' prior disaster research, disaster response, and planning experiences.

FINDINGS AND DISCUSSION

Views on the Value of Rapid Research

Both administrators and researchers agreed that the potential understanding of behavioral health issues gained through rapid response and longer-term disaster research would be extremely beneficial to health care professionals, first responders, policy makers, school personnel, and the wider public.

Administrators in the focus group expressed concerns about the limited knowledge of children's mental health among primary care practitioners. One participant stated that primary care practitioners are "very handicapped when it comes to mental health problems in kids." Another expressed concern that "most of us, certainly in the primary care area, are really at a loss in knowing how to deal with the mental health issues among children after disasters." That administrator went on to say that, as there is little knowledge of disaster mental health or the effects of child trauma among primary care clinicians, research studies take on added importance. The respondents believed that clinicians and administrators, in general, and pediatric medicine clinicians and administrators, in particular, would need to learn about both child disaster mental health and child disaster mental health research through team-focused trainings.

Participants acknowledged that there is a particular need for rapid disaster research, especially among children and adolescents. One participant expressed a concern regarding research efforts being delayed upon entering the field after disasters: "[there are] a number of major research centers working together but the criticism is that you go into the field 1 to 2 years out from the disaster and people start saying, "Where were you when we needed you?"

Behavioral health researchers who comprised the second focus group seemed to be more aware than the primary or emergency care providers or administrators of the practical outcomes of previous research. These participants readily illustrated their comments with real-life examples drawn from their experiences. They elaborated on their assessment of research utility and the importance of findings stemming from such research, and strongly advocated for preparedness training for disaster research and response. For instance, they noted that in training sessions for skill building, people must actually learn and practice new skills. One disaster researcher reflected on his experiences with local school districts: " . . . working with districts, each time an event would occur, it was clear that it wasn't something that was practiced, and it wasn't user-friendly. They would still call up and say, 'Something happened; now what do I do?' and I'd say, 'Well, you know that manual that we developed last year? Take it off the shelf, blow the dust off of it, and you have within your district lots of resources and put the plan into effect.' And they said, 'Well how?'" Likewise, participants stated that research experience, especially in regard to studying school disaster response, indicates that just having a disaster plan does not necessarily mean that people know what to do when disasters strike, as people tend to become so overwhelmed that they cannot put the plans into effect.

Linking Research to Service Needs

The behavioral health researchers saw the usefulness of research and evaluation in identifying needs and improving services. To exemplify the point, one participant spoke about how, after the 1994 Northridge earthquake in Southern California, research was helpful in developing a system that would inform school bus drivers as to the whereabouts of children who had been relocated. That led to the establishment of centers where children could be picked up by the school buses, and aided a return to their normal school routines. Researchers were also aware of the need to justify local federal funding requests by linking research findings to services needs. One participant, who had been part of the response to the September 11 events, pointed out that the

ability to perform needs assessment, particularly for children, was crucial to obtaining funding for services: "That's part of the reason that response and recovery hasn't been well studied, because it's been very hard to get good proposals in early, so that we can actually get the resources to fund that kind of work." The speaker went on to say that research findings helped New York City to receive needed resources from FEMA and that once the New York City Board of Education was convinced of the importance of assessing and documenting the need for mental health services, then these schools and students received extra resources for supportive interventions from FEMA. By contrast, in Nassau and Suffolk County, Long Island, where many September 11 decedents resided, and where there was no research documentation of need, the FEMA-funded crisis counseling program ended a year earlier. The speaker noted that perhaps, in the aftermath of the World Trade Center attacks, the New York City area is a perfect setting for understanding the benefits of rapid response research. The speaker concluded that creating disaster research teams was particularly important in New York City and its metropolitan areas because of the City's high disaster potential.

Administrators also felt that researchers who would like to undertake rapid response research might be able to collaborate with the American Red Cross and other disaster response organizations. Several participants suggested tracking clients who register with one of these organizations throughout their recovery and identifying what referrals and services they use at different points in time. Another suggested being observers during the immediate disaster response and tracking what activities are happening in the field. Administrators and researchers both agreed that a collaboration with schools is important to enhance the value of child and adolescent disaster research. While administrators viewed collaborative research as a good opportunity to inform schools about students' mental health needs, they noted that it would be necessary to establish school-based research partnerships in advance. One participant pointed out that there is a population of children accessible through schools that may present opportunities to conduct effective research, adding that ". . . to do effective research, you almost have to enroll everybody in true disaster planning. You can't do that with the general population, but you actually could do that with children via school collaborations." Hence, while generating community buy-in and participation in study design and sampling in advance of a rapid research project is usually seen as an obstacle to carrying out rapid research, planning the research with key stakeholders (including administrators, teachers, parents, and students, through school-based partnerships), may greatly facilitate the process.

Researchers addressed the importance of random sampling in research with children and identified a key issue that may inhibit such a sampling strategy, that being a possible lack of understanding and commitment to the project from school staff and parents. Another participant stated that while there is the potential to randomly assign children in a rapid research study, the full nature of the project—why it is being conducted and how—would need to be presented properly to obtain parental, child, and school administration consent and participation. It was agreed that efforts in this regard, together with the preparation and approval of institutional review boards (IRBs) for post-disaster research protocols, need to be made in advance of the occurrence of a disaster.

Researchers also expressed concerns about possible issues involving intervention or treatment outcome studies in the aftermath of a disaster. For example, they indicated that victims and their families may have concerns about possible post-disaster compensation and that this sometimes motivates people to enter treatment. One researcher stated: "Not to be cynical, but their [victims'] attorneys are advising them to seek treatment because it will make their cases better." Others agreed that documentation of victims' and family members' pain and suffering, acquired through treatment effectiveness studies or through rapid research conducted in the aftermath of a disaster, may be viewed by patients and their attorneys as useful for legal purposes. Hence, it is important that victims and their families be assured that the researcher's role is impartial and not that of a participant in (or even an influence on) pending settlements and that research results will not be used for legal purposes. Hence, it is important that the impartial roles of researchers be clarified with survivors and their families in grant proposals and during informed consent procedures. Informed consent procedures for survivor research participants will need to address issues of the utilization of research data by participants for purposes of litigation, albeit that rules regarding this matter may vary from state to state.

Competing Needs: Research versus Services in Primary Care

Administrators identified a number of obstacles to conducting rapid research, including the fact that so little time and expertise are dedicated to dealing with the myriad

children's problems in the primary care sector that it is difficult to visualize pediatricians having adequate resources to conduct behavioral health disaster research without additional help provided by investigators who are members of other health system departments, or outside of health system agencies. Administrators also noted the problem of investigators from outside a hospital department conducting research and of referring child patients for participation in research studies being conducted by persons who are not staff members of the hospital department serving the children. Further, administrators indicated that the strict confidentiality requirements that protect emergency patients would often preclude their inclusion in clinical research without the usual informed consent process. Researchers echoed this concern, noting that during the acute aftermath of disasters, they usually have to wait to approach patients until they are "physically stable," and then the current HIPAA regulations make it even more difficult to follow up with patients seen for emergency care. The researchers concurred that legal and ethical mechanisms need to be developed to allow the re-contacting of patients after they are physically stable and also after they have received emergency services. Some expressed concern that, although important, it might not be realistic or appropriate to conduct research in the immediate aftermath of disasters, citing staff resource loss, increased demands on staff, stigma against mental health care and research, and liability issues as some of the reasons.

Another obstacle participants spoke of was the public perceptions of researchers as "self-serving" individuals who enter a community after a disaster and propose research that may stigmatize residents. The participants acknowledged that researchers are frequently perceived as "careerists" and "opportunists" – that researchers may be perceived as "vultures who go in for the kill after a disastrous event" and compete for limited resources. Researchers agreed that trust-building is a significant challenge because researchers are often viewed as "outsiders" to the system under study. They noted that although many agencies want feedback on findings related to mass-casualty events, this often does not occur or, perhaps, does not occur promptly enough. The researchers appeared to agree that, in most cases, the failure to provide feedback as to the practical implications of the data has contributed to the perception by agency administrators and their patients that they were "used for a research opportunity." To quote one administrator in charge of financial appropriations: "Well, you know you guys do research but we never see the findings; we never hear about it." All agreed that barriers go up quickly during mass-casualty events when health care systems, their administrators, and patients anticipate direction and assistance, and such feedback is not provided.

Negative Views of Research and the Dilemma of Stigma

Researchers felt that negative attitudes towards research, particularly in schools, make it almost impossible to gain entry: ". . . if anyone has tried to do research in schools recently, it's almost impossible to get in there." One suggestion was that, to some degree, research in schools should become mandatory "from a public health perspective on a higher than school authority level so that we're not begging and cajoling people." They noted that a breach exists in public trust in the competency of clinical researchers, largely due to the negative press that research has recently received. They also complained that there is very limited public understanding of the importance of research and the research process. In community-based research, especially, there is a concern about how to meet the needs of the local community and still have a protocol that will serve the needs of researchers and the residents affected by the disaster. To address this concern, researchers pointed to the need to find ways to break down cultural barriers, denial, or a lack of trust, so that community members can become more receptive to the issues to be studied. Researchers also acknowledged that there are limits as to what questions people are willing to allow them to ask and what they would be willing to answer. There is also concern that researchers may label post-disaster reactions as a mental illness. Administrators stated that some individuals might hold mental health research, and even mental health care, in fairly low esteem. They emphasized that the general public views mental health and behavioral health with considerable distrust, noting that after the events of September 11, a significant number of people did not seek help or respond to offers of help for almost two years.

Training Needs

The research participants highlighted that the trainings need to emphasize research design and methodology issues. In particular, they highlighted that having research designs "ready-to-go" with a library of research measures and databases established would buy some precious time "up front." It was also pointed out that IRB members with specialties in disaster response or research could serve as liaisons to researchers who are looking to develop very quickly a protocol

in the event of a disaster. One participant highlighted that research should not just focus on the services but also on the process of bringing it into the setting, perhaps using ethnographic and other qualitative methods.

In designing post-disaster studies, researchers spoke of the need to consider the question of who is going to be, or already is, "vulnerable" as a population (e.g., patients with pre-existing physical or mental illness or disability, the frail elderly, children). Researchers said that previous experience shows that, besides those who were obviously and directly affected, there were "those kids who were the silent sufferers, laid low for quite some time or were too young at the time, or for whom the effects of the trauma had not really crystallized yet." One participant commented that, while it would be useful to have baseline information about current and prior trauma exposure, the affected community might say "no thanks" to the effort to establish this baseline. It was noted that large-scale psychiatric epidemiological studies conducted regularly across the United States might provide comparison data for post-disaster research. Most agreed that, in any case, a traditional mental health model is probably not useful, stating that, although many people may wish to see mental health providers for post-event reactions, they do not want to think of disaster-related reactions as psychopathological, or of counseling as a form of psychiatric treatment. The researchers stated that the issue of "retraumatization" of research participants is a critically important area that will need to be investigated.

In terms of training formats, participants highlighted the need for not only didactic sessions but also role-playing workshops and "situation research" techniques that are currently being used to train residents, fellows, and nursing staff about how to perform most efficiently in the real clinic settings. The administrators highlighted the need to have disaster behavioral health topics at Grand Rounds or other regularly scheduled symposia to increase the awareness of this topic by health staff. Both the administrators and researchers mentioned that the trainings and research could be conducted during regularly scheduled emergency management exercises or drills.

The Challenge of Research in Primary Care

Both administrators and researchers were sensitive to the fact that methodological issues are overwhelming. Among them are research design and statistical issues that do not really let us answer some questions. Researchers, more familiar with the process, discussed the challenges in the hospital and health care environment that would hinder rapid research studies, including the use of many different protocols for multiple types of studies. Many expressed concerns that generalizable conclusions and cross-study comparisons may not be possible because of the lack of common research tools and methods among the various studies in the aftermath of major disasters. All agreed that common research protocols and assessment tools would be helpful in carrying out post-disaster mental/behavioral health research with children and families. Addressing methodological issues, researchers also pointed out that, for clinical services, a question will often be raised: "Where does the research come in?" To answer the question will require an understanding of particular service needs, the ability to tailor treatment protocols to these needs, and the capacity to match research interests with the needed interventions at the site of service. This type of quid pro quo arrangement will make it easier to put forward a research protocol, not as something intrusive, something extra, or something burdensome, but as one tailored to the needs of the specific non-mental health clinical setting, and with questions about mental/behavioral health and service needs pertaining to patients studied. To address the need for consensus among researchers and administrators regarding the value and limitations of rapid response research activities in the aftermath of mass-casualty events, members of each group suggested creating a professional coalition that would provide members with preliminary answers and, perhaps, some direction to encourage support and appreciation of research.

RECOMMENDATIONS

Based on the findings from the focus groups, the following actions informed the North Shore multidisciplinary team training needs (Recommendations1-3) and project goals (Recommendations 4-5): 1) two training modules focused on IRB and grant writing issues to address the need to develop IRB pre-approved research protocols, with advanced selection of appropriate measures; 2) a member of the IRB was asked to be on the multidisciplinary team to help facilitate the application process; 3) the team would designate time to discuss which research questions and hypotheses they would like to focus on, in order to ensure the implementation of research. Several training modules focused on research design, measurement, and evaluation issues to help the team with this process; 4) the group noted the importance of providing feed-

back on the research process and findings to community stakeholders throughout the implementation of rapid research; and 5) the team agreed to establish partnerships with key agencies and stakeholders early in the research process.

SUMMARY AND CONCLUSIONS

In summary, hospital and health care administrators and researchers in a large health care system in the New York Metropolitan Region fully appreciated both the value of rapid response research with children and their families, and the barriers that researchers face in carrying out studies in a health system and within its surrounding communities in the aftermath of disasters and other mass-casualty events. Opinions of researchers and administrators are complementary, resulting in both reasoned and holistic perspectives on the issues. While researchers are more familiar with the methodological issues and have a more detailed knowledge of the practical challenges of disaster research, administrators demonstrated sensitivity to these matters and a resolve to address them on a system-wide basis. Focus group participants suggested various ways to increase researcher access to local populations, for example through building "localized trust" and support for children's mental health service research both across health system departments and within surrounding communities. All recognized the pressing need for research regarding the effectiveness of, and access to, services for traumatized children and their families. Moreover, because of service limitations and barriers within and between organizations, most felt that increased outreach and training in advance of mass-casualty events would be needed to promote research, which requires greater access to patients served by emergency response sites and primary care services. Also, the importance of educating survivors and the public about the value of post-disaster research in assessing needs for services was emphasized.

Although the use of focus groups has become widespread, there are limitations about what interpretations can be made from the results (Agar & MacDonald, 1995). Because focus group members frequently share a common interest, they also tend to share a subculture that is obvious to them and therefore not explained or articulated to those conducting the group. In this case, through knowledge of the hidden assumptions of the hospital system and its subculture, DRT program staff members came to better understand the common concerns and shared meanings held within the various professional and organizational subcultures targeted by this training program.

In a consensus panel, the NIMH (2002) recommended that researchers evaluating services collaborate with those organizing and delivering them. For that reason, the DRT program involves multiple disciplines in various service-delivery arenas, as well as more traditional academicians and researchers. The goal has been to operationalize research through training that addresses the important information needs of service providers and provider organizations, the methods of obtaining and analyzing this information, and the use of findings. It is hoped that this will sensitize researchers to practical issues, and will stimulate research that promotes quality as well as performance improvement among clinicians, service managers, and response systems. In this way, the DRT program advances the overarching goals of the NCTSN that is designed, in part, to address these concerns over a range of childhood traumas, through systematic efforts that raise the standard of care and improve access to services. With this in mind, the DRT program can provide a means to improve the research foundation upon which NCTSN and the broader community of disaster providers can base strategic priorities and operational decisions.

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Cultural Differences in Dealing with Critical Incidents

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Abstract: *This article discusses the cultural aspects of High Reliability Organizations (HROs), such as air navigation services. HROs must maintain a highly professional safety culture and constantly be prepared to handle crises. The article begins with a general discussion of the concept of organizational culture. The special characteristics of HROs and their safety culture is then described. Finally the article illustrates how Critical Incident Stress Management (CISM) is becoming an ingrained feature of the organizational culture in air traffic control systems. Critical Incident Stress Management is a prevention program that can successfully guard against the negative effects of critical incidents. The CISM program of DFS (Deutsche Flugsicherung) was recently evaluated by the University of Copenhagen. This evaluation not only confirmed the successful prevention of negative effects at the operation's employee level (especially air traffic controllers), but also showed a sustained improvement of its safety culture and its overall organizational performance. The special aspects of cross-cultural crisis intervention and the challenges it faces, as well as the importance of prevention programs, such as CISM, are illustrated using the examples of two aircraft accidents: the crash landing of a calibration aircraft and the Lake Constance air disaster. [International Journal of Emergency Mental Health, 2009, 11(3), pp. 155-164].*

Key words: *Aviation, CISM, crisis intervention, culture, high reliability organization, safety*

The Concept of "Culture"

Culture is difficult to accurately define. There are as many definitions of the word as there are authors writing on the subject. Attempts at a definition range from "the human made part of the environment" (Triandis, 1989) to "a collective programming of the mind" (Hofstede, 1980). Kastner (2006) draws the following distinction between ethics and culture: That what we strive for, the values and goals to which we aspire, these are our ethics (what we do, why we're here). The way we do this is our culture. Thomas (2003) suggests the following definition of culture as helpful for improving cooperation among people of different nationalities: Culture is always presented as an orientation system that is typical for a nation, society, organization or group. In summary, culture may be defined as the sum of all conventional actions, mindsets, mentalities, and beliefs shared by a group of people or a nation. They are expressed through language, body language (gestures, facial expressions), clothing, status symbols, and rituals. Common values and norms are the essence

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of culture and influence attitudes and behavior (Trompenaars, 1993). Culture reduces complexity. Thanks to culture, we are not constantly forced to consider how to interpret situations and how to behave in them.

