

# **The influence of organizational support on the life course of trauma in emergency responders from British Columbia**

Adam D. Vaughan, Ciara B. Moran, Laurie D. R. Pearce and Laurie Hearty

Office of Applied Research and Graduate Studies, Justice Institute of British Columbia, New Westminster, BC, Canada

## **ABSTRACT**

Research has consistently demonstrated that following a response to an emergency incident, first responders and first receivers, support staff, and civilian responders are likely to experience trauma. The aim of this article is to explore if the traumatization of emergency responders is influenced by the nature of organizational support toward the psychosocial recovery of staff and volunteers. Twenty-two qualitative inter-views were conducted with emergency responders from British Columbia, Canada. Using content analysis, findings indicate that there are similarities in how organizational support (or the lack thereof) influences the life course of traumatization. Pertinent factors include the occupational requirements of each agency, their organizational culture, and the quality and quantity of policies and practices that place emphasis on well-being. Possible methods for improving organizational support for emergency responders include providing additional post-event information to responders to permit emotional closure from the event, empowering field supervisors to provide timely and appropriate treatment options, and lastly, to shift organizational culture to recognizing and responding to the psychological well-being of staff and volunteers as vital to the operation of an organization.

Epidemiological research highlights that there is an increased risk of exposure to trauma when a person responds to a mass casualty or other emergency incident (Zimering, Gulliver, Knight, Munroe, & Keane, 2006). At times, trauma can be devastating to the psychological functioning of emergency first responders, with some reporting symptoms ranging from depression and anxiety through to posttraumatic stress disorder (PTSD) (Shakespeare-Finch, Smith, Gow, Embelton, & Baird, 2003). Although not the only psychological response to trauma, PTSD has been repeatedly shown to be a common psychological diagnosis in police officers (Haugen, Evces, & Weiss, 2012), firefighters and paramedics (Beaton, Murphy, Johnson, Pike, & Corneil, 1998), and war Veterans (Orsillo et al., 1996). In many cases, the impact of trauma has resulted in a reduction in the quality of occupational performance, increased absenteeism, sleep difficulties, a negative impact on relationships with others, burnout, and increased substance use, and it can manifest in psychological symptoms of depression, thought intrusion, avoidance, and arousal (Sheen, Slade, & Spiby, 2014). The costs for treating or managing clusters of persons who are traumatized can be exceptionally high for an employer who may need to provide follow-up services to an individual worker, a group of employees, and in some instances, their corresponding network of families and friends (Gorman, Blow, Ames, & Reed, 2011).

The aim of this article is to explore how the traumatization of emergency responders and other emergency-based personnel (ERs) is influenced by the nature of organizational support focused toward the psychosocial recovery of staff and volunteers. Rather than focusing on specific occupations or types of trauma or events, the intention was to study how organizations provide psychosocial support to their personnel and volunteers as holistically as possible. The specific focus will

be to study ERs who respond directly to the needs of casualties or who provide support services. Although the scale of the event for traumatic incidents often pertains to natural or human-caused disasters, this study also considers trauma that emerges from smaller scale or repetitive incidents. A final consideration is to broaden the prevalent perspective of how trauma is often defined by organizations. In this article, the definition of trauma is extended from a focus on specific clinical outcomes to include multiple psychosocial outcomes that may be caused by direct or indirect traumatization.

## **Literature review**

### *Impact of trauma—A psychosocial approach*

In recent years, the increase in the social and political awareness of the prevalence and impact of PTSD on emergency responders and military personnel has generated much discussion regarding the degree of emphasis organizations place on psychosocial recovery following a traumatic incident. This increased awareness has led to multiple studies that explore the pathways of trauma within specific incidents (e.g., post-event responses to natural disasters or terrorist attacks). For various practical and methodological reasons, these studies tend to focus on specific groups of responders/receivers (e.g., police or paramedics) as their roles during an incident are likely to be unique to their profession (Styra et al., 2008). Recently, researchers have begun to explore the impact of trauma affecting different service providers, some of whom will be paid professionals, some who will be volunteers from recognized governmental or nongovernmental organizations, and yet others who will be responding civilians (Neria, DiGrande, & Adams, 2011).

