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Emergency first responders are affected by second-hand exposure to trauma; they put themselves at risk for developing debilitating posttraumatic stress symptoms in the aftermath of a traumatic crisis. Empirical research is reviewed for successful mental health services for civil servants, such as police officers, firemen, and emergency medical technicians recovering from traumatic stress or sustaining a healthy mental state. This review investigates successful mental health intervention for emergency service personnel, such as Critical Incident Stress Management (CISM) and Critical Incident Stress Debriefing (CISD),concluding CISD to be an effective intervention treatment among secondary victims of trauma. Effective traumatic stress prevention strategies are also reviewed. Appropriate prevention measures focus upon the role of peer-support officers in law enforcement, addressing stigma, emotional and stress management, and the importance of pre-incident training.

War, terrorist attacks, hurricanes, earthquakes, and murder. Every year large and small disasters, natural and man-made, occur on this earth, shattering reality for victims. Often these disasters are reported in the news; some with national and international 24-hour coverage, and others with only a local news bulletin. But, always, help is needed on the front line of these disasters to protect and to save the innocent and the suffering (Spiegel, 2010). Persons who provide help in disastrous situations are called emergency service personnel. These persons include first responders to trauma and terror, such as; police officers, firemen, emergency medical technicians, and military personnel. First responding individuals are faced with terrifying sights and stressful situations that are unimaginable to the general population—and they are expected to be are expected to be able to handle it (Mitchell, 1983; Levenson 2007). But the reality is, first responders are affected by second-hand exposure to trauma; they put themselves at high risk for developing debilitating posttraumatic stress symptoms in the aftermath of a traumatic crisis, which effects their job performance, participation in relationships, and mental functioning (Michell & Bray, 1990). For the aid that they provide to disaster victims, first responders themselves are also in need of mental health attention. from the general population (Jacobs, Horne-Moyer, & Jones, 2004).

A closer look at the population of emergency service personnel reveals them as a special category of individuals with unique characteristics that determine their success in the field, as well as their differences from the general population (Jacobs, Horne-Moyer, & Jones, 2004).

Personality characteristics of emergency service workers include: desire for control, action orientated, intense dedication, desire for immediate gratification, risk-taking tendencies, and the need to be needed (Jacobs, et al., 2004). In instances of devastating disaster or traumatic crisis, emergency service personnel enter the scene with a common purpose (to provide aid to victims), are goal oriented (rescue and bring endangered victims to safety), they feel needed, and they have a sense of "team spirit" among themselves (Levenson & Dwyer, 2003). More importantly, firemen, law enforcement personnel, emergency medical technicians, and military personnel all place themselves in various situations of traumatic stress by choice. They have made the conscious decision to enter high-stress professions and to train for disaster response. All of these factors and personality characteristics separate the population of emergency service personnel from the general population, causing them to face unique mental health risks, and the necessity to learn traumatic stress coping mechanisms in the development of a psychological crisis. A *psychological crisis* results from feelings of distress associated with a critical incident (Everly & Michell, 1999). According to Levenson (2007), in a psychological crisis, there is a distinct stress increase, where coping mechanisms become insufficient and there is evidence of significant stress, impairment, and dysfunction. In addressing the symptoms of a psychological crisis, Levenson considers that the two roles of mental health response and crisis intervention for emergency service personnel should be to mitigate severe psychological distress brought on by involvement in a traumatic event or situation, and to prevent traumatic stress reactions that could be detrimental to a person fulfilling his or her duties and expectations in a job and in life.

This paper investigates successful mental health intervention for emergency service personnel, and discusses effective prevention strategies for avoidance or severity decrease of traumatic stress related symptoms. Empirical research is reviewed for successful types of currently-used mental health services for civil servants, such as police officers, firemen, and emergency medical technicians recovering from traumatic stress or sustaining a healthy mental state.

Posttraumatic Stress Disorder and Mental HealthPosttraumatic Stress Disorder did not exist as a diagnosis until the 1980's, however, it is likely that this disorder has existed since humans first experienced trauma (Taylor, McKay, & Abramowitz, 2000). Recognition of PTSD first began to emerge in the context of war and war veterans. During the civil war, symptoms of PTSD were referred to as "soldier's heart", this evolved to "combat fatigue" during WWI, to "gross stress reaction" during WII, and to "post-Vietnam syndrome" after the Vietnam war (Carroll, 1919; Messervy, 1978; Rosenheck, 1985). PTSD is also commonly referred to as "battle fatigue" and "shell shock" (Garland & Robichaud, 1987; McCarroll, 2007). While all of these previous terms are associated with war, PTSD can occur from many different traumatic or life threatening experiences, such as rape or survival of a life-threatening accident (Breslau, 2009).