Culture in High Reliability Organizations (HROs)

Organizations that operate in safety-related areas are called High Reliability Organizations. An HRO is characterized by the high degree of complexity and interactivity of its processes and the agents responsible for protecting life, limb, and the environment. Typical HROs are, for example, air navigation service providers, airlines, hospitals, and nuclear power plants.

The potential risk of an "organizational accident" (Reason, 2000) that could lead to a disaster is present at all organizational levels. But its immediacy becomes more and more acute as we shift from management to the actual front line operators. The operators at the "sharp end" directly control processes and thus avoid accidents. For this reason, operators in HROs have a keen awareness of risks and of the responsibilities borne by each operator.

Disasters are often too hastily attributed to human failure if technical failure has been ruled out. However, the operators at the "sharp end" do not bear the sole responsibility for the safety of processes in HROs. Safety depends on the cooperation of all involved, and such cooperation is based on the interactive dynamics of all personnel belonging to such organizations. In his article "Safe Operations as a Social Construct," Gene Rochlin (1999) describes this interaction and division of responsibilities as a constructed network of safety held together not only by the interaction of those involved, but also by certain attitudes, opinions, and assumptions.

In accordance with the idea of a social construct, culture in these organizations is based on the way operational safety is perceived both within and from outside the organization. Passengers boarding an aircraft assume that all involved will do their utmost to guarantee that the aircraft is technically sound, that the pilots are well-trained and experienced, and that the aircraft will reach its destination safely. But passengers and markets also form parts of this social construct, which, for example, is also based on the assumption that low-cost flights are safe. HROs, more than other businesses, industries, or organizations, hire experts on safety culture to help them fulfil this assumption.

Dealing with Crises

Based on the general culture of an HRO, its safety culture and the quality of its management (Vogt, Leonhardt, Koper, & Pennig, 2010), the way an HRO handles crisis situations may reflect how it perceives its own safety culture. There may be different types of crises affecting different people in different organizations. Since the focus of this article is on HROs' management of crises and critical incidents, we shall illustrate how some organizations manage crises by employing three crisis scenarios:

- individual operator-related crises
- organization-related crises
- crises affecting persons outside the organization

Individual Operator-Related Crises

Irrespective of the organization, individual crises related to operators are always to be expected in safety-relevant areas. This applies to pilots in the same way that it applies to surgeons, nurses, air traffic controllers, and other professional groups. The operator at the "sharp end" of the process chain has a direct and immediate influence on actions and their outcomes. An air traffic controller's instruction to a pilot to climb, for example, can both improve and worsen the safety situation. Because of the considerable amount of responsibility involved in these professions, those who practice them have a keen sense of personal responsibility, reliability, flexibility, resistance to stress, and ability to work under pressure. In the case of air traffic controllers, an elaborate selection procedure is used to determine whether candidates are allowed to enter training. Thanks to a combination of personal disposition and daily experience, an air traffic controller is able to deal with unusual, complex, and dynamic situations. The same applies to a surgeon, who is confronted with unexpected situations during an operation, or to a nurse, who must handle emergency situations during the night shift. What these competent professionals have in common is the ability to cope with such situations. They "create safety through practice" (Dekker, 2004).

Emergencies and critical situations are an integral part of these professions and thus represent an occupational "normality." However, they can also lead to reactions on the part of the actors that are either unusual, unusually prolonged, or cannot be handled without assistance. Irrespective of the incident, the reaction of the operator remains the decisive factor when it comes to crises, although major disasters al-

ways pose a potential emotional threat. A crisis can trigger reactions in a person that he does not expect, does not expect to be as strong, or that he expects to wear off quickly.

If a crisis is caused by a significantly distressing event in an every-day situation, it causes *critical incident stress* reactions. These reactions are either physical (high pulse, trembling), cognitive (uncertainty, limited decision-making ability), emotional (anger, aggression) or behavioral (reclusiveness, isolation, insecurity). And, for individuals who are affected by them, crisis reactions are difficult to understand because they do not match the image one has of oneself as a person and a professional. Personnel employed by HROs are not accustomed to such strong psychological reactions and cannot reconcile them with their professional self-image as people who are specially trained and quite capable of handling daily emergencies.

If a person experiences these reactions in a corporate culture in which this understanding of the profession is absent, in which trust is not cultivated, and in which the operator carries the ultimate responsibility, the feeling of being "different" is aggravated and coping strategies are suppressed. For this reason, a company's corporate culture plays a key role in the management of personal crises at the operator level. The systemic self-concept of an HRO, its management concept, the behavior of both management and team members, vis-à-vis those in crisis situations, are decisive for dealing with crises in an adequate and sustainable manner. An evaluation of the CISM program at the German Air Traffic Control organization (DFS) confirmed that air traffic controllers who were temporarily replaced by their managers immediately after a critical incident (e.g. aircraft proximity), who talked to peer support personnel, and who spent the rest of the day not engaged in operations, recovered from the incident most rapidly and effectively. Although the absence of the affected controller from the work site along with the peer support person are a significant cost factor, CISM has been proven to be profitable for the organization in the long run, since the affected controllers were able to return to full work capability much sooner than in cases where no CISM program was in place and/or where the controller concerned was not given leave from work for the remainder of the day (Vogt & Pennig, 2006).

Organization-Related Crises

By definition, HROs always face the risk of a disaster. Nevertheless, the rate of incidents and accidents in such organizations is markedly low. Because of this, they are considered to be very safe by the general public and are sometimes even referred to as "ultra safe systems/organizations" (Amalberti, 2001) by the scientific community.

Besides the small number of accidents, this perception is based on the notion that these organizations put safety first and do all they can to conduct their business safely. However, when a disaster does occur, the affected HRO can be faced with such a serious crisis that the economic survival of the organization is put in jeopardy. For HROs, such a crisis is usually a disaster or an occurrence that causes devastating damage rather than a financial crisis. Disasters affect a large number of persons, often leading to casualties. Be it a railway disaster as in Eschede, Germany, an aircraft accident similar to the one over Lake Constance, a nuclear accident such as Chernobyl, Ukraine or an accident at a chemical plant resembling the tragedy in Bophal, India, those who are affected the most are passengers, workers, or residents.

For the company, the impact of the disaster for which it is accountable is the main crisis and not the direct economic results (e.g. the loss of an aircraft). And the way an organization handles such a crisis shows whether it has a state-of-the-art corporate culture and safety culture or not. Crisis management can only be effective if there is open communication, if the people affected are treated with respect and understanding, if the accident is assessed from a systemic point of view as described above, if all relevant background information is disclosed, if those in charge are held accountable and if, above all, quick and efficient assistance and psychological support is provided to those affected.

An organization can financially survive a disaster if it does everything it can to put safety first before the accident. After the accident, it must then do everything it can to investigate the accident and to cope with its effects. Even managerial decisions which later prove to have contributed to a disaster (e.g. changes to maintenance schedules) are made in a specific context and based on rational considerations that seemed correct at that time and in that context. The negative consequences of an accident can only be dealt with in an open manner. Accidents in complex systems can be seen as emergent phenomena. The complexity and interactivity of the system (Snook, 2000) and the preconditions in the work design, the time available, production pressure, and changing working conditions sometimes combine to result in an accident. Decisions by operators and managers are taken in a certain situation, under certain circumstances, and to the best

of knowledge. Neither the operator at the "sharp end" nor the manager at the "blunt end" is to be blamed in these cases. A good culture will consider this and an organization with a healthy safety culture will work on the improvement of system safety.

In an international or global market, it has to be expected that people of other cultures are among those affected by an accident. For this reason, an organization must always take account of the different needs of individual cultures in its crisis management and take an active interest in these cultures. In an international airport, there are passengers and staff from all over the world. The organization must therefore be prepared for different national and corporate cultures, e.g. different ways of expressing grief in the case of a major disaster. In addition to the cultures, the political situation within and between the countries concerned must also be taken into account (Gaber & Drozd, 2006).

Crises Affecting Persons Outside the Organization

One of the negative effects faced by an HRO after a disaster is the confrontation with those affected who do not belong to the organization. This includes persons who are affected directly (e.g. casualties) but also those affected indirectly (e.g. relatives). Such people face an emotional crisis and often place partial or full blame for the accident on the HRO. And they usually have to bear two emotional crises at once: the loss of a family member and the fact that this loss was caused by an organization. In such cases, grief and anger tend to dominate and, combined, inhibit the emotional coming to terms with the crisis. Grief can lead to depression and a sense of helplessness and weakness and as a result interfere with anger as an extroverted behavioral regulator (e.g. activity, drive); anger, in turn, can inhibit the grieving process. Those affected feel as though they are in a passive role both with respect to the cause of the disaster and to coping with it; they are victims in two ways.

The situation may escalate if cultural differences enter into play. If those affected by a disaster belong to a different culture than those who caused it (as in Bophal, for example) and if the ways of dealing with crises differ among these cultures, crisis management can become highly challenging for both the organization and the individual.

Support in managing the crisis may come from within the organization or from an outside source (e.g. politics). The emotional involvement of all participants must always be considered. The following section will introduce a program developed to provide support within the organization.

CISM as a Crisis Intervention Program

Critical Incident Stress Management (CISM) is a method for crisis intervention. CISM was developed in the 1980s by Mitchell and Everly. The operations manual for CISM appeared in 2001 in its third edition (Mitchell & Everly, 2001). During the last thirty years, CISM developed into a program comprising correlated and consecutive crisis intervention measures. It includes not only preventive measures and interventions for individuals, small groups, and large groups, but also support for families, communities, schools, and organizations. The International Critical Incident Stress Foundation (ICISF) continuously develops and evaluates the CISM program. From 2005 through mid-year 2009, ICISF maintained a European office at the DFS headquarters in Langen, near Frankfurt. The office assisted in managing the linguistic and cultural diversity of Europe.

The CISM program, in accordance with ICISF standards, has been established in many fields of work. In Germany, CISM has become an established and proven method of crisis intervention in the air navigation services organization, airlines, and airports. Some organizations have firmly established crisis intervention teams to better prepare and perform the missions on site, e.g. at airports. DFS and the operator of Frankfurt Airport, FRAPORT, for example, have maintained a joint crisis intervention team, ATC-AP (Air Traffic Control - Airport), since 2003. The team is registered with ICISF and had its first large-scale mission after the tsunami in 2004, when it supported passengers returning from Southeast Asia.

CISM at DFS

In 1998, DFS began its development of a CISM program for air traffic controllers working at 18 towers and 5 radar control centers in Germany. The safe and effective surveillance and handling of air traffic in and over Germany is the core task of DFS and is performed by approximately 1800 operational staff members. DFS controls more than 3 million flight movements in German airspace per year.

The DFS CISM program is based on a peer support model. It provides qualified personnel (peers) to offer support throughout the company. There are more than 80 peers at DFS, all of whom have completed ICISF courses in Individual Crisis Intervention and Peer Support, Group Crisis

Intervention, and Advanced Group Crisis Intervention. Peer support after critical situations has become a standard procedure in all DFS facilities and now forms an integral part of the professional image of air traffic controllers.

Peers generally do their work within the first six hours following an incident. This is only possible because sufficient peers have been trained at all DFS locations to ensure that someone is always readily available. Air traffic controllers affected by critical incidents who subsequently receive peer support normally return to work the following day. Since the introduction of CISM, there have not been any reports of long-term problems resulting from critical incidents. The goals of the program are to reduce stress reactions after critical incidents, and to quickly restore the ability to work. These goals have been met in all cases to date.

Peers are supported in their tasks by the Board of Managing Directors, the heads of the individual branches and the managers in operations. Thanks to the CISM program at DFS, "safety leadership" is now practiced and experienced on a daily basis. As mentioned above, the importance of managers in operations in the implementation of CISM has been proven in an evaluation study (Vogt & Pennig, 2006). The success of CISM, however, largely depends on top management's continual support of the program (Riedle, 2006).

DFS has advised other air navigations service providers in Europe in their efforts to develop CISM programs and has trained peers for them. Every year, DFS organizes a peer conference to which other air navigation services organizations are also invited. A sound network has developed as a result. This network is an important prerequisite for supporting each other in the case of a disaster, especially when different cultures and languages are at play.

CISM and Corporate Culture

The evaluation of the DFS CISM program by the University of Copenhagen also included an investigation into improvements related to corporate culture. The starting point was the result of a preliminary study that preceded the evaluation (Vogt et al., 2004). At the time, it had been determined that even air traffic controllers who had never taken advantage of CISM nevertheless attributed 3% of their recovery after critical incidents to the program. The reason for this was that the introduction of the CISM program had generally improved the corporate culture of DFS and particularly its safety and communication culture. The introduction of the CISM program alone showed that critical incidents were no longer seen as the result of "human failure," but rather as an inherent part of the job for which the organization must make provisions, about which the team must talk, and from which all involved must learn. The entire staff – even those who never experienced a critical incident or never used CISM after such an incident – benefit from this improvement of the corporate culture and from the back-up offered by the program in case they need it someday. As a result, the organization as a whole benefits from CISM.

In order to corroborate the hypothesis that a cultural change has occurred at DFS, all 352 air traffic controllers and peers who took part in the evaluation of the DFS CISM program were asked to describe the changes to DFS culture following the introduction of CISM. A list of adjectives describing culture was provided: sensible, helpful, supportive, safety-conscious, egoistic, resistant to change, clique-oriented, competitive, disciplined, uptight, polite, team-oriented, staff-oriented, and open. On a scale from -2 (much worse), -1 (worse), 0 (unchanged), +1 (better) to +2 (much better), the participants were asked to indicate how their interaction with their colleagues had changed after the introduction of CISM. On average, the change was rated between +0.1 and +1.1, indicating that the introduction of CISM improved the culture with regard to all adjectives (more sensible, more polite, less uptight, etc.). Although the changes were rather small, the sample group was large enough to ensure that these changes are, with few exceptions, statistically significant. The adjective "safety-conscious" must be stressed, because it is crucial to the core business of air navigation services and improved by +0.7.

In summary, these empirical findings confirm the importance of a corporate culture for an HRO. It should also be noted that this culture can be positively influenced by the introduction of a program such as CISM, bringing advantages for both the organization and the staff.

The next section will show how a positive corporate culture is also important outside the organization when it comes to coping with major disasters.

Crisis Intervention Missions After Major Disasters / Crashes

In addition to the frequently occurring individual crisis situations attended to by the DFS peers on site, there may also be aircraft accidents. Although rare, they unfortunately

can never be ruled out. We will look at two examples. The accounts are not focused on the accidents themselves, but rather on the work of the DFS crisis intervention team and on the lessons learned in dealing with cultural differences.

The Crash of a Calibration Aircraft

In the year 2000, a calibration aircraft, commissioned to calibrate the arrival and departure navigational facilities of a smaller aerodrome in Germany, crashed into a mountain. The aircraft was destroyed and caught fire; the crew – pilot, co-pilot and two calibration engineers – were killed.

The organization responsible for the calibration aircraft offered the relatives of the victims the opportunity to travel to the crash site to see the site themselves. DFS promised additional subsequent support in the form of its crisis intervention team. Among the relatives of the deceased crew members were wives, parents, brothers, and sisters. The DFS crisis intervention team was composed of five peers and two psychologists. The team met one evening prior to the actual mission and discussed the accident and the planned course of action for the mission on the basis of the facts available at the time.

As planned, they met with the relatives, who came from different towns in Germany, at a central location. A representative of the company gave the relatives a description of the accident and informed them of the facts available at the time. Then the head of the crisis intervention team introduced the individual team members and the support they offered. After this meeting, which lasted approximately one hour, everyone – i.e. relatives, company representatives, and the crisis intervention team – was taken by tour bus to the crash site. The bus ride lasted approximately two hours.

In the preparation phase, the crisis intervention team discussed the following:

- Since the relatives would not know the members of the crisis intervention team, the team must first establish contact, while offering information regarding the support it had to offer and its limitations.
- These limitations would be due to the amount of time given to the mission. Furthermore, because the members of the crisis intervention team would not be "peers" of the relatives, the team would only be available to the relatives for a relatively short time.
- To prevent feelings of a lack of interest or helplessness caused by the limitations of the mission, the peers to be chosen for this mission would live in the same town or at least near the places of residence of the relatives. This would create a certain sense of solidarity.
- The bus ride would be an opportunity for initial personal contact.
- The peers would collect information about the support systems available in the cities where the relatives resided so that they would be in a position to refer them to other aid organizations upon their return home (e.g. priests, psychological services, information centres).
- The support would be limited to one day and focused on coping with the confrontation with the crash site.
- In addition to psychological support, the peers' expert knowledge as air traffic controllers would be helpful when relatives had questions about the facts presented.

One of the deceased was an ethnic German from Russia. His wife and son participated in the trip. This was a particular challenge for the preparation because the wife could speak very little German and most of the communication had to be mediated by the son.

When the bus reached the town where the crash had occurred, the relatives had to walk about 30 minutes through a forest to reach the crash site. The crash site had already been cleared at this point, so there was no visible wreckage. The traces of fire on the ground and on the trees, the smell of kerosene and the broken branches of the trees sufficed to describe the situation.

The relatives asked to be shown the spot where the dead were found so they could say their last goodbyes. While the German family members were rather quiet and contemplative, the Russian wife began to weep very loudly, as is customary in her culture. The crying grew into a loud screaming and pleading; the woman threw herself to the ground and made gestures to express her grief.