When ERs respond to a traumatic event, their occupation or volunteer role can be rudimentarily placed into three categories: (1) first responders and first receivers, (2) support personnel, and (3) responding civilians. First responders and first receivers provide direct support in the immediate aftermath of an event. First responders consist of police, fire, and paramedics, whereas first receivers are those who work in hospital settings such as triage nurses and emergency room physicians.

To ensure that initial and continued emergency services to casualties are effective, a second group of service providers is often involved. Several examples of support teams who may be exposed to trauma include persons responsible for clean-up and repair (Stellman et al., 2008), relief services (Simons, Gaher, Jacobs, Meyer, & Johnson-Jimenez, 2005), journalism and mass communication (Feinstein, Owen, & Blair, 2002), health care (Styra et al., 2008), and social work services (Bride, 2007). Because support teams provide qualitatively different services from first responders and first receivers, their trauma is likely to be indirect. For example, trauma may be considered indirect when groups of health care professionals witness or listen to an account of a traumatic event from an individual or a number of individuals who have been directly affected (Sheen et al., 2014). Differentiating between indirect and direct traumatization has its challenges as occupational roles may vary within a given event or various events.

A combination of the scale, frequency, and location of the incident, as well as the availability of resources and trained staff, may lead civilians to emerge as de facto ERs (Lay, Allen, & Kassirer, 1974). Civilian responders historically have been effective at providing emergency services ranging from small-scale events (Venema, Groothoff, & Bierens, 2010) to mass casualty incidents (MCIs) (Ashkenazi, McNulty, Marcus, & Dorn, 2012). Much like first responder/receiver counterparts, civilian responders may be physically harmed during the incident (Harrison, 2006). However, for some civilian responders, there is an added burden of anxiety, guilt, and depression when their efforts are associated with the handling of the deceased; when there is large-scale property damage; or when casualties and fatalities are known to the civilian responder (Perry & Lindell, 2003). It is thus plausible that civilian responders may be more vulnerable to trauma because of their dual role as de facto ERs and as residents in the local community. The context of a traumatic event can also dictate the proportion, population, and severity of injury to ERs. For instance, the life course of trauma has been studied following military combat missions wars (Cesur, Sabia, & Tekin, 2013), terrorist attacks (Neria et al., 2011), natural disasters (McCanlies, Mnatsakanova, Andrew, Burchfiel, & Violanti, 2014), and health epidemics (Styra et al., 2008). In some cases, a distressing or critical event may be much smaller in scope and involve fewer casualties yet result in significantly acute and, at times, long-term chronic psychosocial consequences for ERs. For instance, paramedics who work in high-stress settings have increased levels of anxiety, impaired memory recall, and physiological increases in cortisol levels (Leblanc et al., 2012). The notion that a traumatic event (or series of events) can result in a battery of co-occurring psychological and physical illnesses is of concern as the symptoms can manifest indefinitely following a traumatic event (D'Andrea, Sharma, Zelechowski, & Spinazzola, 2011).

Recently, researchers have begun to consider the impact of trauma across different occupations involved in the same event. Using a meta-analytical approach, Neria et al. (2011) tracked the prevalence of PTSD among clusters of first responders, repair crews, support workers, and other persons with high exposure to the World Trade Center terrorist attacks and who had a high likelihood of developing PTSD. Findings indicated that those exposed to the event experienced several other adverse psychological outcomes in the years following the attack such as major depressive disorder, generalized anxiety disorder, and severe forms of grief. Neria et al. (2011) also found that the impact of PTSD was comparable across most ERs that worked following the event, and that ERs had other psychological symptoms that were symptomatic of PTSD (e.g., invasive images, being overwhelmed, and difficulty sleeping). Further research indicates that PTSD can also be associated with other conditions such as substance use, elevated shame, physiological symptoms, interpersonal problems, tendencies toward violent behavior, and other psychological disorders such as depression, conduct disorder, and mania (Javidi & Yadollahie, 2012). Although PTSD is associated with traumatization, clearly it is not the only psychosocial outcome. Research indicates that when some first responders are exposed to traumatizing