PTSD is a mental illness that is associated with severe anxiety and often depression as a result from haunting images and memories of a high-stress traumatic experience (Taylor, et al., 2000). Diagnostic symptoms, as published by the American Psychiatric Association (APA) in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV, 2000), include: re-experiencing the original trauma(s) through flashbacks or nightmares; avoidance of stimuli associated with the trauma; and increased arousal, such as difficulty falling or staying asleep, anger, and hypervigilance. Formal diagnostic criteria (both DSM-IV and International Classification of Diseases-9) require that the symptoms last more than one month and cause significant impairment in social, occupational, or other important areas of functioning. To preserve mental health specifically in emergency service personnel and to prevent the debilitating symptoms of PTSD, many types of debriefing have evolved as treatments for trauma exposure.

Critical Incident Stress Debriefing

Robinson (2008) reports that in the late 1970's, Jeffrey T. Mitchell, a retired emergency service worker, recognized that exposure to especially awful events or a culmination of events may cause emergency personnel to become overwhelmed and unable to function at their full capacity. As a result, Mitchell proposed a multi-component model for mental treatment in crisis intervention and termed it the Critical Incident Stress Management (CISM) model (Michell, 1996). The CISM model encompasses several key innovations in crisis intervention, including: staff support, the role of the first-response workers themselves, articulating needs of the workers, recognizing common and uncommon thoughts in response to trauma, exposure and, finally, group interventions, such as Critical Incident Stress Debriefing (CISD); (Mitchell, Everly, & Lating, 1995). This emergency service model has been adopted throughout the US, and in other countries, including Canada, Australia, Germany, and Great Britain, as well as by workplaces and occupational groups where staff are exposed to loss and trauma (Robinson, 2008). Currently, however, there is debate among psychologists and emergency rescue workers of whether debriefing might in fact be more harmful than helpful (Bisson, et al., 2000). CISD has been applied to direct victims of disasters, pushing them to recall their traumatic experience and emotions within hours of the incident. In a recent National Public Radio broadcast following the earthquake disaster in Haiti, Alix Spiegle (2010) reported that Richard Mollica, a professor at Harvard who has spent his life researching mental health responses to natural and man-made disasters, argues that people are greatly emotionally volatile in the immediate aftermath of trauma; thereby, making it difficult for them to control their emotions after they are aroused in this way, and therefore concluding that discussions of traumatic experiences are better left until months later for primary victims of trauma. Jacobs, et al. (2004) conducted a study analyzing the effectiveness of CISD with primary victims compared to that with secondary victims. Findings in this study concluded that CISD is misapplied when used to treat primary victims of trauma, but is, in fact, a successful treatment for secondary victims of trauma—specifically emergency service personnel.

In Jacobs, et al., (2004) several of the reviewed studies on CISD success looked particularly at emergency medical workers. One study compared stress reactions and recovery of emergency medical workers responding to a mass-shooting incident in Texas (Jenkins, 1996). In this study, there were 30 participants, 15 attended Mitchell CISD model debriefings and 15 refused the intervention. The author's conclusions reported that the strongest recovery effects appeared among those who participated in CISD (Jacobs et al. 2004). However, one limitation of this study is that participants were not randomly assigned to a treatment or control, thus the participants who self-selected CISD treatment might have been more motivated to recover from stress effects in the first place. In another reviewed study on CISD as an effective intervention treatment after trauma exposure, Nurmi (1999) investigated stress reactions of four groups of Finnish disaster workers involved at the sinking of the ferry Estonia. The sample included: 38 winchmen and helicopter pilots from the Finnish Frontier Guard (rescue), 30 firefighters trained in rescue operations (fire), 28 nurses working with emergency team operations at Turku University Hospital (nurses), and 37 police officers from the Disaster Victim Identification Team (DVI). Traumatic stress symptoms were assessed by Nurmi (1999) using the Impact of Events Scale-Revised (IES-R); (Weiss, Marmar, Wilson, & Keane, 1997), the Penn Inventory, and the Symptom Check List 90-Revised (SCL-90-R); (Derogatis & Kazdin, 2000) three months after CISD was conducted. However, as there was no control group, the participants' reduction in traumatic stress symptoms could be a result of regression to the mean. Nevertheless, Nurmi concluded from his results that this study adds to the preliminary evidence supporting CISD as an effective intervention for some secondary victims of trauma.

Elements of CISM and CISD that were used in these intervention studies included: pre-incident education, group crisis management briefings, defusing emotions, and normalizing the experience (Jenkins, 1996; Nurmi, 1999). Participants were able to unwind their emotions as they retold the traumatic event. They were also able to then take their exposed emotions and normalize them or justify them in a group setting with other participants who felt similarly during the traumatic event.