The way the woman dealt with the situation, the way she coped with her emotions and her grief, was in stark contrast to the reactions of the other mourners. Because of the silence of the others, the behavior of the Russian woman felt even louder and more foreign. On the bus ride back, the Russian woman seemed considerably more detached and clear-headed than the other relatives.

From the point of view of crisis intervention, we can make the following observations about cultural differences:

- We knew early on that a woman with Russian background would be present. However, our preparation was limited to the question of religion, and since the woman was Christian, we saw no reason to consider special treatment. In view of the mixed group, its size and the limited time for preparation, this seemed to be an appropriate procedure.
- Still, a discussion of cultural differences in dealing with grief would have been helpful.
- It was not clear whether we should have done something, and if so, what this should have been. Because of the common cultural background shared by the helpers and the other relatives, it was easier to treat those quietly mourning with respectful distance and to intervene only upon receiving certain signs. A certain amount of cultural identification could be taken as a given and a reliable appraisal of the mourners' actions was possible.
- The behaviour of the Russian woman, however, created a sense of insecurity, as the loud pleading and crying did not correspond to the culture of the German helpers. Furthermore, this behavior was interpreted as an emotional collapse and a loss of self-control, and thus for those from our cultural background it signaled a need for intervention all the more.
- Since a message is interpreted by those who receive it and the interpretation is based on past experience and cultural consensus, the helpers also experienced the emotional insecurity caused by the situation and the sense of being "threatened" by it.
- In this situation, helplessness turned out to have a positive effect: We did not react. It could very well have aggravated the situation if, for example, a helper had tried to offer consolation with the intention of lending support. Consolation in the usual sense would probably have interfered with the grieving process, with coming to terms and coping with the loss, which, from her point of view, were not threatening at all.
- Interfering with a person's coping mechanism is detrimental to a lasting, effective emotional process of coming to terms with the situation. It interrupts the process of coping and weakens those affected because it causes them to go from an emotional to a cognitive/rational state.

The mission was an overall success, as the feedback from the relatives also confirmed. This example also shows, however, that an intensive preparation of the crisis intervention team must include information about the cultural backgrounds of all affected. Dealing with cultural particularities not only refers to different religions but also to the way in which members of different cultures react to crises and cope with grief and loss.

The Disaster at Lake Constance

Another experience of the DFS crisis intervention team was supporting the air traffic controllers of the Swiss air navigation services organization, Skyguide. In summer 2002, around midnight, a Russian passenger aircraft from Bashkiria collided with an American cargo aircraft over Lake Constance. The collision took place on German territory; the aircraft was controlled by the Swiss air navigation service provider. On board the aircraft from Bashkirian Airlines were children and adolescents who had won a school competition, the prize being a trip to Barcelona. On board the cargo aircraft were pilot and co-pilot.

All 71 passengers and crew members of the two aircraft were killed in the crash. As if by a miracle, there were no additional deaths on the ground.

The DFS crisis intervention team arrived in Zurich five days after the accident to offer support to the Swiss air traffic controllers from Skyguide. A total of six Critical Incident Stress Debriefings (CISDs) were provided. Approximately 120 Skyguide staff took part, the majority of whom were air traffic controllers.

The DFS team consisted of two mental health professionals, i.e. a psychologist and a family therapist, and five peers (DFS air traffic controllers). The peers were selected according to the following criteria:

- Level of training and experience as peer
- Sex (both male and female peers were to be present)
- Emotional involvement and emotional stability
- Ability to work in a team

The crisis intervention team discussed the situation in detail and worked out a course of action prior to their departure to Switzerland. The roles they would each take in the

process, the responsibilities, and the sequence of events were discussed and agreed upon (Leonhardt et al., 2006).

In the group sessions, the participants identified themselves very strongly with the Danish air traffic controller on duty at Skyguide the night of the disaster, with Skyguide, and with the air traffic controller profession in general. This identification connected them emotionally to the disaster – "it could have happened to me." Such reactions were even more marked on the part of other Danish air traffic controllers working at the Swiss air navigation service provider, since identification due to shared nationality and expatriate status also came into play. This aspect was further intensified by the differences in the way Danes and Swiss deal with their emotions. We had the impression that showing and expressing emotions is seen as normal in Danish culture and is thus acceptable; in comparison, it seemed that the Swiss were more determined to rationalize their emotions.

In the CISDs in which Danes participated, the emotions expressed were more distinct and more strongly emphasized than in debriefings with only Swiss air traffic controllers. In retrospect, it might have been a good idea to form a purely Danish group in order to have a more homogeneous group. Emotions could then have been discussed in a culturally consistent way, which would presumably have also simplified matters for the debriefings in the Swiss groups. On the other hand, such a procedure could have reinforced the impression of the "foreignness" of the Danish air traffic controllers and therefore could have had a negative impact.

This review of the events is to show that there are always numerous factors to consider. A discussion of the cultural aspects of crisis intervention should form an essential part of team preparation.

Besides religion and nationality, crisis intervention measures are influenced by other cultural factors, such as:

- the viewpoint that operational staff in HROs have of their profession
- the culture within a particular organization (e.g. safety culture)
- the way managers view communication, crises, and crisis management

The Swiss air navigation services organization is to be credited for the fact that they were able to request help when in a state of organizational crisis and to benefit from that help. Their willingness to accept help from another state and from an organization in the same line of business deserves respect.

One and a half years after the accident, the Danish air traffic controller who was on duty that night was stabbed to death by a man who had lost his wife and both children in the crash. The murder took place in front of the air traffic controller's house in Switzerland in the presence of his wife and two children. This is not the place to attempt a description of the factors which contributed to this tragedy. Nevertheless, the following points should be borne in mind to guarantee that no stone is left unturned to prevent such tragedies in future:

- After the air traffic controller was murdered, reports indicated time and time again that it is part of Bashkirian culture to ask forgiveness when someone is killed. This request for forgiveness can initiate the grieving process, which also leads to forgiving those guilty for the loss and accepting the situation.
- The air traffic controller was not allowed to ask forgiveness, since in legal terms it could have been interpreted as an admission of guilt and could have had legal ramifications for all involved.
- The accident was frequently represented as the result of "human failure." For this reason, the air traffic controller was taken to be the only responsible party and thus the only person to blame for the accident. In the case of this accident, however, an entire chain of situations, circumstances, actions, and decisions led to the collision. It is therefore inappropriate to solely blame one individual.
- The name, nationality, and the place of residence of the air traffic controller became publicly known relatively quickly.

In that light, the following questions must be discussed in a HRO in order to be equipped to handle an intercultural crisis:

- How are employees' personal data handled after accidents and critical incidents?
- How can data protection and the anonymity of those involved be assured?
- How can an organization, when giving its account of an accident, avoid giving the impression that it is the result of an error of one individual?

- How can it be guaranteed that the term "human failure" is not used?
- When other nations are affected, what should an organization do to understand their cultures and the special aspects of these cultures?
- Which measures should be taken to do justice both to cultural demands and to legal limitations?

When we ask such questions, we are not trying to tell the organization concerned, i.e. Skyguide, how to run their business, and we certainly do not intend to imply a failure on their part. That would be an allocation of blame to an individual organization, which would be as inappropriate as attributing the cause of an accident to "human failure."

What is done is done; instead, the situation and the decisions made by responsible parties must always be seen in context and in relation to their reasoning at the time. Not learning from tragic events in order to be better prepared for the future would, however, constitute an unforgivable mistake. These questions will need to be pursued and more questions need to be raised. More than five years after the murder of the controller, however, they should also be a basis for reconsidering intercultural crisis management and the responsibilities it entails.

Conclusions

National and organizational cultures play an important part in dealing with critical and potentially traumatic events. Professional helpers who offer their services in such situations must prepare themselves for the culture of the people they are to help. High Reliability Organizations have the obligation to create and maintain an organizational culture and especially a safety culture, which help them to prevent critical situations as much as possible and, when they do occur, to handle them professionally and effectively. Critical Incident Stress Management has proved to be helpful in dealing adequately with crises on all three levels: personal, within and outside the organisation.

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Traumatic Events in the Workplace: Impact on Psychopathology and Healthcare Use of Police Officers

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Abstract: *This retrospective study examined the impact of exposure to duty-related traumatic events and of Posttraumatic Stress Disorder (PTSD) among 159 Canadian police officers. Structured interviews were conducted (1) to assess the presence or absence of exposure to work-related traumatic events; (2) to identify the most traumatic incident; (3) to determine PTSD status (i.e., full, partial or no PTSD); and (4) to diagnose psychopathology (i.e., anxiety, depression, and substance-related disorders). Healthcare use, hardiness, and coping were assessed with self-administered questionnaires. Data were analyzed using chi-square tests, Fisher exact tests, and Student's t-tests. Results showed that trauma-exposed officers were no more likely to have psychopathology at time of study and did not score differently on measures of hardiness and coping than non-exposed officers. However, trauma-exposed officers who developed full or partial PTSD were significantly more likely to experience depression in the aftermath of trauma than exposed officers without PTSD. After the trauma, police with full PTSD were significantly more likely to have medical appointments, consult a mental health professional, be on sick leave, and score lower on a hardiness measure than officers without PTSD. Full PTSD affected subsequent psychopathology, healthcare use, and hardiness. Clinical implications of the findings are discussed. [International Journal of Emergency Mental Health, 2009, 11(3), pp. 165-176].*

Key words: *PTSD; posttraumatic stress disorder; police; mental health; healthcare; hardiness; coping.*

Police work is identified as one of the most stressful occupations (Marmar et al., 2006). Exposure to duty-related critical incidents can have an impact on the psychosocial functioning of police. Following exposure, it is not uncommon for some officers to develop depressive symptoms or increase their alcohol consumption (Loo, 1986; Stratton, Parker, & Snibbe, 1984). Cumulative exposure and repeated occupational stressors put officers at risk for developing Posttraumatic Stress Disorder (PTSD; Friedman & Higson-Smith, 2003; Liberman et al., 2002). While risk factors are associated with an increase in PTSD symptoms following a trauma, protective factors facilitate adaptation and lead to fewer symptoms if any (King, Vogt, & King, 2004). Among protective factors for PTSD, approach-based coping strate-

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gies and personality hardiness have been associated with resiliency (Sharkansky et al., 2000; Zakin, Solomon, & Neria, 2003). In a recent police study, the commitment dimension of hardiness was negatively associated with PTSD symptoms among female officers (Andrew et al., 2008). It is therefore especially important to identify, among police personnel, protective factors that make them less vulnerable to developing PTSD and that sustain their resilience following trauma exposure.

Consequences of PTSD

When PTSD develops, sufferers can experience substantial impairment. This anxiety disorder has been associated with increased mental health consultations and healthcare use (Elhai, North, & Frueh, 2005; Stein, McQuaid, Pedrelli, Lenox, & McCahill, 2000; Wang et al., 2005). A study of PTSD patients in the primary care medical setting revealed that they had greater functional disability at work, at home, and in family and social life than patients without mental disorders (Stein et al., 2000). Individuals with some PTSD symptoms, but not meeting full diagnostic criteria, namely, persons presenting subthreshold or partial PTSD, have been the subject of more recent investigation. In one study, these individuals were found to have rates of help-seeking and levels of social impairment comparable to those of individuals with full PTSD (Stein, Walker, Hazen, & Forde, 1997). Partial PTSD has also been associated with high rates of comorbid depression and anxiety disorders (Marshall et al., 2001).

Comorbidity associated with PTSD is the rule rather than the exception. In two large epidemiological studies, 58% and 75% of individuals suffering from PTSD also had a comorbid disorder (ESEMeD/MHEDEA 2000 Investigators, 2004; Kessler, Chiu, Demler, & Walters, 2005). Comorbidity was defined as the presence of two or more disorders occurring within a specified 12-month period. Among respondents with PTSD in the National Comorbidity Survey conducted in the United States, almost half of them had experienced major depressive episodes, about 20% had another anxiety disorder, and more than 40% of male respondents also had substance use disorders (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995).

In police, PTSD has been associated with higher rates of divorce, increased medical consultations, perceptions of poorer physical health, and more suicidal ideations (Maia et al., 2007). Officers with PTSD can also experience difficulties at work, such as reacting less alertly or less appropriately, taking too many or not enough risks, being less productive, or having difficulties interacting with colleagues. These problems can put the officer's and his or her coworkers' safety in jeopardy (Carlier, 1999).

Objectives

To the best of our knowledge, there is no empirical study that measures the impact of PTSD on subsequent psychopathology and rate of healthcare use among Canadian police officers. The first objective of this study was to evaluate whether trauma-exposed Canadian police officers were more prone to experiencing psychopathology at time of study (i.e., anxiety, depression, or substance-related disorders) and whether they scored differently on measures of hardiness and coping than non-exposed officers.

The second objective was to compare trauma-exposed officers with various PTSD statuses (i.e., full, partial or no PTSD), using indicators of psychopathology (i.e., anxiety, depression, or substance-related disorders), hardiness, coping, and healthcare use. For this objective, it was hypothesized that police with full PTSD following trauma exposure, compared to those without PTSD, would be at a higher risk for subsequent onset of psychopathology, report greater healthcare consumption, and score lower on measures of hardiness and coping. Since no hypothesis was formulated for police with partial PTSD, this group was evaluated for exploratory purposes.

METHOD

Participants

One hundred and sixty-nine French-speaking police officers from the Montreal metropolitan area were interviewed on a voluntary basis. Inclusion criteria were speaking and reading French, and being psychologically and physically fit to participate in an interview and to answer several questionnaires. Exclusion criteria were being in a psychotic state, having suicidal ideation, and presenting any severe mental disorder that, in the interviewer's judgment, might interfere with the participant's well-being. However, none of the interviewees was excluded from the study. Exposure to previous traumatic events was determined by criteria A(1) and A(2) for PTSD in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*; American Psy-

chiatric Association, 1994). These criteria stipulate that a traumatic event involves both (1) having experienced or witnessed an event that involved death, injury, or a threat to the physical integrity of self or others; and (2) that the person's response to the event must have been intense fear, helplessness, or horror. Officers who had previously encountered at least one duty-related traumatic event were classified in the trauma-exposed police group. The others were allocated to the non-exposed police group.

Trauma-exposed Police

One hundred and forty-two officers had previously been exposed to a traumatic event. Examples of traumatic events include the following: being a witness of suicide, homicide, or conjugal violence; being involved in a school shooting; being threatened with a firearm; being injured; injuring a suspect; or shooting someone. When participants reported several traumatic events, the face-to-face interview focused on the most stressful. Among the group of exposed officers, 10 (7%) of them did not complete the two phases of the study. One of these dropped out after the interview (first phase). The remainder did not return their questionnaires by mail (second phase). The reasons for their non-completion of the study are unknown. These participants are referred to as non-completers. Completers of the two-phase process consisted of 132 participants (113 males and 19 females) with a mean age of 43 years (*SD* = 11.53) and an average of 15 years of education (*SD* = 2.13); 87% were married or cohabiting; and 71% were active police officers, while 29% were retired.

There were no significant differences between completers and non-completers of the study in terms of number of PTSD symptoms, number of avoidance symptoms, PTSD conditions (full or partial), PTSD severity, number of current and lifetime mental disorders, and demographics (e.g., age at interview and at the time of trauma, gender, education, work and marital status).

Non-exposed Police

Twenty-seven officers had never encountered a traumatic event at work. This group consisted of 21 males and 6 females, with a mean age of 44 years (*SD* = 12.89) and an average of 15 years of education (*SD* = 2.29); 74% were married or cohabiting, 67% were active police officers, and 33% were retired.

Procedure

Recruitment involved contacting police officers from lists obtained through the Montreal Police Department of Human Resources. The research team randomly selected a total of 1,664 police officers among the 8,000 active and retired employees. Selected officers received a letter at home briefly explaining the study and inviting them to participate. Officers who contacted the research coordinator were given details about the study and, if they were still interested, an appointment for an interview was scheduled. In total, 169 (10%) of the officers responded and agreed to participate, representing a low response rate. A two-phase data collection strategy was employed. First, after receiving explanations of the study's procedures, officers who provided written informed consent were evaluated in a single interview. Second, they had to complete questionnaires at home and return them by mail. The following data must be interpreted with caution since participation was low, suggesting a high level of self-selection. This study was approved by the research ethics committee of the Université du Québec à Montréal.

Measures

French versions of all the instruments were used.

Demographics and Personal Trauma History

Collected demographics included gender, age, education attainment, marital status, and length of police service. Among trauma-exposed police, personal trauma history outside of police work was assessed using the *Life Events Checklist* (*LEC*), which is part of the *Clinician-Administered PTSD Scale* (*CAPS*; Blake et al., 1995). This checklist comprises a list of 16 traumatic experiences plus one open-ended item for events not listed. Respondents had to indicate if, outside of police work and before the work-related trauma, they had experienced each event, if they had witnessed it, or if neither was applicable. The *LEC* exhibited adequate temporal stability, good convergence with a measure of trauma history—the *Traumatic Life Events Questionnaire* (Kubany et al., 2000)—and significant correlation with psychological distress and PTSD symptoms (Gray, Litz, Hsu, & Lombardo, 2004).