events there is a high degree of correlation with worker burnout or cumulative stress (Mitani, Fujita, Nakata, & Shirakawa, 2006). Similarly, support workers, Disaster Psychological Support service (DPS) workers, or anyone else who may experience secondary traumatic stress or compassion fatigue may experience general burnout and reduction in work quality, increased absenteeism, and staff turnover (Figley, 1995). Thus, if one subscribes to the notion that the cause (i.e., indirect vs. direct) and effect of traumatization has some degree of consistency across ERs, then it is worth exploring how organizational practices influence the life course of trauma.

### *Coping with trauma*

Responders can be affected either during or after an incident. Jensen (2000) suggests organizations can reduce the physical and psychological impact by providing workers with coping mechanisms before, during, and after exposure to the traumatic incident. Regardless of when the training is implemented, there are two critical organization facets that need to be considered to maximize the likelihood for recovery. First, it is important to consider that even in a single event there will be variances as to what elements caused the trauma, individual coping mechanisms, and individuals' previous experiences. These factors will shape how they interpret the current incident or series of incidents. Second, Jensen (2000) stresses that mitigation programs need to be supported by rank-and-file staff, middle-management/supervisors and administrators, as well as by other front-line staff. Organizations that recognize there are three points in time where they can provide support for coping strategies to their staff, and that there will be the variability among the resilience and coping levels of their staff will be, in theory, better positioned to support and treat their staff when traumatization occurs. Rather than focusing on the efficacy intervention for pre- and post-event traumatization, (as has been well studied in the literature), the aim of this article is to study the role of organizational support, or the lack thereof, as a conduit to the psychosocial well-being of ERs. As Bloom (2010) indicates, when the workplace is chronically stressed and there are untreated traumatized staff, frustrated administrators, and pressured organizations, the occupational setting can be as toxic as a traumatizing event or series of events. For instance, these organizations often have significant breaks in communication between staff and respond to subsequent stressors by becoming more rigid and authoritarian. Bloom (2010) further indicates that these work environments can lead to unresolved grief, burnout, and an atmosphere of demoralization and depression. Exposure to a traumatic incident, coupled with chronically stressed occupational environments, creates a nexus point that has the potential to generate exponentially high levels of occupational stress in ERs.

To improve organizational responses, Bloom (2010) proposes an approach known as the "sanctuary model." Bloom's (2010) framework recognizes that to effectively respond to persons who are individually traumatized, organizations need to be actively creating and maintaining a therapeutic and trauma-informed culture within the workplace. To create healthier work environments in which individual

treatments can be less coercive and more effective, organizations should support a culture of non- violence, increased emotional intelligence, and open communication. In addition, Flannery (2015) suggests that treatment methods should be multifaceted in nature as there is no one standardized and effective approach. Each person who is affected will require a separate assessment, and various treatment needs must be grounded in the major tenets of trauma informed care for ERs.

The degree of organizational support for the psychosocial well-being of staff before, during, or after an event is likely to vary across and within organizations. Given the array of tasks associated with responding to an emergency and the different management styles within each agency, it is reasonable to believe that there may be a narrative, or series of narratives, that describe the strengths and weaknesses of how each organization approaches the provision of support services for those affected by a traumatic event. Therefore, it is posited that creating and maintaining an organizational culture of respect for the psychosocial well-being of all personnel before, during, and most importantly, after a traumatic incident, is crucial in reducing the longitudinal impact of trauma and improving the social well-being of workers and volunteers.