Peer-Support Officers

While intervention treatments for posttraumatic stress symptoms are an important mental health service to help first responders of disasters and traumatic events reclaim their field of service, prevention strategies can also be taken. A prevention strategy might be any element of mental help that aids a person to handle a very stressful and traumatic situation in a way, such that, he or she will be less likely to develop debilitating posttraumatic stress symptoms (Feldner, Monson, & Friedman, 2007). Because of the nature and demands of the job, policemen, firemen, and emergency medical personnel are constantly under immense stress, exposed to horrific scenes of death, tragedy, and human suffering (Levenson, 2007). A way of addressing an experience of severe stress is to use a mental health method that can aid in the prevention of developing posttraumatic stress symptoms. However, seeking prevention and intervention mental health services is a challenge because a stigma—discomfort that a worker feels towards asking for support when faced with vulnerable emotions—is strong among the civil servant work force (Halpern, Gurevich, Schwartz, & Brazeau, 2009). Richard L. Levenson Jr. (2007) reviews a successful combination of crisis intervention and prevention by training mental-health professionals to become peer support officers who work within law enforcement teams. Using peer-support officers as a way of treating stress-affected law enforcement officers has been well-established for over 40 years (Levenson, 2007).

Peer-support officers (PSOs) serve on their own departmental teams and are on call to provide mental health critical care. PSOs are supervised by licensed mental-health professionals and use standardized treatments, such as CISM and CISD, learned during an all-encompassing primary training. Results from Levenson's review study state that, when using peer-support officers and Critical Incident Stress Management, outcomes equal to or better than many mental-health professionals can be achieved. However, a major limitation to Levenson's report is that there is no specific measure indicated that was used to produce this conclusion.

Pre-Incident Training

While the elements of peer support, emotional support, and stress management are all evident in prevention of traumatic stress, the importance of pre-incident training to law enforcement officers sparks as another potentially helpful quality to include in mental health services for first responders (Levenson, 2007). In the before mentioned research study on prevention of traumatic stress in law enforcement personnel, Levenson (2007) found crisis prevention pre-incident training to be one of the most crucial aspects of any law enforcement critical incident response team because it prepares the team to react quickly and with understanding to the unique and devastating instances of disaster and crisis. Thus, arming law enforcement personnel with skills that might prove valuable and helpful when combating traumatic stress, which they are sure to face on the job.

Other fields of first responders are beginning to look into pre-incident training as a successful prevention technique for traumatic stress. For example, in a (2009) study of targeted PTSD prevention approaches, Parker conducted a quasi-experiment examining the effectiveness of pre-incident traumatic stress education in mitigating posttraumatic stress reactions in firefighters. In this study, 12 firefighters were split into three groups: group A (experimental) received pre-incident education; group B (control) received communication skills and entry-level firefighter training; group C (second

(second control) received only entry-level firefighter training. All participants completed pre- and post-testing using the Impact of Event Scale–Revised, a demographic questionnaire at pretesting, and the Critical Incident Inventory at post-testing. Although the study had several limitations, including small sample size, positive outcomes appeared in experimental group A, demonstrating the need for further experimentation in pre-incident training. Overall, efforts to prevent posttraumatic stress symptoms have been met with fairly limited success; thus, prompting more attention to be paid to this beneficial area of mental health service (Feldner, et al., 2007).

Discussion

This paper reviewed a special population of common and healthy individuals who are routinely involved in situations that lead to "normal (but painful) reactions to abnormal or unusual circumstances" (Michell, 1996). The cited studies extend our understanding of mental health services that can be beneficial in coping with critical incident stress. When critical incident stress exposure can cause an emergency responder to lose focus on his or her job and struggle to keep a stable mental state, it is helpful for the first responder to treat posttraumatic stress symptoms with CISD to unleash and normalize stress reactions. By implementing a CISM and CISD model as intervention for first-responders facing posttraumatic stress, adequate coping strategies can be learned and personal concerns and emotions can be heard.

The mental health services of CISD and prevention strategies involving peers might also be modeled for use with prolonged trauma or repeated trauma. Such prolonged or repeated trauma might be encountered in communities of civil unrest, military action, and natural catastrophes. Mitchell and Everly (1995) report that, recently, the basic CISD model has been slightly modified for mass-disaster and community response applications. This modification creates a transition from the emotional domain of a traumatic experience, back to the cognitive domain during reframing. This intervention strategy might be helpful to troops overseas at war who are constantly bombarded by traumatic stress, or for responders to devastating hurricane and earthquake disasters.

Indeed, it is recognized that prevention and early intervention efforts towards traumatic stress symptoms are preferable to having to pursue extended treatment for posttraumatic stress disorder (Mitchell, et al., 1995). Nevertheless, it should be noted that there still remains the insidious and far-reaching barrier of stigma that needs to be crossed. Models of recovery from critical incident stress and trauma highlight the role of available social support in preventing the development of traumatic stress symptoms. Having familiar personnel available for mental health services and counseling has been shown to lessen the hesitancy of emotionally vulnerable workers to seek mental help (Levenson, 2007). Implementing mental health workers among existing personnel might be addressed without significant organization upheaval. Also, improving the training of supervisors so that they realize the importance of dealing with critical incident stress and traumatic stress symptoms might be beneficial to sustaining a healthy dynamic among the workers and in the office environment. Therefore, emergency service personnel should be knowledgeable of and have easy access to prevention and intervention strategies for posttraumatic stress symptoms.

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