Assessment of PTSD

The entire PTSD module of the *Structured Clinical Interview for DSM-IV Axis I Disorders* (*SCID-I*; First, Spitzer, Gibbon, & Williams, 1996) was administered by qualified interviewers only to police exposed to duty-related traumatic events and only with reference to the most traumatic work-related event. Partial PTSD was assigned when a participant did not have enough symptoms to qualify for full PTSD but had at least one symptom each for *DSM-IV* (APA, 1994) PTSD criteria B, C, and D, or of at least one criterion B and two criterion D symptoms (Schnurr, Lunney, & Sengupta, 2004). The PTSD module of the *SCID-I* is both clinically sensitive and reliable (Keane & Barlow, 2002). Furthermore, the *SCID-I* is the most commonly used interview to assess Axis I mental disorders (Keane & Barlow, 2002). Reliability studies indicate that the *SCID-I* has good-to-excellent interrater reliability for establishing current disorders and moderate test-retest reliabilities for lifetime disorders (Rogers, 2001). Blind evaluations were performed by independent raters on 30% (n = 40) of randomly selected audiotaped *SCID-I* interviews. There was perfect interrater agreement (kappa = 1) on diagnoses of PTSD.

Measures of Psychopathology

Qualified interviewers used the *SCID-I* modules to measure the presence or absence of psychopathology, more specifically anxiety disorders, major depressive disorder, and substance-related disorders. The authors of the present study differentiated psychopathology that was experienced in the aftermath of trauma from psychopathology that was present at time of study. Blind evaluations were performed on 30% of randomly selected audiotaped *SCID-I* interviews. There was a very high level of interrater agreement on the presence or absence of these mental disorders (kappa = .90).

Measures of Healthcare Use

Among trauma-exposed police, the use of health services in the 12 months following the incident was documented using a questionnaire constructed by the research team. Respondents had to indicate whether they had had medical appointments, consulted a mental health professional (i.e., psychologist, psychotherapist, or social worker) or used alternative medicine therapies (i.e., acupuncturist, chiropractor, homeopath, osteopath, or massage therapist), regardless of whether the visit was related to difficulties or symptoms associated with the traumatic event. The number of officers on sick leave after the trauma was also documented.

Measure of Hardiness

The French version (Dufour-Pineault, 1997) of the *Short Hardiness Scale* (*SHS*; Bartone, 1995) is a 15-item self-report questionnaire that assesses three dimensions of personality hardiness: (1) control, which refers to the belief that one is capable of managing stressful events; (2) challenge, which reflects the tendency to interpret stressful events as opportunities; and (3) commitment, which consists in the ability to find meaning in stressful events. Bartone (1999) reported acceptable internal consistency for the commitment, control, and challenge subscales (alphas = .77, .68, and .69, respectively). Internal consistency for each subscale in the French version ranged from .48 to .69 (Dufour-Pineault, 1997). Cronbach's alpha coefficient for the total measure was .82 for the original version and .66 for the French version. Test-retest reliability indicated correlations of .78 and .71 for the original and French versions respectively. When measuring hardiness, researchers must be aware that the three dimensions of hardiness may have a different effect according to gender. In addition, trauma exposure could influence hardiness levels. Therefore, hardiness levels, measured in this retrospective study, might not reflect a stable personality trait and instead be a result of exposure to stressful conditions.

Measure of Coping

The *Coping Inventory for Stressful Situations* (*CISS*; Endler & Parker, 1990) focuses on ways people react to various difficult, stressful, or upsetting situations. This inventory assesses task-, emotion- and avoidance-oriented components of coping. The *CISS* has shown appropriate construct validity, and several validation samples have identified very good psychometric properties for this instrument (Schwarzer & Schwarzer, 1996). The *CISS-French Version* has shown good internal validity (Rolland, 1994). Internal consistency, as calculated by coefficient alpha, was .86 for the emotion-oriented subscale, .87 for the task-oriented subscale, and .83 for the avoidance-oriented subscale.

Research Design

A correlational and cross-sectional design was used for this study. For the first objective, the dependent variables

were indicators of (a) psychopathology, namely diagnoses of anxiety, depression, and substance use; (b) hardiness; and (c) coping. Presence of exposure to duty-related traumatic events versus absence of exposure was the dichotomous independent variable. For the second objective, the dependent variables were indicators of (a) psychopathology, namely diagnoses of anxiety, depression, and substance use; (b) healthcare use; (c) hardiness; and (d) coping. PTSD status after exposure to duty-related traumatic events (i.e., full PTSD, partial PTSD or no PTSD) was the independent variable.

Statistical Analyses

On some questionnaires, missing values were found among 6 (4.5%) participants in the trauma-exposed police group. Prior to analyses, missing values were replaced with the mean for the entire series. For the first objective, which was to compare trauma-exposed police to non-exposed officers, the following analyses were used: chi-square and Fisher exact tests for categorical variables and Student's *t*-tests for continuous variables.

For the second objective, which was to compare the three groups of police exposed to trauma (i.e., full, partial, or no PTSD), ANOVAs were used for continuous demographic variables and Fisher exact tests for categorical demographic variables. Group differences (i.e., no PTSD versus full PTSD; no PTSD versus partial PTSD) in terms of psychopathology, healthcare use, hardiness, and coping were tested using chi-square and Fisher exact tests for categorical variables and Student's *t*-tests for continuous variables. For all tests, differences were considered statistically significant where $p < .05$.

RESULTS

Comparison between Trauma-Exposed Police and Non-Exposed Police

Demographics. No significant differences were found between the two groups with regard to age at interview [$t(157) = 0.21$, $p = .84$], gender (Fisher, $p = .38$), education [$t(157) = 0.99$, $p = .33$], number of children [$t(157) = 0.77$, $p = .44$], work status – active vs. retired – [$\chi^2(1, N = 159) = 0.22$, $p = .64$], marital status (Fisher, $p = .14$), and work experience (in years) of retired police [$t(45) = 0.50$, $p = .62$] and active police [$t(110) = -0.58$, $p = .57$].

Psychopathology. There were no significant differences between trauma-exposed police and non-exposed officers with regard to diagnoses of anxiety disorders experienced at time of study (6.1% vs. 7.4% respectively; Fisher, $p = .68$), and of major depressive disorder (2.3% vs. 3.7% respectively; Fisher, $p = .53$). Regarding substance-related disorders, none of the groups reported such conditions at time of study.

Hardiness and coping. No significant differences were found between the two groups on the *Short Hardiness* subscales of control [$t(157) = -0.82$, $p = .41$], challenge [$t(157) = 0.89$, $p = .38$], commitment [$t(157) = 0.11$, $p = .91$] and total score on this measure [$t(157) = 0.25$, $p = .81$]. Likewise, there were no significant differences between groups with regard to task-oriented [$t(157) = 0.66$, $p = .51$], emotion-oriented [$t(157) = -1.04$, $p = .31$] and avoidance-oriented coping strategies [$t(157) = -0.78$, $p = .44$)]

Prevalence of PTSD among Trauma-Exposed Police

Following their most traumatic duty-related event, almost 8% ($n = 10$) of the officers developed full PTSD, 7% ($n = 9$) developed partial PTSD, and about 86% ($n = 113$) had no PTSD. At time of study, none of the participants had PTSD with reference to that event.

Comparison between the Three Groups of Trauma-Exposed Police

Demographics. No significant differences were found between the three groups (i.e., full PTSD, partial PTSD, and no PTSD) on age at interview [$F(2, 129) = 1.82$, $p = .17$], education [$F(2, 129) = 0.74$, $p = .48$], number of children [$F(2, 129) = 1.51$, $p = .23$] and work experience (in years) of retired police [$F(2, 35) = 1.66$, $p = .21$]. Regarding work experience of active police, significant group differences were found [$F(2, 91) = 6.94$, $p < .01$]. Further analysis revealed that the partial PTSD group had significantly more years of experience than the no PTSD group [$t(91) = -3.68$, $p < .01$]. There were no significant differences either between the no PTSD group and the full PTSD group, or the no PTSD group and the partial PTSD group on work status (active vs. retired; Fisher, $p = 1.0$ for both analyses), gender (Fisher, $p = .36$; $p = .35$, respectively), marital status (Fisher, $p = .35$; $p = .36$, respectively) and trauma history prior to the work-related trauma (Fisher, $p = .74$; $p = .48$, respectively).

The distribution of the variables related to psychopathology, healthcare use, hardiness, and coping in the three trauma-exposed groups of officers (i.e., full PTSD, partial PTSD, and no PTSD) are depicted in Table 1.

Table 1.
Relationships between posttraumatic stress disorder and psychopathology, healthcare use, hardiness and coping

	Groups			Group comparison	
Variables	No PTSD[1] (n = 113)	Partial PTSD[2] (n = 9)	Full PTSD[3] (n = 10)	1 vs. 2	1 vs. 3
Subsequent psychopathology					
Anxiety disorders after the trauma	4.4%	0.0%	20.0%	Fisher, p = 1.0	Fisher, p = .10
Anxiety disorders at time of study	6.2%	11.1%	0.0%	Fisher, p = .47	Fisher, p = 1.0
Major depressive disorder after the trauma	15.0%	44.4%	60.0%	Fisher, p = .046	Fisher, p = .03
Major depressive disorder at time of study	2.7%	0.0%	0.0%	Fisher, p = 1.0	Fisher, p = 1.0
Substance-related disorders after the trauma[a]	0.9%	22.2%	10.0%	Fisher, p = .01	Fisher, p = .16
Healthcare use					
Medical appointments	44.2%	22.2%	90.0%	Fisher, p = .30	Fisher, p = .01
Consultations with mental health professionals	13.3%	11.1%	60.0%	Fisher, p = 1.0	Fisher, p = .02
Use of alternative medicine therapies	24.8%	0.0%	30.0%	Fisher, p = .12	Fisher, p = .71
Sick leave	12.4%	11.1%	60.0%	Fisher, p = 1.0	Fisher, p = .01
Hardiness and coping					
Personality hardiness					
Commitment	8.01	8.30	7.53	t (120) = -0.58, p = .57	t (121) = 0.99, p = .32
Challenge	6.71	5.63	5.13	t (120) = 1.58, p = .12	t (121) = 2.36, p = .02
Control	6.99	6.74	7.20	t (120) = 0.54, p = .59	t (121) = -0.49, p = .63
Total score	7.24	6.89	6.62	t (120) = 0.86, p = .39	t (121) = 1.64, p = .10
Coping strategies					
Task-oriented coping	7.15	7.0	6.38	t (120) = 0.31, p = .76	t (121) = 1.70, p = .09
Emotion-oriented coping	3.45	3.37	3.97	t (120) = 0.16, p = .88	t (121) = -1.01, p = .32
Avoidance-oriented coping	4.22	3.54	3.61	t (120) = 1.03, p = .31	t (121) = 0.97, p = .33

[a] The «substance-related disorders at time of study» variable is not shown in the table since prevalence rates were null for all three groups.

Impact of Full PTSD

Subsequent psychopathology. After the trauma, the full PTSD group, compared to the no PTSD group, was significantly more likely to have experienced major depressive disorder (60% vs. 15%). Moreover, despite higher percentage rates, the full PTSD group, compared to the no PTSD group, was not significantly more likely to have experienced, after the trauma, anxiety disorders (20% vs. 4%) or substance-related disorders (10% vs. 1%). No significant differences were found between the full PTSD and the no PTSD groups in terms of likelihood of having, at time of study, anxiety disorders (0% vs. 6%), major depression (0% vs. 3%) and substance-related disorders (0% vs. 0%).

Healthcare use. In the 12 months following the trauma, the full PTSD group, compared to the no PTSD group, was significantly more likely to have had a medical appointment (90% vs. 44%), have been on sick leave (60% vs. 12%), and have consulted a mental health professional (60% vs. 13%). Psychologists were the only mental health professionals that officers consulted. There were no significant differences between groups in use of alternative medicine therapies after the trauma (30% vs. 25%).

Hardiness and coping. Regarding scores on measures of hardiness and coping, the only significant difference was on the challenge subscale of the *Short Hardiness Scale*. The full PTSD group had significantly lower scores ($M = 5.13$) than the no PTSD group ($M = 6.71$).

Impact of Partial PTSD

Subsequent psychopathology. After the trauma, the partial PTSD group, compared to the no PTSD group, was significantly more likely to have experienced major depressive disorder (44% vs. 15%) and substance-related disorders (22% vs. 1%). However, the partial PTSD group, compared to the no PTSD group, was not significantly more likely to have experienced, after the trauma, anxiety disorders (0% vs. 4%). No significant differences were found between the partial PTSD and the no PTSD groups in terms of likelihood of having, at time of study, anxiety disorders (11% vs. 6%), major depression (0% vs. 3%), and substance-related disorders (0% vs. 0%).

Healthcare use. Following their trauma, the partial PTSD group was no more likely than the no PTSD group to have had a medical appointment (22% vs. 44%), been on sick leave (11% vs. 12%), consulted a mental health professional (11% vs. 13%), or used alternative medicine therapies (0% vs. 25%).

Hardiness and coping. No significant differences were found between the partial PTSD and the no PTSD groups on scores of hardiness and coping.

DISCUSSION

Prevalence of PTSD

Among police assessed in this study, 84% had been exposed to a traumatic event during their shift. Among those exposed, 7.6% had developed full PTSD afterward. This estimate is consistent with several worldwide studies conducted on police. Two studies found that 7% of officers from the Netherlands and New Zealand were diagnosed with PTSD (Carlier, Lamberts, & Gersons, 1997; Stephens & Miller, 1998). A recent study on Brazilian police found that 8.9% of them had full PTSD (Maia et al., 2007). A study by Kessler and colleagues (2005) indicates that the lifetime prevalence estimate of PTSD in the general population is 6.8%. Even though police officers encounter repeated adversities, they do not seem to be at greater risk of developing PTSD than other members of the community. The participants in this study can be considered highly resilient officers with effective adaptation skills. How can these low levels of PTSD symptomatology among such a high-risk population be explained? Diverse explanations are possible for these low levels of posttraumatic symptomatology in police. First, they undergo preemployment psychological screening designed to select fit-for-duty personnel (Marmar, Weiss, Metzler, Ronfeldt, & Foreman, 1996). Police also receive rigorous training for handling stressful incidents, which can provide a form of stress innoculation (Dyregrov, Kristoffersen, & Gjestad, 1996; Marmar et al., 1996). Furthermore, they accumulate day-to-day experience in many adverse situations (Dyregrov et al., 1996). Self-selection may also be present, such that police who cannot handle the stress of the profession may decide to leave the police force early in their careers (Carlier et al., 1997). Another possibility is that police may have purposely decided not to report PTSD if they perceived this condition as a sign of weakness that they must hide from others. An alternative explanation for the low symptomatology found in police samples might be that many police organizations have an employee assistance program that provides free access to mental health services for officers in need.

Impact of Exposure to Duty-Related Traumatic Events

Since police work requires facing repeated adversities, it is necessary for officers to deal with exposure to such events without enduring serious disruptions in normal life functioning. At time of study, trauma-exposed officers were no more likely to have psychopathology and did not score differently on measures of hardiness and coping than non-exposed officers. These results showed that sole exposure to duty-related traumatic events did not lead to impairment among police.

Impact of PTSD on Subsequent Psychopathology

It was hypothesized that police with full PTSD, compared to those without PTSD, would be at higher risk for subsequent onset of psychopathology other than PTSD. This hypothesis was partially supported. Indeed, trauma-exposed officers with full PTSD were more likely to experience major depressive disorder in the aftermath of trauma than officers without PTSD. Substantial rates of comorbid major depression have been reported in PTSD sufferers. Almost 50% of respondents diagnosed with PTSD in the National Comorbidity Survey had experienced major depressive episodes (Kessler et al., 1995). In our study, 60% of the officers with full PTSD developed depression after the trauma. These results are also consistent with recent studies which have shown that only individuals with PTSD, compared to exposed persons without PTSD, are at higher risk for subsequent onset of major depression (Breslau, Davis, Peterson, & Schultz, 2000; Breslau, Davis, & Schultz, 2003). Contrary to hypothesis, trauma-exposed police with full PTSD, compared to officers without PTSD, appeared no more likely to experience anxiety or substance-related disorders afterward. These results are inconsistent with previous epidemiological studies which indicated that PTSD is associated with high comorbidity rates and subsequent onset of drug use disorders (Breslau et al., 2000; 2003; ESEMeD/MHEDEA 2000 Investigators, 2004; Kessler et al., 2005). In a study by Kessler and colleagues (1995), 20% of PTSD cases had a comorbid anxiety disorder. In our study, 20% of the officers with PTSD developed another anxiety disorder in the aftermath of trauma compared to 4% of those without PTSD, but this difference was not statistically significant. It is worth noting that officers who met full PTSD criteria following their trauma had no diagnosis of anxiety, depression, or substance use at time of study, reflecting their capabilities to cope and adjust to critical incidents in the long-term. Police officers undergo screening for psychopathology designed to select fit-for-duty personnel, which might influence the likelihood of their developing comorbidity after trauma.

The officers who developed partial PTSD, compared to those without PTSD, were more likely, after the trauma, to experience major depressive disorder and substance-related disorders. These results indicate that partial PTSD among police officers leads to some impairment with regard to mental health. Similar to the results obtained in our study, veterans with subthreshold PTSD have been found to have higher levels of depression than veterans without PTSD (Grubaugh et al., 2005; Yarvis, Bordnick, Spivez, & Pedlar, 2005). The often-found association between PTSD and depression may reflect shared underlying vulnerabilities (Breslau et al., 2000; 2003). However, officers with partial PTSD in our study were not found more likely to have had anxiety disorders after the trauma or to have met diagnostic criteria for anxiety, depression, or substance use disorders at time of study.

Impact of PTSD on Healthcare Use

Our hypothesis that police with full PTSD, compared to those without, would make greater use of healthcare services was supported. After the trauma, police with full PTSD were indeed more likely to consult mental health professionals, have medical appointments, and be on sick leave.