## **Method**

This study explores how organizational support affects ERs who recently experienced work-related traumatization. To enable cross-comparisons to be made between agencies, a variety of ERs were interviewed to better understand how their employers responded to their needs before, during, and after a single or series of stressful incidents. To develop an understanding of how organizations operate within this domain, paid ERs and volunteers were asked a series of questions that focused on the life course of their trauma. Because the subject material may have elicited responses and memories that could trigger a reactivation of the stress response, a protocol was in place to have the Disaster Psychosocial Program (Provincial Health Services Authority, 2015) provide confidential psychosocial support to any participant in the study. Contact details to these support services were provided in the consent form and through an information pamphlet that was handed to each participant at the end of the interview.

To inductively explore differences among organizational response to trauma, qualitative interviews were chosen as the most appropriate medium of data collection. Interviews were semistructured to build a rapport between the interviewer and the participant in order to thoroughly explore the concept of trauma within the context of organizational support. Table 1 displays the semistructured interview guide.

All interviews were audio-recorded and supported with notes. In most cases, interviews took place in-person at the participants' office during office hours. Because of distance and scheduling difficulties, some interviews were conducted via telephone after office hours. Recordings were transcribed verbatim following each interview and verified before analysis. The precepts of conventional content

analysis (Hsieh & Shannon, 2005) were used to analyze the data. In the absence of predetermined hypotheses about participants’ experiences with trauma, the first author completed a three-stage inductive coding technique to make inferences about the life course of trauma experienced by and among participants. In the first stage, all transcripts were read by the first author to capture an overall understanding of the breadth of data

Table 1. Interview guide.

<p>Introduction (read by interviewer):</p> <p>I understand that you have experienced a multicasualty incident or traumatic, I’d appreciate you sharing your best recollection of this event. Our intent is to provide concrete input into research to increase the knowledge and inform the practices of first responders and psychological personnel tasked with responding to a multicasualty incident or any other similar emergency incident.</p> <p>Questions:</p> <p>What do you remember most from that experience?</p> <p>Please tell me in a chronological way what happened during this incident. What happened first?</p> <p>Before this incident, did you have any information or training that would prepare you for it?</p> <p>What was the most difficult part of the incident for you?</p> <p>Where did you receive the most support during the incident?</p> <p>What strengths did you draw on during the incident?</p> <p>What other supports would you have liked to receive during and after the incident?</p> <p>What would you like to tell people who respond to multi-casualty incidents about the needs of the person involved in or impacted by the incident?</p> <p>What would you like to tell someone who might be involved in a multicasualty incident?</p> <p>What else would you like to say about the development of multi-casualty incident protocols or the kinds of supports that should be available to those who are experiencing them?</p> <p>Is there anything else you would like to add?</p>
--

contained in the interviews. A series of holistic open codes were identified and provided to the second author to be reviewed again within the transcripts, line-by-line. Once all transcripts had been coded a second time, the two coders convened to compare notes, themes, and other observations in the data. This was an iterative process of discussion that also included input from the third and fourth authors of this study.

*Participants*

The stigma that often surrounds the discussion of trauma in the ER populations meant that it would likely be difficult to sample participants using traditional probabilistic methods. Instead, snowball sampling was chosen as it is traditionally used to study vulnerable, hidden, or difficult-to-access populations (Palys & Atchison, 2008). The snowballing process began with the third author acting as the gatekeeper to several ERs with known experience in high-stress trauma events. Qualifying events included, but were not limited to, plane crashes, mass shootings, mass gatherings/riots, and natural disasters, such as landslides, floods, and forest fires. Other, more commonly occurring events, such as suicides and attempted suicides, major motor vehicle accidents, and apartment and house fires, were also included. These initial participants completed a semistructured interview (Table 1) and at the end of the interview, were asked to identify/recruit any of their

colleagues who were also employees or volunteers who responded to emergency incidents and were believed to have had some exposure to a traumatic event. To ensure that referred participants qualified for the purpose of the study, participants were asked to self-report their experiences with MCIs, and other trauma-related events. The nature of the psychosocial impact that resulted from the incident varied among participants, with some indicating formal psychological diagnoses such as depression, anxiety, and PTSD, whereas others referred to challenges at work (e.g., absenteeism, reduced productivity), substance use, and a variety of social challenges (e.g., difficulties with family and friends) that they felt were in some way linked to their exposure. Participants identified the sources of their trauma. The cause and effect of their trauma was not verified by researchers. For example, if a participant indicated that he or she had PTSD or had difficulty sleeping after an event, this was assumed to be true as the overall intention of this study was to better understand organizational support systems and not individual symptomology.

Snowball sampling resulted in a total of 30 interviews with participants from North America. In an attempt to analyze responses within a comparative response and legislative framework, the focus centered on 22 participants from British Columbia. The final sample consisted of female ( $n = 11$ ) and male ( $n = 11$ ) participants: police officers ( $n = 8$ ), clinical and social service providers ( $n = 5$ ), civilian responders ( $n = 4$ ), fire and rescue services ( $n = 1$ ), emergency communications (E-COMM) ( $n = 1$ ), ambulance services ( $n = 1$ ), the media ( $n = 1$ ), and hospital first responders ( $n = 1$ ). Although they may have changed jobs since the traumatizing event, participants were able to recall the factors surrounding the event and the degree of support they received. Interviews lasted between 60 and 90 minutes. In some cases, participants were interviewed a second time to add clarity.

### *Coding procedure*

There were three iterative rounds of coding. Using the original transcripts, the first round of coding consisted of extracting individual quotations from the transcripts. These quotes were then categorized into 12 codes based on the number of questions in the interview guide. In the second round of coding, the first and second author compared notes and quotes, and it became readily apparent that the original 12 codes could be aggregated into four broad themes. These themes were (1) the psychosocial impact of working in a MCI, or a traumatizing event; (2) organizational and personal approaches to trauma management; (3) current practices and programs for trauma recovery; and (4) recommendations for improving trauma management or the recovery process. Individual quotations from the first round of coding were placed within these four themes. A third round of coding focused on making connections between the initial codes and the overall aim of the study, namely organizational support. For all rounds of coding, the data were analyzed manually using Microsoft Word and Excel.

## **Results**

Using the selected quotations and notes from the first and second round of coding

the nature of the organizational support participants received emerged as the overarching theme. Two subthemes of organizational culture and organizational policies and practices also emerged from this data. This section then compares and analyzes the results of these findings across the responding agencies.

### *Organizational support*

In one form or another, all participants associated the impact and process of recovering from a traumatic incident with the degree of organizational support. Organizations that recognized the importance of providing services to their staff, or organizations that recognized the need to identify traumatized persons early on, were more valued by participants than those working for organizations that did not provide any degree of proactive or reactive services, or where the accessibility to services was limited or cumbersome. Some ERs suggested that a lack of staffing and availability of resources may play a role in creating a workforce that is more likely to be exposed to trauma:

We were short that night and you're sort of scrambling to figure out who is going to try answer those calls because somebody has to ... take that call and that's really stressful. Just making those decisions where you're like, you know that not all, like, 15 calls holding are about fire and there's somewhere another emergency. (P25)

In another example, working a double shift, or shift work in general, was regularly mentioned as a precursor to negative psychosocial outcomes:

That's what happened to me in the [name deleted for confidentiality] case, where the incident was over at 10 o'clock in the morning and then the member was off for two days and on no sleep. And then you're trying to process what happened through social media. That happen [sic] to shift workers. That's why I think it needs to change ... we are not bankers ... now you have a shift worker and, [that is] a huge thing that affects the way you respond to critical incidents after the fact.... So, a lot of people, especially newer members, they don't know how their body's going to react. You know, they don't know mentally how they're going to react. (P18)