In our study, officers with partial PTSD, compared to those without PTSD, did not report greater healthcare consumption. Similarly, a recent study failed to find any significant differences between police with partial PTSD and those without PTSD in terms of health-related variables (i.e., history of psychiatric treatment, use of medical services, hospital admissions and physical health rating; Maia et al., 2007).

Impact of PTSD on Hardiness and Coping

It was hypothesized that police with full PTSD, compared to those without, would score lower on measures of hardiness and coping. Contrary to hypothesis, no coping differences emerged between police with full PTSD and those with no PTSD. Regarding hardiness, our hypothesis was partly supported. Officers who met full PTSD criteria, compared to those without, scored lower on the challenge subscale of personality hardiness. The individuals who

scored lower on this dimension appeared less inclined to perceive stressful events as an opportunity for personal growth. They also appeared less open to change and challenges in life. It should be noted that, as mentioned previously, hardiness scores were not significantly different between the trauma-exposed and non-exposed officers, but were lower solely among the exposed officers who met full PTSD criteria. While hardiness is relatively stable over time, it can change under certain conditions (Maddi & Kobasa, 1984). It is difficult to say at this time whether less hardy officers are at greater risk for developing PTSD once exposed to trauma or whether PTSD depletes hardiness. Furthermore, the authors of another police study found that, among the three dimensions of hardiness, only commitment was significantly associated with lower levels of PTSD in women, whereas no dimension of hardiness was significantly associated with PTSD symptoms in men (Andrew et al., 2008). Different dimensions of hardiness may operate differently for the genders.

As for trauma-exposed officers with partial PTSD, they were no different from individuals without PTSD in terms of personality hardiness and coping abilities.

Clinical Implications

Even though this study presents limited evidence of impairment associated with partial PTSD, we urge clinicians and researchers not to overlook the possible implications of partial PTSD. In a police population, having partial PTSD may result in occupational impairment that can diminish performance of work-related tasks and put the officer's safety at risk. Clinical attention and intervention should be directed not only to police who show full PTSD syndrome, but also to those with subsyndromal symptomatology. Since return to work is a high priority in a police population, clinicians could focus intervention efforts on PTSD symptoms that have been found to lead to greater occupational impairment, namely, reexperiencing, hyperarousal, and depression symptoms (Taylor, Wald, & Asmundson, 2006). These symptom clusters are associated with mental alertness and concentration. Furthermore, in occupations requiring that employees work in trauma-related situations, such as police work, avoidance symptoms might also be a good target for intervention.

Moreover, exposure to trauma can not only lead to the development of PTSD, but also trigger a range of other mental disorders. In the aftermath of trauma, clinicians should stay on the lookout for the development of disorders other than PTSD. Since comorbidity with other disorders is to be expected among PTSD patients, careful assessment is needed to adjust treatment. Clinicians should always screen for substance use and major depression, as comorbidity rates are frequent. When a comorbid major depressive disorder is present, it is recommended that the depression be treated first (Brillon, 2004). Early intervention is required with PTSD patients since this disorder typically follows a chronic course if untreated. Moreover, early intervention for primary PTSD is especially important to prevent comorbidity and improve prognosis.

PTSD has also been associated with poorer health functioning and more intense physical symptoms (Gillock, Zayfert, Hegel, & Ferguson, 2005). Not surprisingly, PTSD leads to greater healthcare consumption. Some traumatized police officers may use medical services for physical complaints (e.g., sleep and concentration difficulties) without recognizing or understanding that their physical symptoms are indicative of an anxiety disorder. Psychologists working within a police organization should educate this population about normal or expected stress reactions following work-related trauma and help them distinguish these reactions from pathological stress reactions that warrant clinical attention.

It would be advisable for organizations that employ individuals likely to encounter traumatic events in the workplace to implement strategies designed to prevent or attenuate the immediate or long-term impact of these traumatic events. Such strategies should be based on the literature on protective factors. For example, training of police recruits could focus on the development of personality hardiness. Recently, researchers have described strategies and principles for fostering mental toughness, and a new model of police officer resiliency has been put forth (Miller, 2008; Paton et al., 2008).

Limitations and Strengths

The conclusions that may be drawn from our findings are limited for several reasons. First, retrospective measurement can produce recall error. Also, police culture may promote officers to give more socially desirable answers, leading to underreporting of PTSD symptoms. Moreover, our results concern police officers, a high-risk population, and it therefore remains to be determined whether the results also apply to civilian populations who face trauma. Furthermore, our sample is not entirely representative of all police personnel

working in the Montreal metropolitan area since participation was voluntary and the response rate was low. The possibility that non-participants might have been more distressed or symptomatic cannot be excluded.

Despite these limitations, our study has major methodological strengths. First, the impact of exposure to duty-related traumatic events and of PTSD was measured in a relatively understudied population. Second, a well-validated structured interview was used to diagnose PTSD and other mental disorders, in contrast to the self-administered questionnaires used in many other studies.

Future Research

Prospective and longitudinal studies are encouraged in trauma research to investigate the impact of cumulative stressful events over time, especially for high-risk populations. Further investigation is needed regarding the impact of partial PTSD on work and psychosocial functioning of police personnel. At present, it is not known whether individuals who experience duty-related trauma are more impaired in work functioning than other populations whose trauma is unrelated to work. Predictors of work impairment among officers with PTSD should be studied. Researchers should continue investigating protective factors that enable police officers to adapt to challenges in their work and remain resilient in the face of trauma. Hopefully, with more clinical and research efforts to come, the quality of life of individuals with PTSD will be improved.

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Peer Support Action Plan: Northwest Fire and Rescue

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Abstract: *Cumulative stress among firefighters may present as behavior changes that could be considered destructive for an individual and for the fire crew on which they serve. Through the use of effective leadership and open communication between personnel, destructive behaviors may be mitigated before a cascade of poor decisions affects the health and livelihood of the individual and those around him/her. The Peer Support Action Plan presents several different intervention techniques in order to best cope with destructive behaviors, while providing follow-up and continued support by a trained Peer Support Action Team. The Peer Support Action Plan is not a disciplinary measure nor is it a guarantee of continued employment, but rather a coaching and support strategy to correct behaviors and keep firefighters at their optimum level of functioning and performance through coping efficacy (problem focused and seeking social support). [International Journal of Emergency Mental Health, 2009, 11(3), pp. 177-184].*

Key words: *Peer Support Action Plan, coping, Peer Support Action Team, peer support action plan models, Path-Goal Leadership, mens rea, moral turpitude, self-evaluation, self-monitoring, and Fayol's Bridge communication.*

The purpose of the Peer Action Support Plan is to assist firefighters in adopting a healthy and constructive mechanism for coping with the stressors associated with high stress situations. Utilizing coping appraisals and coping strategies (Lazarus, 1966; Lazarus & Folkman, 1984) has been shown to reduce anxiety and stress (Jones, Hanton, & Connaughton, 2002). Effective coping strategies of problem-focused coping and seeking social support have proven helpful in the fire service (Dowdall-Thomae, 2008; Dowdall-Thomae, 2009). The stressors associated with fire/EMS work have the ability to accumulate over time (Antonellis & Mitchell, 2005) and to manifest as destructive behaviors that take a toll on personal, familial, and professional environments. Having the appropriate support in place that utilizes a trained Peer Support Action Team allows the members of fire departments to effectively and successfully cope with the events causing the stress, to become educated about

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options and consequences, and to make successful changes. The plan may be used to prevent further deterioration or may be used to intervene to help a firefighter become aware of changes they need to make through problem-focused coping and with social support (Dowdall-Thomae, 2009).

Fayol's Bridge and Respect for the Chain of Command

The Peer Support Action Team follows the principle of Fayol's Bridge. This concept was developed by Henri Fayol (Sashkin, 2003) regarding effective communication between individuals without going through the chain of command. Although the chain of command is to be respected, there may be times when Fayol's Bridge can be applied directly to a situation to reduce conflict and promote problem-solving strategies that are solution oriented. Henri Fayol, one of the founders of management and leadership theory and practices, pointed out that sometimes the chain of command can distort communication, creating further problems. The Peer Support Action Team uses the Fayol Bridge concept in communicating concerns about a firefighter by taking concerns informally and directly to the individual in question without going through the chain of command (see Adminstrative Support section). All disciplinary actions are addressed formally and through the chain of command. The purpose of Fayol's Bridge is to redirect an individual by having informal and direct communication, thereby, creating a positive outcome before it requires formal disciplinary action. With more individuals involved in a problem, the more complex the problem may become because of individual perceptions and filtering systems. Obtaining truthful and factual information to help redirect a firefighter, communicated directly versus indirectly, is viewed as best practice in implementing the Peer Support Action Plan.

Additionally, in 1916 Henri Fayol stressed the importance of managers promoting harmony and unification, thereby making it their responsibility to maintain morale (Toegel, Anand, & Kilduff, 2007). Another responsibility of managers, stressed by Chester Barnard in 1938, was the importance of managing informal communication to promote morale (Toegel, Anand, & Kilduff, 2007). Over-professionalization, with the use of formal communication, may possibly create fear, anxiety, and disconnectedness thus reducing morale, unification, and, ultimately, harmony.

Leader Member Exchange

Dialogue and interaction between members of a functional work group (e.g. an engine company) begin at the time of assignment to the position and continue throughout one's career. The traditional communication hierarchy is developed through repeated interactions in a close working environment, such as the subordinate-boss relationship, which is defined and fostered through daily interaction and job duties. The members of a functional work group will develop a higher level of interactions and trust as demonstrated in the Leader-Member Exchange theory, creating an "in group," that has personal bonds established that are more than formal hierarchical relationships (Robbins, 2003). Such connectedness and cohesiveness among firefighters and their crew members is considered essential.

Path-Goal Leadership

In addition to the Leader-Member Exchange (LMX; Robbins, 2003) that is transpiring on a continual basis within the functional work group, the personal development of team members may be accomplished through the clear definition of expectations, as provided in policy and procedure in addition to job description and prerequisites for the position. With a developmental path defined for personnel, a leader is taught to adapt to the *Path-Goal Style of Leadership* (House, 1996), which guides the individual to a predetermined goal, while minimizing the number of barriers (Robbins, 2003; House, 1996).

The Path-Goal Leadership Model (House, 1996) has four leadership styles to best match the personalities of the employees. The first style is that of a *directive leader.* These leaders let followers know what is expected, provide timetables, and give specific guidance. A *supportive leader* shows concern for the needs of followers and uses encouragement to motivate. A *participative leader* consults with followers and uses their input in the decision making process. Lastly, the *achievement-oriented leader* sets challenging goals and expects followers to perform at their highest level, while encouraging standards (Robbins, 2003; House, 1996).

The Path-Goal Leadership Model (House, 1996) used by peer support also forms the basis for the *Peer Support Action Plan* (PSAP) by giving a firefighter the tools, ability, and support, along with clear expectations, to obtain internal and external locus of control, thereby achieving desired career

goals. Internal locus of control has been shown to produce higher job satisfaction, accomplished through a participative and supportive style of management in which personnel have the ability to control and participate in their own destiny (Mitchell, Smyser, & Weed, 1975). On the contrary, firefighters who respond better to external controls have the same increased satisfaction with a directive leader versus a participative leader (Mitchell, Smyser, & Weed, 1975). By utilizing the Path-Goal Theory method of leadership in the PSAP, both types of personalities, internal and external locus of control, involve the individual and their Peer Support Action Team to explore needed changes using these concepts. The PSAP process allows a plan of action that still gives firefighters the ability to make their own decisions and have the choices given to them in terms of positive or negative consequential outcomes.

The firefighter that has already adopted maladaptive coping mechanisms identified by his or her peers and is headed towards a further decline of professional capabilities may need additional levels of support. Therefore, this is not a disciplinary measure against an individual; this is a peer-structured effort to communicate informally, to intervene positively, and to stop the further erosion of personal and professional capabilities due to destructive behaviors. It is ultimately a preventative measure aimed at situations that could negatively affect a firefighter's personal life, as well as, their career.

Peer Support Action Plan

The Peer Support Action Plan (PSAP) is a strategic framework for peers; it has the ability to be individualized for each unique situation. Because the workplace is a socio-emotional system (Toegel, Anand, & Kilduff, 2007), Peer Support Action Plans may help to reduce negative emotions and toxicity that are a real threat to this system by increasing positive social support that may enhance performance. PSAP is an additional tool to be used in the preservation and optimization of the personal and professional lives of each fire family member. This is not a stand-alone measure intended to replace the everyday contact and fundamental foundation formed between the officers and the firefighters of a crew/station. The need for consistent communication between co-workers will diminish barriers that may inhibit an individual from seeking assistance regarding a professional or personal issue. Promoting an honest and open dialogue between crew members may assist in maintaining efficiency, in addition to increasing personal satisfaction. In times of firefighter distress, a concerted effort may need to be made by ones co-workers and friends in order to assist their peer in correcting destructive behaviors. In the event of a PSAP intervention, the life and work connections of the firefighter will be addressed in order to achieve factual information for problem solving.

Education and Prevention

Awareness, through education of choices and situations to avoid, is extremely important on the front end of the Peer Support Action Plan. Likewise, a leadership management education component of the Peer Support Action Plan is encouraged for administrative support. Henri Fayol, a proponent of managerial education and training (Parker & Ritson, 2005), expressed concepts taught that enhancing leadership was important to an organization.

A training presentation for leadership and for firefighters regarding behavioral expectations that have ramifications extending beyond employment (i.e. receiving a DUI off duty) is created for each member to view so they may gain a better understanding of standards of conduct, as well as the legal and social consequences that may result if a member violates rules. The education and prevention component is a key element for the realization of potentially destructive behaviors through first-hand experiences of other peers, who are willing to share lessons learned and the ways in which peers intervened. The Peer Support Action Team presents information regarding their training requirements, ethics, confidentiality, and contact information.

Delivery and interaction of all components of the PSAP is done without regard to rank or fear of punitive measures by utilizing Fayol's Bridge communication strategy. The intent is to foster an environment of honesty where there is fluid dialogue. In addition to honest, open dialogue regarding actions and consequences of behavior, it is very important to define the facts of an alleged problem. Once again, truthful and factual information will need to be obtained to best assist and to help a firefighter make the necessary changes for the best outcome. The Peer Support Action Plan is discussed in this training presentation regarding what the PSAP is and how the Peer Support Action Team can be activated.

Administrative Support of the PSAP

Just as education through awareness is important in making effective choices, so are the expectations of leadership that all firefighters will make choices that represent the fire department's ethical standards of conduct. Administrative leadership has expectations that all members will demonstrate self-accountability and will self-evaluate behaviors (Glasser, 1998) that are good and moral. Through managerial education (Parker & Ritson, 2005), leadership will have an understanding of self-monitoring (Toegel, Anand, & Kilduff, 2007) and self-evaluative practices (Glasser, 1998). Peer Support also uses leadership qualities of role modeling, and implements functional rules of conduct, such as, "Do as I say, do as I do" versus the dysfunctional rule of, "Do as I say, not as I do." Positive behaviors produce a healthy socio-emotional system (Toegel, Anand, & Kilduff, 2007).

In the cases of firefighters whose behaviors are considered marginal, who are on the verge of moral turpitude (conduct that is considered illegal), or mens rea – having a guilty mind (Ochberg et al., 2003), or who are having problems following department policy because they are making poor choices, administrative leadership will support the member in the following ways.

- To make the right choices.
- To understand negative consequences of their uncorrected actions.
- To be given an opportunity to correct their actions through the use of the Peer Support Action Plan (PSAP) and Peer Support Action Team.

The PSAP will give firefighters the opportunity

- To explore behaviors.
- To explore positive consequences of corrected behaviors.
- To make a plan to correct their actions with the support of their peers.

The Peer Support Action Plan is an opportunity to bring firefighters along and to help them raise their standards of conduct. Administrative leadership supports all corrected behaviors and all members elevating themselves to a higher level of conduct. The positive consequence to self-evaluation (Glasser, 1998) and to self-accountability is that they foster positive outcomes for the members and for the organization. They may provide many lessons that will enhance a fire family to raise organizational standards of conduct.

When there is willful moral turpitude (conduct that is considered illegal or contrary to community standards of conduct) or mens rea – a guilty mind committing a wrongful act knowing that it is illegal (Ochberg et al., 2003), other disciplinary actions may take place that are out of the realm of the Peer Support Action Plan. Such disciplinary actions will go through the chain of command.

Additionally, conflicts may develop within the firehouse between firefighters. According to Spector in 1997, unresolved negative conflict may also lead to retaliatory covert behaviors and anti-social acts (as cited in Meyer, 2004). Ultimately, unresolved conflict, as stated by Luckenbill and Doyle, 1989, may result in violent behaviors (as cited in Meyer, 2004) or may be expressed in a verbally abusive manner. Firefighters are exposed to trauma, sometimes on a daily basis, creating stressors that are expressed by some crewmembers as irritability which may lead to verbal abuse, creating further conflict in the firehouse. The negative aspects of stress, conflict, and decreased performance point to the importance of a proactive Peer Support Action Plan with the use of the Peer Support Stress Management SAFER Model (Everly, 2006), Peer Support Mediation Model (Dowdall-Thomae & Culliney, 2009), and the Optimum Performance Plan Model (Dowdall-Thomae & Culliney, 2009). The PSAP is comprised of these three models. The Peer Support Action Team is required to meet to discuss the factual information, plan intervention strategies, and give assignments.

Peer Support Action Plan – Prevention and Intervention Strategies

Purpose

- To assist our peers with helpful guidance for identified performance concerns

Goals

- Maximize employee retention
- Maximize employee satisfaction
- Maintain and optimize levels of performance, which may include the suggestion of an educational program and/or rehabilitation, where all fees will be covered by the member.