For those involved in media and communications, the manifestation of trauma may come as a surprise and after a prolonged time of exposure. As the reporter indicated,

When I was covering [a Provincial Inquiry into a multiple murder case], I was getting pretty emotional with some of the stuff that I was covering. I couldn't understand why I was snapping at my sister on the phone one day and I was, like, oh I didn't realize I was in such a bad mood. (P13)

### *Organizational culture*

According to some participants, organizational culture could lead to an increased likelihood for workers and volunteers to be traumatized. Organizational cultures that overlook the symptoms of emotional strain were often cited as being



antitherapeutic:

Cops basically have one of two options – either they can break down and cry or they can tough it up and laugh it off. There is no in-between with policing when you're seeing dead bodies, you're making death notifications. You know one call, I went to the call, I saw the person die, I had to tell the other person, the relative that he died. I had to go to the autopsy. You know throughout all that, sure it's terrible for me but my choice is: either I break down and cry or I tough it up and kind of laugh it off or whatever. Where firemen, they don't get involved in those things and they're emotional train wrecks. (P4)

Many participants were unable to share their experiences with their family or even with their colleagues. The outcome of this approach could strain interpersonal relationships.

It's what we call Ambulance-induced divorce syndrome. We call it AIDS, right? But a lot of it is, you get into those situations with people like that and you're working around that with another partner, or the other crew is a member of the opposite sex. Also, you have this bond, right? And it certainly has affected more than one marriage in this job, you know? (P2)

In other cases, participants recognized that there was an increased desire to make their colleagues aware of the potential for PTSD and other adverse psychosocial impacts associated with traumatic incidents. Though this was not a common theme in the interviews, one senior police officer indicated:

It's creating an awareness of the importance of ... what a debrief is all about, what critical incidence is and isn't, and the fact that post-traumatic stress and emotional trauma don't show up as a black eye, as a bruise, as a cut finger, they show up as I need a couple of days off, or I need five minutes parked up on 12th Street before I go to my next call right? And the system is so go, go, go, that we tend to forget the importance of that. (P3)

### *Organizational policies*

Job or volunteer requirements tend to constrain how personnel respond to the incident, particularly when it comes to decisions surrounding safety and security. As a consequence, these policies can lead to increased anxiety among incident commanders and trickle down to front-line ERs. Policies surrounding how staff and volunteers respond to a traumatic incident became a regular discussion point in the interviews. Participants often perceived policy as important while being limited in real-world settings:

One of the biggest emotional challenges to an incident commander is, slow down, stop, let's make sure what we know before we rush in, or that the worst decision we could possibly make is "Guys, we're not going in." That person is going to be an unfortunate fatality, but we cannot add to the fatality list ... and that's a very difficult decision that people have to make. And that's a very difficult for the public to understand (P24)

In other cases, it appeared that adhering to pre-defined protocols and procedures

during an incident were paramount to mitigating or reducing trauma. As one police officer indicated:

The call at [a hotel] where we were dealing with a very acutely suicidal subject was completely different. The team was operating and functioning at the highest level. There were many points at that call where I thought we're likely going to lose this guy because he seems very committed to dying, and it would've been sad, tragic, but I would've been ok with it. It would have been his decision because I was very confident that our team could not have done anything more, could not have functioned better. (P27)

Policies for follow-up treatment are usually up to the discretion of administrators. However, the identification of the events and personnel for debriefing and other support was often the responsibility of immediate supervisors. Participant P5 described an incident where his colleague was providing surveillance on another vehicle with known criminals "likely wanting to do a drug drop ... pulled up beside the police car ... and pulled a loaded firearm and pointed it at [his colleagues] head. [His colleagues] didn't want to blow surveillance [so] they just booted out of there." After the incident, the participant reconnected with his colleague. As part of this discussion, he asked his colleague to:

do me a favor and I'm not asking – I'm telling you. I need you to go see one of our psychologists just to discuss it. Like one session, two sessions, whatever it takes just to discuss it, get it out in the open. And he actually did and then he came back about two weeks later and said "thanks for the conversation because I didn't see it at the time but in talking about it, I realized everything that was going on." (P5)

Interestingly, P5 could not force treatment because "the OIC [Officer in Charge] has to do it." This phenomenon of relying on upper management was highlighted by other participants. On the topic of providing more psycho- social support for his coworkers, a dispatcher indicated,

I don't really have any sense about how much I should be pressing the battalion chief because, technically everything is his call. So, you're trying not to get in the way, and if he actually has somebody injured the last thing he need is, "is he ok, is he ok" in his ear. That's the last thing he needs and we know that, but we can't tell if he has heard us, if he is taking it seriously, if he understands what is happening. There's no button that's like, "I'm handling it. I'm on it." (P26)

Communication staff and front-line ERs commonly reported observing stress and strain in their colleagues. The ability of some ERs to observe the psychosocial well-being of their colleagues and to check-in on them was a remarkable showing of psychosocial awareness. However, because they lacked the necessary decision-making power; observing the impacts of stress and connecting them with the trauma are often done independently of the formal organizational response to traumatic incidents. Often times, front-line workers and volunteers felt these peer-to-peer approaches were necessary as administrators may have overlooked the

emotional issues facing their staff in lieu of other pressing issues such as the tactical deployment of resources during an emergency.

Policies for information exchange between and within agencies tend to be less of a concern for agencies that have ownership of the information or those that disseminate information to their staff in an open and transparent fashion. On the one hand, police, fire, and ambulance workers all tend to possess key pieces of information, or have the ability to readily access this information. However, their ability to disseminate this information may be strained when communicating to casualties and family members associated with an event:

How do you not say the wrong thing? You may be giving out information that might not necessarily, or should not necessarily, be given out. It is always in the back of your mind; you're always worried about releasing information, so ... I continuously tell new recruits "Don't do anything that you wouldn't feel comfortable seeing on tonight's news and don't say anything that you don't feel comfortable being quoted in the newspaper" [for]—that adds another level of stress—those are the things that can truly end a career. (P24)

Support staff may not be provided with timely access to additional information or processes to correct misinformation about the emergency event. As P26 explains:

One of the guys I work with is still super-traumatized by a death of a guy in a vehicle fire that was totally not his fault [because the] caller gave him the wrong address. He went through those tapes a million times which is how we know he's still not ok, [and he] still listens to those tapes sometimes.

Perhaps the most obvious group where access to information is extremely limited is when an emergency incident involves civilian responders. Following a traumatic incident involving a plane crash with multiple fatalities, a civilian responder was not affiliated with an emergency organization, and consequently her narrative highlights the lack of occupational resources available to her immediately following the event:

I needed closure. I need something to say I could leave, and I don't even know what that was, but it just that I was physically stuck there, just this weight of needing to be there until something else. I don't know if that was sharing our story, or, it's not acknowledgement, that actually makes me cringe. It was literally having to impart what we had just seen, that there was enough information that we had to share. (P22)

### *Comparisons across agencies*

Notwithstanding the individual differences among various participants in this study, their occupational responsibilities, and the variability in emergency incidents that were associated with trauma, several participants in this study suggested or made direct reference to their employer as playing a substantial role in the trajectory of their trauma. At the most basic level, it appears that how an organization considers, or frames, the psychosocial well-being of its employees

and volunteers can lead to drastically different outcomes in regards to the likelihood for exposure to trauma, the severity of symptoms, and ultimately the duration of trauma. More specifically in this study, how an organization responds to the psychosocial needs of its staff and volunteers was primarily, though not exclusively, a result of the occupational demands placed on the agency, the organizational culture, and its policies. These responses may mitigate, aggravate, or have no perceived impact on improving the psychosocial well-being of its employees.