Identification of concerning behavior

- Shared concern among peers with an individual's performance
- Peer initiated only, cannot be mandated
- Falls outside of/not associated with the disciplinary matrix

Confidentiality

- No documentation
- No e-mails
- Verbal communication only

Location

- Neutral
- Private
- Comfortable
- Confidential

Procedure

1. Pre-Peer Support Team Meeting
   - Variable group size to include one facilitator trained in peer support and/or mediation
   - All Peer Support Action Team members involved in the intervention must be involved in the pre-intervention meeting and post-intervention meeting
   - Rules and roles set by facilitator
2. Peer Support Action
   - Caring and respect are top priorities
   - No rank
   - Model Utilization

1. ICISF Peer Support Model
2. Peer Support Mediation Model
3. Optimum Performance Plan Model
   - Stay within guidelines set by facilitator
   - Suggested actions
   - Peer Support Team commitment to the firefighter(s)
   - Obtain commitment from the firefighter(s) *during the intervention*
3. Peer Support Plan
   - Assign Peer Support Team Member(s) for continual follow-up with the firefighter(s)
   - Education and/or treatment
4. Post Peer Support Team Meeting
   - Retention Strategy
   - Confidentially commitment
   - Follow-up commitments

The Peer Support Action Plan is designed to be flexible and adapt to the needs of the users. This is not a stand-alone measure; good team building principles and open dialogue between all firefighters involved are required in order for everyone to receive the most benefit from the plan and for everyone to ultimately achieve their highest potential. A Pre-Intervention Peer Support Action Team Meeting will be set prior to the intervention.

Models

ICISF-Individual Crisis and Peer Support Model-SAFER-R (Everly, 2006)

1. **S** tabilization
2. **A** cknowledge
   - Event
   - Reactions
3. **F** acilitate an Understanding
   - Meet basic needs
4. **E** ncourage Effective Coping
5. **R** eferral and Recovery

Peer Support Mediation Model (Dowdall-Thomae & Culliney, 2009)

1. **I**ntroduction- Introduce the two mediators. What mediation is and what it is not… the facilitator and the second mediator will NOT take sides or correct anyone in the process. Facilitator and second peer mediator may remind those in the mediation of the ground rules below.

2. Rules to SELECT to get along
    - **S**olution focused
    - **E**ffective Communication- Word choice, tone of voice, reflective listening, direct communication (no passive aggressive remarks) and ask questions etc.
    - **L**esson focused and lessons learned (for self and situation)
    - **E**ncourage Understanding
        - o Understand perceptual differences
        - o Ask clarifying questions
        - o Understanding does not mean agreement
    - **C** onfidentiality
    - **T** reat others the way you want to be treated.
        - o Respectful behaviors- no interruptions
        - o No Yelling
3. Controlled Dialogue- No interruptions.

   First person speaks. Second person reflectively listens.

   Second person speaks. First person reflectively listens.
4. Open Dialogue- Solutions explored and agreed upon.
5. Implementation Plan- What each person is going to do to correct the conflict and to get along.

Optimum Performance Plan (OPP; Dowdall-Thomae & Culliney, 2009)

- Introductions and purpose (setting the environment)
- Rules of Respect
    - o Confidentiality
    - o Dedication to our member's success
    - o Respectful communication
- Recognition and Encouragement Statements (from Peers)
- Exploration from member(s)
    - o Responses (cognitive affect)
    - Solutions
        - o Planful Problem Solving
    - Positive Reappraisal- Meeting the Challenge and Benefits to Change
    - Optimum Performance Commitment Plan
    - Follow-up- continued support

Post-Intervention Peer Support Action Team meeting will take place immediately after the intervention for follow-up assignments and implementation of the plan.

Conclusions

To promote a healthy socio-emotional system (Toegel, Anand, & Kilduff, 2007) by providing healthy and effective coping strategies, such as social support, positive reappraisal to meet the challenge, and problem solving (Lazarus, 1966; Lazarus & Folkman, 1984; Dowdall-Thomae, 2009), and by having peer support team members trained in the Peer Support Action Plan, organizational leadership may indeed save careers. Critical Incident Stress Management was created out of a need to mitigate stressors of emergency services personnel (Mitchell, 2008). Further development of retention plans like the Peer Support Action Plan is also being born out of necessity.

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Disclaimer: The purpose of this plan is to bring further awareness to the firefighter about behaviors that need to be changed. There is no guarantee that the completion of this plan may preserve a member's employment. Correspondence regarding this article should be directed to cdowdall@northwestfire.org

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You're It!
How to Psychologically Survive an Internal Investigation, Disciplinary Proceeding, or Legal Action in the Police, Fire, Medical, Mental Health, Legal, or Emergency Services Professions

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Abstract: *Rightly or wrongly, law enforcement, public safety, medical, mental health, legal, and emergency services professionals may have to face internal investigation, disciplinary measures, license suspension, criminal prosecution, civil lawsuits, and/or personal life disruption related to actions taken in the course of their work. This article describes the main categories of misconduct – or simply mistakes – that can cause different types of professionals to be investigated, charged, prosecuted, and/or sued. It next discusses the kinds of psychological reactions commonly seen in workers who face these kinds of proceedings. Finally, the article offers a set of practical psychological coping strategies and procedural recommendations for dealing with the stresses of an investigation, administrative action, or litigation, and for mitigating their effects on one's life and career. [International Journal of Emergency Mental Health, 2009, 11(3), pp. 185-190].*

Key words: *Emergency services stress, excessive force, fitness-for-duty, internal investigation, law enforcement stress, official misconduct, police psychology, professional misconduct, public safety stress.*

You hope it never happens to you: You receive notice that you will be the subject of an Internal Affairs investigation, disciplinary proceeding, administrative action, or legal charge. For some clinical and public safety professionals, this comes as a complete shock; for others, it confirms what they've suspected has been brewing for a long time. Either way, you expect that your whole life is about to change.

The purpose of this article is not to provide legal advice, and for purposes of this discussion I take a neutral position as to the validity of any particular case against you. Similarly, this article is not about second-guessing the decisions of law enforcement, public safety, and mental health administrators, the overwhelming majority of whom are honorable public servants, dedicated to the welfare of their personnel and their communities. The primary purpose of this article is to provide practical information on coping with the psychological stress of an internal investigation, disciplinary action, or legal charge, and its aftermath.

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Who Gets Investigated and Why

In my years of practice, I've counseled, advised, treated, and/or forensically evaluated a range of professionals who have been investigated, disciplined, suspended, terminated, criminally prosecuted, lost their licenses, and/or been sued in civil court for a variety of reasons (Miller, 2004, 2006b, 2008c). This list is not exhaustive, but represents the most common factors in my experience.

Police officers. Excessive force; abuse of authority; substandard performance; corruption; theft; drug dealing; domestic battery; intoxication on duty; misuse of weapons or other equipment; racial discrimination or insensitivity; sexual harassment; perjury in court; conduct unbecoming an officer, on- or off-duty.

Public safety personnel. This usually includes firefighters, paramedics, and other non-law enforcement public safety personnel. Infractions typically involve incompetent or substandard practice; illegal or embarrassing behavior on- or off-duty; excessive conflict with members of the work team; mistreatment, abuse, or harassment of a citizen during a call.

Medical doctors. Malpractice or substandard care; medication overprescription; personal abuse of legal drugs or illegal substances; sexual harassment or impropriety with patients or staff; improper business relationship with patients or staff; billing or insurance fraud, or other financial impropriety.

Mental health clinicians. Malpractice; improper sexual relationship with patients; improper business relationship with patients; billing fraud; suicide of a patient (clinician failed to observe standard duty of care, which would constitute malpractice, or family is just distraught and angry and seeks to blame someone); failure to observe duty to warn or protect third parties (in states which have this statute); failure to report child abuse (all states require this); record-keeping infractions.

Attorneys, judges, prosecutors. Malpractice (usually substandard legal representation); violation of attorney-client privilege; subornation of perjury (encouraging or abetting a client to lie under oath); judicial misconduct; financial fraud; drunk driving or sexual misconduct charges.

Protective services or court personnel. These are usually child welfare investigators, guardians ad litem, or victim services personnel who misuse their authority. In most cases, these involve issues of substandard performance, as when the neglected home visits of a child welfare worker result in the child's injury or death.

Clergy. These usually involve sexual indiscretion or financial fraud.

Other. Airline or other transportation crew personnel (usually intoxication, failure to follow standard flight procedures, or improper behavior with coworkers or customers); corporate or government managers or executives (almost anything, from sexual harassment, to financial fraud, to abusive management style); political figures (problems usually revolve around sex and/or money).

What do these professionals have in common? They all occupy positions of *high public authority and trust.* Society places great power and responsibility in their hands and so we hold them to a higher standard of personal and professional conduct than other types of workers. Supervisors in these fields take the position that tolerating even a few bad apples can have devastating repercussions – practical, professional, political, financial – on their respective fields as a whole. Hence, to preserve the honor and integrity of these professions and the public trust on which they rely, investigators may be especially zealous in pursuing those who are suspected of breaking the rules.

Possible Consequences of an Internal Investigation

Although there can be several kinds of administrative and legal repercussions from a particular action, probably the one that is feared and loathed the most is the departmental internal investigation, because this comes from inside the tribe, from one's fellows and professional compatriots, from the folks that we feel should *understand.* While the details vary from agency to agency, there are several possible outcomes of a departmental internal investigation.

Exoneration. The charges are found to have an insufficient basis to sustain them, the worker is thanked for his/her cooperation, and is returned to duty.

Discipline. The investigating panel concludes that the worker did do something wrong, but not severe enough to be terminated, so he/she may be subject to a range of sanctions, from suspension without pay, to demotion in rank, reassignment to other duties, removal from a special unit, verbal or written reprimand, or other measures.

Termination. The charges are either serious enough in themselves, or the infractions show a recurring pattern, to warrant the worker being fired from the agency.

Criminal prosecution. The case is serious enough to be turned over to local or federal prosecutors for further investigation that may lead to criminal charges being brought against the worker, most commonly in excessive force cases or cases in which the worker was involved in outright criminal activity.

Civil lawsuit. This is an action that may be taken by a third party who sues the worker – and typically the department and the municipality as well – for physical, emotional, financial, or other damages. Most commonly, the plaintiff is the subject (or the surviving family member of a deceased subject) of an allegedly excessive action (police beating, tasing, or shooting) or of an insufficient action (paramedic incompetence or neglect of procedure), or the direct or indirect victim of the worker's negligent or improper behavior (e.g. a pedestrian is crippled in a crash involving an unsafe police vehicle chase; a bedridden citizen dies because a firefighter neglected to do a room search of a burning residence; a mental health patient commits suicide because she couldn't reach her therapist by phone for several days). Even if the department or agency is not directly involved in this lawsuit, the worker's personnel file and other records may be subpoenaed by plaintiff or defense counsel for use in the case. For medical, mental health, and legal professionals, this may involve a malpractice lawsuit.

License Suspension. For medical, mental health, legal, and other licensed professionals, this usually involves complaints made to their state licensing boards. If the board chooses to investigate, it may impose sanctions, such as a period of supervised practice, temporary license suspension, or, if the violation is severe or repeated, permanent revocation of the license to practice in that state.

Personal damage. Ruined reputation, family crisis, financial disruption, reduced employment prospects, media intrusion, and personal mental health and substance abuse problems are all possible sequelae to the stress of being charged and investigated.

Psychological Reactions to an Internal Investigation and Other Actions

Again, while each worker will respond individually, based on his or her unique personality, temperament, and personal history, certain reaction patterns occur fairly commonly.

Fear. Suddenly, your career is on the line – and, if you're like most clinical and public safety workers, so is your whole sense of personal and professional identity. Most commonly, something like this has never happened to you and you don't know what to expect. There are good moments, when you're able to put it out of your mind and hope for the best, and bad moments when you are close to panic.

Anger. "I can't believe this is how I get treated for doing my job!" If you feel that your actions were justified or that the department is making a big deal of this case because of political pressure, a personal vendetta, or just because the powers-that-be can't or won't understand the full story behind your conduct, then you're going to be mad as hell. Even worse is when you believe that the discipline was meted out unfairly: "I know a dozen guys/gals who've done the same thing as me – or far worse – and nothing happened to them." Fear and anger typically alternate in a swirling spiral of emotions that may make it difficult to think clearly at just the time that clear-headedness is vital.

Hopelessness/Helplessness. Many charged workers go through periods where they just crash and feel demoralized and defeated: "If something like this can happen, then what the hell's the point of anything?" Motivation is sapped, energy is drained, and you shuffle around like the living dead. Then, boom – something happens and the anger and panic come flooding in again. These kinds of roller-coaster emotional cycles can prove debilitating over time and start to convince you that you're going insane.

Recklessless/Revenge. Sometimes, as a reaction against feeling like an impotent victim, you'll get the urge to act out in some way: "Okay, they think I'm a criminal, I'll show them how bad I can really be." This is probably a subset of the angry response discussed above. In these instances, it may be really hard to fight the temptation to figuratively stick a thumb in the eye of your tormentors but, as further discussed below, it is vitally important to consider the big picture and keep such impulses in check.

Guilt. As much as you hate to admit it, maybe there was some way you contributed to your own plight. Look, none of us is a complete angel and we're all subject to human temptation and emotion. Okay, so the jerk jabbed you with a hidden syringe while you were trying to cuff him, and you whacked him with a baton. Or you did get overflirty with the cute college student at the crash scene and spent way too much

time attending to her minor wounds, to the neglect of the trucker with the compound fracture. Perhaps you convinced yourself that you were doing your divorce client a kind favor when you offered to let her place her funds in your private bank account, so her scheming husband couldn't get his hands on them. Or it was a crushing day at the clinic, you were overbooked and overwhelmed with patients, so you let a few chart notes slip which resulted in a patient getting a dangerous dose of unneeded medication. Or, as is so often the case, maybe you know you really did something wrong but never thought you'd get nailed because everybody does it and gets away with it but – just your luck – you got pinched. In such cases, fear, guilt, anger, and paranoia may all percolate and magnify your distress: "What was I thinking?" "How could I have been so stupid?" "Everybody does it and I get caught!" "I'll bet this was a set-up – they've had it in for me for a long time!"

Clinical syndromes. These may be physical, such as headaches, stomach problems, or sleep disruption; or psychological, including panic disorder, depression, or sometimes full-blown PTSD. Alcohol or substance abuse is a distinct risk, further compounding the problem. If you're getting overwhelmed by the stress of the investigation to the point where you're not able to function, it's time to get help because you're going to need to be as strong as possible to handle what's ahead.

Psychological Coping Strategies for Dealing with an Internal Investigation and Other Actions

The following are some psychological coping strategies you can utilize and adapt to the unique configuration of your personality and the individual circumstances of your case. Many of these have been developed out of my work with law enforcement officers and workers in public and private organizations (Miller, 2006a, 2006b, 2007, 2008a, 2008b, 2008c), but they are equally applicable to all of the groups of professionals described in this article.

Don't panic. Notice how I didn't say "don't worry," because that would be like telling you, "don't let it hurt you" after you've just been busted in the kneecap with a baseball bat. You're bound to experience a certain amount of anxiety from now until your case is resolved one way or another; the goal is to deal with it without becoming too overwhelmed to function. Try to learn and utilize a number of basic stress-management techniques, just as you would if you were faced with the prospect of a serious illness (Miller, 2008b; Rom, Miller, & Peluso, 2009). You can do this on your own through recordings and manuals, or you can seek the aid of a qualified mental health professional. This won't necessarily make you a happy camper, but you'll at least be able to set up and maintain your camp.

Strategize. One of the nasty things about anxiety is that it knots up your brain and keeps you from thinking clearly. At some point, sit down and figure out what you're going to do. Review the actions that led to the investigation. Be clear about what's being charged and what your options are. The game plan you develop may be modified multiple times as new information comes in and contingencies change, but at least you'll *have* a game plan, which will give you a little bit more feeling of control.

Get legal help. Retain competent, qualified legal representation, whether it's your departmental legal rep provided to you by your agency or private counsel that you independently hire. This professional will help you focus your activities so that they will be most likely to help you, not hurt you. The rule of thumb before you take any action on your own behalf is "Ask your lawyer first." You can disagree with your attorney, you can argue with him/her and, ultimately, you can choose not to take his/her advice, but use this person's knowledge and experience to guide your efforts so that they'll be maximally productive.

Keep a low profile. There may be a great temptation to "take it to the streets," to publicize your trials and tribulations so that the whole world will rise up and declare with one voice, "No, we shall not let this injustice stand!" Forget about it. Except for a few close family members and allies, most people's reaction will be more like, "Sucks to be you, so what else is new?" Aside from this apathetic response, turning your case into a crusade and making yourself the poster-boy/gal for wrongful discipline will, in most cases, only backfire and damage your chances of being exonerated or, if you've already been sanctioned or terminated, diminish your chances of being reinstated.

That's because one of the primary principles of any negotiation is to *make it as easy as possible for the other side to give you what you want.* They're much more likely to do that if you can hand them a face-saving way of letting you slide, such as: things aren't as bad as they first appeared; new information has come to light; intelligent, well-meaning individuals can sometimes make ill-informed decisions, but

once they clearly see how their reasoning got sidetracked, they will of course do the honorable things and reconsider; and so on. But if you turn this into an us-versus-them contest of wills – and especially if you do your best to blab it to the world – they'll have no choice but to defensively dig in their heels and redouble their efforts to expunge you.

Meanwhile, beware of those who are only too eager to make your case their own *cause celebre.* A cottage industry has sprung up of individuals and organizations who offer to consult, represent, and support workers who feel they've been wrongly disciplined: click on the web and you'll find their sites easily. Many of these outfits in fact do some good work and can be of substantial benefit to your case, if guided by common sense and the counsel of your own attorney. But be careful if any of these helpers seem a little too keen on pushing their own agenda or nudging you to say or do things that don't necessarily bear on your case or that otherwise seem irrelevant or uncomfortable. Always ask yourself and them, "how will this or that recommended action help or hurt *my* case?" Then, discuss it with your lawyer.

Keeping a low profile also means staying out of further trouble. During a suspension, with too much free time on your hands, and "lousy" being your predominant emotion, you may be tempted to go out, have some fun, and raise a little hell while you still can. Don't. From now until this case is resolved, behave as if there is a surveillance camera on you 24/7. No, it's not fair for you not to have a life, but remember the point about the big picture: how do you want this to end? Do you want your review or appeals board to be on the verge of cutting you a break, only to learn at the last minute that you were just pulled over for a DUI, were involved in a domestic violence call, got into a bar fight, made threatening phone calls to an obnoxious neighbor, or were seen out partying, as if this whole affair were just one big joke to you? You may be bummed-out, stressed-out, and ticked-off, but don't shoot yourself in the foot. Tough it out and work toward a favorable resolution.

Work your case. This might also be termed *obsess constructively,* and is actually a better way of utilizing all that nervous energy you were just advised to squelch. Since you're going to have all this free time, and since even the best attorney can't do everything by him/herself, you might be able to serve as the point-man/woman on your case and start doing some research. Create a card or disk file and keep it organized. If this clerical or computer stuff is not your strong suit, get help. You may lack the legal training and experience to distinguish what's really useful from what's bogus but, in the beginning, be comprehensive: haunt the library and scour the internet. The more information you can glean that's helpful to your case, and the more clearly you organize it, the easier time your attorney will have punching it up into a form that will get your point across to those who have your fate in their hands. Just remember – check everything with your lawyer first. Be a helper, not a pest. If nothing else, constructive action on your own behalf can help psychologically detoxify the feeling of helpless rage that would otherwise mire you in a state of self-destructive despair.

Don't lie. Let me say this again: *do not lie.* One attorney I know put it delicately: "All you need is one tiny crumb of bullshit to stink up the whole room." Translation: If I think you're lying to me once, what are the chances of me ever believing anything you say again? This goes for what you tell your attorney, their attorney, investigators or examining clinicians, or attest to in any deposition or court testimony. I've had more than one Internal Affairs investigator tell me something like: "Look, I know the guys think we're all a bunch of self-righteous ferrets, and if a worker did something truly wrong, it's our job to get it out. But we're professionals, too; we've been out there where he/she is and we understand the strains and pressures of the job. So if there's a way we can find something justifiable in the worker's actions, we're not going to bust someone's chops just for spite. But what we can't tolerate is a liar, because then you're just handing us the shovel to bury you with."

Seek mental health counseling. If you need it, that is. Not everyone, even those under severe stress, needs to be in psychotherapy. If you feel you can deal with this on your own, then all power to you. But the right counselor can make a tremendous difference at those times when it looks like it's all going to hell and there's no one else you can vent to, either because your usual sounding boards are getting tired of hearing it or you don't want to further burden them. Many workers who have faced disciplinary or legal action have noted that having a mental health clinician in their corner was not only a source of emotional support, but was an invaluable resource for providing frequent, needed reality-checks that kept the worker from acting like a royal blockhead and screwing up his or her own case. Again, if you seek the services of a mental health counselor, let your attorney know and, if you want the two professionals to communicate, be sure to sign the appropriate release forms.

A special application of the earlier issue of what and how much to say to whom sometimes arises in a psychotherapy context, where the worker has sought or been referred for counseling (not part of the investigation itself): "Listen, doc, I don't know if I told this part of the story yet, but I'm afraid if I tell you something, you'll report it – we're protected by confidentiality, right?" Answer: doctor-patient confidentiality says I can't violate our trust unless you are a clear and present danger to yourself or others, or I become aware that you're physically or sexually abusing a child. So, in most cases, what you say in my office stays in my office. But doctor-patient confidentiality is still not as inviolate as attorney-client privilege (or, for that matter, clergy-parishioner privilege) so, theoretically at least, a judge could issue a court order for my records and jail me for contempt if I refused to produce them. In all my years of practice, this has never happened to me or to any psychologist I know, and it would probably have to be a matter of national security for something like this to occur but, theoretically, it could happen.

Even then, by the time you get to the therapist's office, you've probably told your story so many times to so many people, that it's unlikely he or she is going to learn anything startlingly new from you at that point. Nevertheless, for your own peace of mind, if there's something you don't feel 100% safe telling a mental health counselor, then don't tell them, at least for now. Talk it over with your attorney and if he/she says its okay, then feel free to let it all out. However, if your legal counsel tells you to clam up about a particular detail, then mum's the word, and a good clinician can still do productive therapy around those little holes in the road. In such a case, a competent and ethical mental health clinician will appreciate your openness, but will want you to feel secure so that you and he/she can work together effectively. Conversely, any mental health clinician who seems to be pumping you for information should be asked why this particular piece of information is so important to them.

Have a Plan B. And, preferably, a C and a D, too. If, despite your best efforts, worse comes to worst and it looks like your professional career in this field is over, have some contingency plans made ahead of time for what you're going to do in your new life. Understandably, this kind of advance planning is harder than it sounds because the mere acknowledgment of any Plans B-Z may seem like a pessimistic capitulation to the possibility of failure of Plan A, which is keeping or reinstating your present job. But make these contingency plans for the same reason people buy insurance: you hope the big one doesn't hit, but if it does, you want to be prepared.

So don't give up: fight the good fight in every legitimate way that you can, but in the meantime, check out alternative employment opportunities, get some additional training, finish that degree you always promised you'd complete, call up some old contacts and call in some old favors, reconnect with your family, and so on. Remember, the clouds won't weave their own silver lining and the lemons won't squeeze themselves to make lemonade – *you're* going to have to do it. Acting rationally, constructively, and courageously on your own behalf can be one of the most stress-reducing and self-empowering actions you can take to finally climb up out of the hole and walk in the sun again.

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Selected Annotated Journal Resources

Brynn Huyssen, B.A. and Nicole E. Schechter, B.A.

Dixon. L.J., Leen-Feldner, E.W., Ham, L.S., Feldner, M.T., & Lewis, S.F. (2009). Alcohol use motives among traumatic event-exposed, treatment-seeking adolescents: Associations with posttraumatic stress. *Addictive Behaviors*, 34, 1065-1068.

TYPE OF ARTICLE

- Original Empirical Investigation

OBJECTIVE/PURPOSE OF ARTICLE

- To determine the association between posttraumatic stress symptoms and motives for alcohol use in a sample of adolescents, all of whom had been exposed to a traumatic event.

METHODS

Participants

- Forty-nine adolescents between the ages of 14-17 years who were receiving group-based residential treatment and who reported at least one incident of alcohol use in the past year and exposure to a traumatic event, as defined by the Diagnostic and Statistical Manual-4th Edition (DSM-IV, American Psychiatric Association).
- An estimated 70 percent of participants reported alcohol use within the last month.

Materials

- The *PTSD Module of the Anxiety Disorders Interview Schedule-Child Version* (ADIS-C) was used to assess exposure to a traumatic event and accompanying subjective experiences.
- The *Child PTSD Symptom Scale* (CPSS) was utilized to measure symptom levels of posttraumatic stress
- The *Youth Risk Behavior Survey* (YRBS) and the *Adolescent Alcohol and Drug Involvement Scale* (AADIS) were used to measure frequency of alcohol use.
- The *Drinking Motives Questionnaire-Revised* (DMQ-R) was used to measure four drinking motives: coping, conformity, enhancement and social motives.

Procedure

- All participants completed the self-report measures during pre-treatment.

RESULTS

- Four motives for drinking were investigated: coping (to decrease internal negative states), conformity (to decrease negative social outcomes), enhancement (to increase internal positive states), and social (to increase positive external outcomes).
- No gender differences were found with respect to any of the four drinking motives
- Female participants endorsed significantly greater levels of posttraumatic stress than did male participants.
- Hierarchal regression analysis revealed that CPSS scores were significantly associated with co**p**ing motives, but not with any other drinking-motives.
- When evaluating the associations between coping motives and posttraumatic stress symptom clusters, coping was significantly related to the symptoms of re-experiencing, hyperarousal and avoidance.

CONCLUSIONS/SUMMARY

- These findings support the "self-medication" hypothesis: youth who have been exposed to a traumatic event may use alcohol to cope in relation to posttraumatic stress symptoms.

CONTRIBUTIONS/IMPLICATIONS

- Findings support previous studies in which associations were found between traumatic event exposure, posttraumatic symptoms and alcohol use among adolescents.
- Findings add to the existing body of knowledge that supports alcohol consumption as a coping method, and is an important factor when examining the development of alcohol use in trauma-exposed adolescents.
- It is suggested that future studies examine the association between alcohol use as coping in adolescents who meet full PTSD diagnostic criteria.

Zerk, D.M., Mertin, P.G., & Proeve, M. (2009). *Domestic violence and maternal reports of young children's functioning*, Journal of Family Violence, 24: 423-432.

TYPE OF ARTICLE

- Original Empirical Investigation

OBJECTIVE/PURPOSE OF ARTICLE

- To assess the trauma responses of school-aged children living in domestically violent households.

METHODS

Participants

- The sample consisted of 46 mothers who fled domestic violence situations and sought assistance from a domestic violence crisis center, all of whom were currently living away from their partners.
- The mean age of participants was 31.7 years (*SD*=6.5 years) and 15 (32.6 percent) reported that this was the first time that they had left their partner
- Data were collected from the 60 children of the 46 adult female participants. These children were between 1.4 and 5.4 years old, with a mean age of 3.4 years (*SD*=1.2 years)

Materials

- The *Adapted Conflicts Tactics Scale* (ACTS) was used to assess type and severity of abuse experienced by the mothers.
- The *Child Behavior Checklist* for Ages 1 1/2-5 (CBCL) was given to mothers to assess children's emotional, social, and behavioral functioning.
- The *Parenting Stress Index Short Form* (PSI/SF) was utilized to measure both parental distress and stress within the parent-child relationship.
- Three of the symptom dimensions (Anxiety, Depression, Somatization) on the *Symptom Checklist-90-R* (SCL-90-R) were used to assess psychological functioning.

Procedure

- Questionnaires were administered in interview format to each female participant and brief demographic data were gathered.
- The CBCL and PSI were given to each child in a family comprised of more than one child under the age of 5 years.

RESULTS

- Female participants experienced high levels of violence within their relationships, particularly high levels of physical violence: 63% reported that their partner hit, threw or smashed something, 44% reported that they had been grabbed, pushed, or shoved, and 70% reported that they believed that they would be killed by their partner.
- The majority of participants reported levels of depression, anxiety and somatization that were clinically significant.
- No significant gender or age differences were found on the Internalizing, Externalizing, and Total Problem scores of the CBCL, but children who were older than 3.5 years scored significantly higher on the Internalizing scale.
- Large correlations were found between total CBCL scores and parenting stress, as well as between parenting stress and mothers' reported emotional functioning.
- CBCL items were grouped together to create the following symptom clusters: Re-experiencing, Numbing of Responsiveness, Increased Arousal, and New Fears and Aggression. The latter two clusters were most frequently endorsed (in 50% or more children), 48% became upset

when parents separated, and 33% endorsed poor concentration. Additionally, 30% of children endorsed with sleep-related items.

CONCLUSIONS/SUMMARY

- Mothers in the sample group were experiencing significant levels of depression, anxiety and somatization as well as significant levels of parenting distress.
- The results of this study indicate that distress (depression, anxiety and somatization) from domestic violence can negatively influence the parent-child relationship.

CONTRIBUTIONS/IMPLICATIONS

- This study contributes to the small body of literature that has examined post-trauma symptoms specifically in pre-school aged children, by utilizing a method of assessment that was developmentally appropriate.
- The study demonstrates the need to conduct further research on post-trauma symptomatology in young children.
- The study also suggests the importance of first assessing the needs of the caregiver following traumatic exposure in order to mediate traumatic responses in children.

Porat-Ben, A., & Itzhaky, H. (2009). Implications of treating family violence for the therapist: Secondary traumatization, vicarious traumatization, and growth. *Journal of Family Violence*, 24: 507-515.

TYPE OF ARTICLE

- Original Empirical Article

OBJECTIVE/PURPOSE OF ARTICLE

- The purpose was to investigate the effects of working with victims of family violence on therapists, with respect to the therapists' secondary traumatization, vicarious traumatization, and personal growth.

METHODS

Participants

- The sample consisted of 214 social workers employed at shelters and centers in Israel.
- Of the participants, 143 (66.8%) reported that they work with family violence 5-41 hours per week, and 71 (33.2%) reported that do not work with family violence.
- The ages of participants ranged from 24-65 years (M=39.11, SD=9.86).
- The years of work in the field ranged from 1-40 (M=10.89, SD=7.98).
- Of the participants, 50.7% had a Bachelor's degree and 49.3% had a Master's degree or higher.

Materials

- *The Secondary Traumatic Stress Scale* is a 17 item questionnaire that was used to assess symptomatology that arose in therapists while working with trauma victims.
- *The Post-Traumatic Growth Inventory* contains 21 items and was used to determine the positive changes in individuals following a traumatic event.
- A qualitative measure developed for the study was utilized and composed of two open-ended questions that asked therapists to list both the positive and negative changes that have taken place in themselves, their families, and their lives as a result of practicing in the field.

Procedure

- Each participant was administered the *Secondary Traumatic Stress Scale*, the *Post-Traumatic Growth Inventory*, and the qualitative questionnaire.
- Three family violence experts evaluated the qualitative measure and identified main themes in the responses.

RESULTS

- Analyses of variance of the quantitative results demonstrated that personal growth was significantly higher among non-family violence therapists than those who worked in the field.
- Family violence therapists reported only an average level of secondary traumatization, and there were no significant differences between the two groups regarding levels of secondary traumatization.
- Chi-square tests of the qualitative results revealed that family violence therapists reported significantly more negative changes relating to their own spousal relations and perception of the world and humanity, than did non-family violence therapists.

- Chi-square tests also demonstrated that family violence therapists reported significantly higher positive changes (including interpersonal communication, anger control, self-awareness, and parenting) as a result of their work, as compared to non-family violence therapists.

CONCLUSIONS/SUMMARY

- Family violence therapists and non-family violence therapists reported similar levels of secondary traumatic stress, and family violence therapists endorsed both more negative and more positive changes in their lives, when compared to non-family violence therapists. Non-family therapists reported higher levels of personal growth.
- Data in this study may have been influenced by the fact that people are often hesitant to report negative feelings and perceptions of their work

CONTRIBUTIONS/IMPLICATIONS

- More research is needed to assure that measures used to assess secondary traumatization are reliable, valid, and encompass all relevant content. The authors suggest that a measure should be adapted solely for the purpose of evaluating secondary traumatic stress in therapists.
- Additional research should be conducted to investigate the effects, implications, and consequences of working with trauma victims on therapists.

Bisby, J.A., Brewin, C.R., Leitz, J.R., & Curran, H.V. (2009). Acute effects of alcohol on the development of intrusive memories. *Psychopharmacology*, 204, 655-666.

TYPE OF ARTICLE

- Original empirical investigation: independent- group double-blind design

OBJECTIVE/PURPOSE OF THE STUDY

- To explore how alcohol affects cognitive processing during a stressful event and the resulting intrusive memories occurring for one week after the event.

METHODS

Participants

- Participants were obtained from undergraduate and graduate student population of the University College London.
- Inclusion criteria for this study were the individual must be between the ages of 18 and 35 years, be a moderate social drinker classified by consuming 2-14 units of alcohol per week for a female and 2-21 units of alcohol per week for a male, have never experienced a PTSD Criteria A1 traumatic event, and have never received any type of mental health treatment.
- Individuals were also excluded if they scored 2 or above on the CAGE alcohol screening test or failed a breathalyzer upon arrival at the study.
- In total, 48 individuals, 24 men and 24 women, participated in the study.

Materials

- The CAGE Alcohol Screening Questionnaire was used to exclude heavy drinkers from the study.
- Alcohol Usage Questionnaire (AUQ) was used to measure participants' drinking habits.
- Dissociative Experience Scale (DES) was used to measure trait features of dissociation prior to viewing the film.
- Dissociative State Scale (DSS) was used to measure current state features of dissociation prior to viewing the film.
- Visual Analogue Scale (VAS) was used to measure participants' mood
- Mood Rating Scale was used to measure the individual's subjective mood in the moment
- Breathalyser exam was used to ensure that the participant had not consumed alcohol prior to arriving at the laboratory.
- Trauma Video
- Seven-Day Online Diary on which the participant recorded his or her intrusive memories experienced over the week
- Cued Recall was used at day-seven to measure the participants' abilities to remember pieces of the film

- Recognition test
- Three to four units of alcohol, seven to eight units of alcohol, placebo beverage

Procedure

- Prior to viewing the stressful film, which consisted of 12.5 minutes of various road traffic accident scenarios, participants received training on how to use the seven-day online diary, then took a breathalyzer, filled out the AUQ and the DES, had their three-minute baseline heart rate and skin conductance measured, and filled out the DSS and the VAS.
- Participants then consumed their assigned beverage (low content alcohol, high content alcohol, placebo) for 30 minutes, sat for an absorption period of 10 minutes, and then received another breathalyzer, DSS, and VAS.
- Individuals then sat alone in a room to watch a 30-minute trauma film while being observed by an experimenter from behind a two-way mirror.
- Following the film, a third breathalyzer, DSS, and VAS were administered and the participant was sent home for seven-days.
- Each day, the participants received an e-mail and text message reminder to fill in their online diary about any intrusive memories from the film they experienced.
- Exactly one week after viewing the film, the participants returned to the laboratory where they underwent a "cued recall test," a recognition test, and online diary entry check.

RESULTS

- There were no group differences in resulting distress following the film or attention paid to the movie.
- Compared to the placebo beverage group, the low-dose alcohol group's week-long intrusive memories increased and the high-dose alcohol group's week-long intrusive memories decreased.
- There was a negative linear effect of alcohol content on memory. As alcohol content increased, recall and recognition for the film decreased.

CONCLUSIONS/SUMMARY

- Findings support that a low-level of alcohol consumption prior to experiencing a traumatic event will increase the likelihood that a person develops PTSD after the event.
- It is unknown if one of the factors that increase individuals' susceptibility to PTSD also affects sensitivity to alcohol effects.
- As expected, an increased use of alcohol will decrease one's ability to remember details for an event.

CONTRIBUTIONS/IMPLICATIONS

- This was the first study of its kind that used an online diary, making it a more standardized procedure that makes the results concerning memory intrusions more reliable.
- One limitation of this study was the use of a trauma film rather than a real life experience; however, it would be impossible to standardize a real life traumatic event.
- The second major limitation of this study is that the experiment did not assess many of the secondary factors that influence the development of PTSD. Therefore, it is not known if one of those factors influenced a participant's sensitivity to the alcohol or if the increased intrusive memories were caused by the alcohol itself.
- A final limitation of this study is the small sample size. With only 48 participants, there is no guarantee that this study's findings can be replicated for a larger sample.
- Despite these limitations, this study provides relevant information for the effects of alcohol on intrusive memories following a traumatic event as well as recall and recognition abilities after a trauma.

Panuzio, J., Resnick, P.A., Taft, C.T., & Watkins, L.E. (2009). An investigation of posttraumatic stress disorder and depressive symptomatology among female victims of interpersonal trauma. *Jounral of Family Violence*, 24, 407-415.

TYPE OF ARTICLE

- Original Empirical Investigation

OBJECTIVE/PURPOSE OF THE ARTICLE

- To examine relevant factors involved in Posttraumatic Stress Disorder (PTSD) and Major Depressive Disorder (MDD) comorbidity in women with a history of intimate partner violence (IPV).
- To explore possible factors contributing to PTSD and depression severity.

METHODS

Participants

- Participants were obtained from an already established pilot and clinical trial.
- Inclusion criteria for this study included that the participants must be at least 18 years old, had at least a three month distance from their abuse, met the DSM-IV criteria for PTSD, were currently in a non-violent relationship or no relationship, and have been out of their abusive relationship for at least six months. Of the 256 women who were screened for inclusion, 78 were excluded from the study and 16 dropped out.
- Overall, 162 females were included in the study. The majority of the women were Caucasian (64%) and single (49%). The average age of participants was 37 years old and the average level of education was 13.8 years.

Materials

- The Clinical Administered PTSD Scale (CAPS) was used to measure whether or not possible participants met criteria for PTSD.
- The Structured Clinical Interview for DSM-IV (SCID) was used to diagnose depression.
- The Physical Punishment Scale of the Assessing Environments-III (AE-III-PP) was used to determine whether or not physical abuse had occurred during childhood.
- The Sexual Abuse Exposure Questionnaire (SAEQ) was used to examine childhood sexual abuse.
- The Conflict Tactics Scale (CTS) was used to measure IPV.
- An adapted version of High Magnitude Stressor Events Structured Interview was used to measure adulthood sexual assault victimization.
- The Personal Beliefs and Reactions Scale (PBRS) was used to examine participants' beliefs surrounding their trauma experiences.
- The Multiscale Dissociation Inventory (MDI) was used to assess a participant's avoidance of the trauma and dissociative responses to the trauma.
- The Posttraumatic Stress Diagnostic Scale (PDS) was used to measure PTSD symptoms.
- The Beck-Depression Inventory-2 (BDI-2) was used to measure participants' symptoms of depression.

Procedure

- Inclusion criteria were assessed through phone screenings.
- Once a participant qualified for the study, she completed the diagnostic interviews, the standardized trauma interview, and the many self-report scales at the study's clinic.

RESULTS

- Women with only PTSD reported more childhood sexual abuse (CSA) than the women with comorbid PTSD and MDD.
- Women with comorbid PTSD and MDD reported more PTSD and depressive symptoms, distorted beliefs surrounding the trauma, and dissociations related to the trauma.
- The study determined that dissociations and distorted beliefs surrounding the trauma as well as an IPV experience were the greatest predictors for PTSD.
- Experiences of dissociation were also found to play a role in severity of PTSD symptoms including avoidance behaviors.
- Neither physical assault victimization nor sexual assault victimization differentiated between PTSD only and PTSD/MDD comorbidity.
- Consistent with other research, co-occurring PTSD and MDD symptoms do not account for the high level of PTSD/MDD comorbidity in this sample.

CONCLUSIONS/SUMMARY

- Findings support past research that cognitive distortions surrounding the trauma experience contribute greatly to the development of PTSD/MDD comorbidity.
- Contrast to previous research, this study concluded that experiences of childhood trauma did not have an effect on adult pathology; however, IPV severity was associated with PTSD and not MDD.
- PTSD/MDD comorbidity in female IPV victims is not caused primarily by the severity of the trauma.

CONTRIBUTIONS/IMPLICATIONS

- The study provided greater insight into the factors that contribute to the development of PTSD, MDD, and comorbid PTSD/MDD.
- One limitation of the study was that retrospective re-

porting was used to assess and measure trauma experiences. In the future, prospective reports could be used.

- A second limitation of this study was the use of a treatment-seeking population of women as the external validity of the results are therefore limited.
- Despite these limitations, this study supported that cognitive distortions surrounding the trauma experience and avoidance behaviors can at least partially explain the common comorbidity of PTSD and MDD in women who have experienced IPV.

Bloch, D., Caspi, Y., Klein, E., Koren, D., Leiba, R., & Vexler, B. (2009). Acute stress reactions among medical and non-medical personnel in a general hospital under missile attacks. *Depression and Anxiety,* 26, 123-128.

TYPE OF ARTICLE

- Original Empirical Investigation

OBJECTIVE/PURPOSE OF THE STUDY

- To measure the rates and severity of PTSD symptoms for hospital workers treating patients with war related injuries while under fire.
- To examine how PTSD symptoms affect the workers' ability to function in their jobs.
- To assess how an indirect trauma (working with trauma victims) after a direct trauma (being under fire) affects workers.

METHODS

Participants

- A sample of 423 hospital workers from the Rambam Medical Center in northern Israel was obtained by way of the hospital's internet system.
- The majority of the sample were women (73%) and the distribution of job type in the sample included nurses (31%), administrative staff, household staff (28%) and doctors (21%).
- Aside from a slight overrepresentation of women, the sample was representative of the hospital's working population.

Materials

- The Hebrew version of the PTSD Symptom Scale (PSS) was used to measure PTSD symptoms.
- Two global items measured on a 5-point Likert scale were added to the PSS to measure the participants' subjective experiences of psychological distress and impairment in functioning.

Procedure

- Participants completed the PSS either online within the hospital's internet network or manually. The majority of responders (90%) completed the questionnaire online.

RESULTS

- Of the sample 4.3% were found to qualify for a diagnosis of PTSD based on symptoms, symptom severity, level of distress, and impaired functioning.
- There were no statistical differences between the workers in the high-trauma exposure group (those working on trauma wards) and the low-trauma exposure group (those working on non-trauma wards).
- Administrative staff/nurses reported statistically significant higher number of PTSD symptoms than doctors and other medical staff. This difference was examined further using a MANOVA, which showed that nurses and administrative staff experience more severe re-experiencing and hyperarousal symptoms.

CONCLUSIONS/SUMMARY

- Findings were consistent with retrospective studies regarding PTSD prevalence and severity in healthcare workers.
- Secondary indirect trauma exposure showed no additive effects on those with prolonged primary trauma exposure.

CONTRIBUTIONS/IMPLICATIONS

- This is one of the first studies to examine real-time PTSD symptoms and severity versus retrospective PTSD symptoms and severity.
- One major limitation of the study is that the data intake began four weeks after the war started and so it is unclear whether the reported symptoms reflect a trend of habituating to the war environment. The authors be-

lieve that the rates of PTSD might have been higher had the first surveys occurred closer to the start date of the war.

- With replication, these findings might suggest that more programs focused on prevention and intervention should be developed to help healthcare workers to function under stressful, war environments.

BOOK REVIEWS

Reviewed by Laurence Miller, PhD

Practical Approaches to Forensic Mental Health Testimony

by Thomas G. Gutheil and Frank M. Dattilio
Philadelphia: Lippincott Williams & Wilkins, 2008

Experts in the field of emergency mental health may occasionally be called upon to testify in court about their evaluation and/or treatment of a particular patient. Other mental health practitioners spend a good part of their professional careers as expert witnesses in legal cases. Although volumes on forensic psychology and expert testimony abound, there has long been a need for a concise but comprehensive, informative but practical, balls-to-the-wall handbook for clinicians who find themselves on the front lines of courtroom cross-examination. *Practical Approaches to Forensic Mental Health Testimony* by psychiatrist Thomas Gutheil and psychologist Frank Dattilio is the book you want to read before your next trial.

This deceptively thin volume manages to combine authoritative scholarship with nuts-and-bolts practical tips for defining and delineating the expert's role; preparing for and delivering compelling expert testimony; overcoming personal and professional biases; handling cross-examination; negotiating internal and external roadblocks to effective testimony; establishing productive working relationships with – and avoiding inappropriate influence by – attorneys and other third parties; handling fees, billing, and scheduling issues; and a host of other details essential to maintaining a forensic psychology practice. In each chapter, the topics are illustrated with numerous case examples and testimony transcripts that flesh out the narrative and give the reader a three-dimensional grasp of how these issues play out in real-life courtrooms. The result is one of those rare books that the reader puts down feeling that he or she has actually learned how to do something.

Overall, *Practical Approaches to Forensic Mental Health Testimony* is informed by a hard-nosed, unsentimental, yet realistically positive view of the field of expert mental health testimony as a productive blend of clinical scholarship, persuasive teaching, and professional ethics, presented by two seasoned authorities who continue to work in the trenches, and are glad to impart their clinical and forensic wisdom to their colleagues in the courtroom.

A Handbook for Correctional Psychologists: Guidance for the Prison Practitioner (2nd ed.)

by Kevin M. Correia
Springfield, IL: Charles C Thomas, 2009

If asked to identify one area where clinical psychology, criminal justice, and emergency mental health converge, you probably couldn't come up with a much better answer than the field of correctional psychology. Indeed, up to now, this field has been relatively neglected amid the more "flashy" domains of investigative psychological profiling or courtroom forensic psychological testimony. Yet, what actually happens to criminal defendants who are sentenced to prison? Who is concerned with their mental health? Why should we even care?

In this volume, psychologist Kevin Correia provides an insider's look into the practice of correctional psychology. The book provides an overview of prison life, which is generally both less volatile and more complex than the garish portrayals shown in movies and on TV. The book helps clarify

the often dicey institutional status of a mental health practitioner working in an institutional setting where the primary concern of most other staff is just to keep the lid on. Roles of the correctional psychologist include management consultant (and here, psychologists can ingratiate themselves with staff by providing practical tips on dealing safely with inmates); suicide, violence, and sexual assault prevention; hostage negotiation; family and employee crisis intervention; and psychotherapy, which is likely to be concrete and focused, e.g. substance abuse counseling or sex offender treatment.

The book dives into the nitty-gritty of conducting psychological interventions with prison inmates, including issues of privacy in the fishbowl environment of a correctional facility; developing a healthy skepticism and professional distance to guard against inmate manipulativeness, deception, and malingering, while at the same time developing some kind of working therapeutic relationship; coping with threats and intimidation; and dealing with severely mentally ill and stone-cold psychopathic inmates. The author also provides guidelines for integrating psychological services with the activities of other staff members, so as to forge a collaborative rather than adversarial relationship with the people he or she has to work with every day.

Aside from a somewhat overly detailed two-chapter digression on the clinical and psychometric assessment of malingering, this book is crisply written and is suffused with a sense of enthusiasm and optimism that has the reader questioning the standard view of prison psychology as either the wasteful coddling of unrepentent badasses, or as some baleful professional purgatory that a psychologist might find him- or herself consigned to until a "real" job comes along. Relentlessly realistic, this book nevertheless delineates the important clinical contributions that correctional psychologists can make in a world that most dismiss as hopeless.

Working with Traumatized Police Officer-Patients: A Clinician's Guide to Complex PTSD Syndromes in Public Safety Professionals

by Daniel Rudofossi
Amityville, NY: Baywood Publishing Co., 2007

A Cop Doc's Guide to Public Safety Complex Trauma Syndrome: Using Five Police Personality Styles

by Daniel Rudofossi
Amityville, NY: Baywood Publishing Co., 2009

The field of what is now broadly called "police psychology" has continued to expand from operational assistance (fitness for duty, hostage negotiation, undercover, interview and interrogation) to clinical services (critical incident debriefing, psychotherapy, family intervention). Police psychologist Dan Rudofossi's two volumes represent perhaps the most expansive theoretical application of psychodynamic and existential psychological theory to the treatment of cops in distress. This has both its benefits and its drawbacks.

Working with Traumatized Police Officer-Patients: A Clinician's Guide to Complex PTSD Syndromes in Public Safety Professionals places its emphasis on two frequentlyoverlooked but vital aspects of working with police officers, the therapeutic alliance and the importance of taking into account each officer's individual personality style and not treating officers as cookie-cutter replicas of each other. Chapters in this volume cover the different kinds of individual reactions to law enforcement traumatic events, especially as multiple traumas may be cumulative over time. The author frames his account in what he calls an eco-ethological foundation of trauma, loss, and the mourning process, and coins the term police and public safety complex posttraumatic stress disorder, or PPS-CPTSD, to refer to this syndrome.

Further chapters describe the unique challenges of doing psychotherapy with law enforcement officers who have

encountered the existentially demoralizing effects of what the author terms quantum psychic moments – psychically destabilizing events that go beyond the usual meaning of "critical incidents." Assessment of strengths and capabilities as well as symptoms and disabilities is crucial for tailoring an individualized treatment plan. A strong therapeutic alliance allows the officer to build trust in the psychotherapy process and permits the clinician to work fostering resilience in the officer while trying to help him or her regain existential meaning and perhaps even achieve a measure of posttraumatic growth, a clinical strategy the author calls the philosophical, empirical/functional, paradoxical, and existential method for helping traumatized officers find meaning and access healthy social supports.

Here is where descriptive practicality begins to get swallowed up by terminological complexity, as Rudofossi fleshes out his theoretical model of complex posttraumatic stress disorder in law enforcement officers by elaborating what he terms the eco-ethological existential method of treating police and public safety complex posttraumatic stress disorder (PPS-CPTSD). The extensive case history transcripts, illustratively useful at first, begin to lose their focus as they often begin to drag on, eventually distracting from, rather than enhancing, the narrative text.

The love affair with theoretical neo-terminology continues in *A Cop Doc's Guide to Public Safety Complex Trauma Syndrome: Using Five Police Personality Styles*. The book begins by reiterating the model of PPS-CPTSD, integrating the theory with a diverse range of other perspectives from the grief and traumatology literature. The author then painstaking applies this evaluation and treatment model to his five public safety personality styles: the (1) addictive hyperexcited; (2) sadistic hyperaggressive; (3) idiosyncratic hyperintuitive; (4) controlled hyperfocused; and (5) adaptive/intuitive styles. These are presented with a plethora of case histories and clinical sidebars which, while thick in detail, can prove distracting to the overall narrative flow.

Any reader who has thus far waded through this sea of terminology will surely feel like he or she is drowning in alphabet soup by the final lengthy chapter on "Provoking motivation through the field of despair in the multiangular polychromatic lens of dissociation via eight officer-patient odysseys." This chapter is presented mostly in the form of additional case histories with clinical commentaries.

Even more so than the first book, this second volume has the feel of an academic text that all too often trips over its own conceptual and terminological complexity, and is thereby likely to frustrate the reader who is searching for usable clinical guidelines that he or she can distill from this mass of scholarly material. This is a shame because, while both of these two companion volumes could have benefited from tighter organization, together they do present an insightful treatment model for helping traumatized police officers. I would like to see the author produce a trimmed-down clinical handbook for front-line clinicians that delineates the nuts and bolts of his therapeutic program. Not all law enforcement traumatic stress syndromes will require such intensive and extensive treatment but, when they do, it's good to know there are mental health clinicians with law enforcement background and experience, as well as a comprehensive grasp of the psychotherapy literature, who are ever working to improve the care of public safety professionals.

The Association of Traumatic Stress Specialists is an international multidisciplinary organization founded to educate and professionally certify qualified individuals actively engaged in crisis intervention, trauma services and response, and the treatment and healing of those affected by traumatic stress. The Certification Board represents individuals who have practical experience in providing direct support to trauma victims and survivors.

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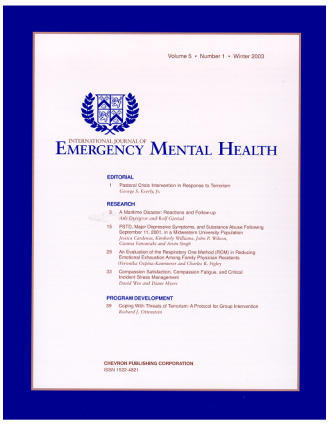

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