Taking these factors into consideration, rudimentary comparisons between different organizational support models intended to address the psychosocial needs of ERs may be made. Table 2 summarizes how participants estimated the strength of organizational support toward traumatization. Because each class of EW contained an array of personnel, participant narratives varied. That being said, the degree of organizational support between groups is intended to illustrate the variance in levels of support as indicated by the perceptions of participants. The results here should be interpreted as a guide to give context to other findings in this paper.

Although there were only three civilian responders in this study, their narratives reflected limited organizational support following exposure to their traumatizing event. In the absence of support, civilian responders were left to their own social support networks and abilities to pursue their own treatment regime. This approach is understandable as the trauma for the three participants in this study occurred outside of their place of employment. On the other hand, organizations with strong support for psychosocial well-being of their staff or volunteers were coincidentally agencies that actually provided psychosocial services to the ERs impacted by a traumatic incident. These groups tended to have a culture of proactively supporting their volunteers and recognizing the symptoms of stress and strain during the course of their work.

Table 2. Levels of organizational support by class of emergency responder.

Organization or group of participants	Level of organizational support		
	Weak	Average	Strong
Civilian responders	X		
First responders/receivers		X	
Support teams		X	X

It is also worth noting that a substantial proportion of volunteers from DPS have clinical training in social work, psychology, or a related field. Having these skills embedded in various points of contact in the organization may help buffer the life course of indirect traumatization and reflect the precepts of three points in time where organizations can provide support or training to enhance coping (Jensen, 2000). For other supporting agencies, the degree of post-incident support can vary as the ability to access pertinent information to obtain closure was perceived as a significant challenge and, at times, resulted in additional stress and strain. Lastly, a commonality among first responders/receivers was a heavy reliance on

debriefing programs and other post-event services. For the most part, participants did not mention that their organization provided them with pre-event or proactive services (e.g., resiliency training). In the rare case where prevent services were provided, these programs appeared to be marginally effective because the overarching cultural norms within some organizations often do not encourage recognition and timely response to psychosocial stress and strain.

## **Recommendations**

Given the open-ended structure of the interviews, the participants were asked to suggest possible methods for improving organizational support for front-line staff and volunteers who have been, or could be, exposed to a traumatic incident. Though some of the recommendations made by participants were specific to typologies of treatment (e.g., increasing the availability of post-event programming), there were three general recommendations to improving organizational support: (1) establish closure, (2) empower immediate supervisors, and (3) change the organizational culture.

### *Establishing closure*

For some ERs, it is vitally important for their psychosocial well-being to be able to compile all available information pertaining to a traumatic situation they were involved in, to process this information, and to consult with clinical professionals and their colleagues to be able to move on from the traumatic event. Closure proceedings, or initiatives, can be informal such as a peer-to-peer or informal networks, or formal proceedings:

some workers will be unaware that they have been traumatized or will make attempts to hide their symptoms. You know during my debrief it came out that one of the fire guys was holding a rag on the heart. That's the trained critical incident stress management team connecting the dots. That's more practical and you know you're getting, for the first responders you're getting the connection. (P2)

In this example, the debriefing helped the fire department generally, and the critical incident stress debriefing team more specifically, to identify that a worker was concealing his traumatization from the incident (i.e., the rag on his heart) from his colleagues.

The dissemination of relevant information to ERs is also vital to establishing closure after an emergency incident. Some ERs actively seek this information on their own, whereas others will demand it from their employer. For some ERs, the challenge of obtaining this information can be overwhelming:

... from a closure perspective, from a psychological trauma healing perspective, having the ability to give people information so that they can move forward so, you know, counseling services and victim services.... But then again, I think that that's a really important aspect, so that they'll take it away and, you know, chew on it too much; but then, there's also the being able to get closure. You know, what happened to the person; did the person live, or die? (P7)

### *Immediate supervisors*

The findings in this study appear to indicate that upper-level management, union support, and health and safety legislation are integral to the amount of organization support for well-being of staff. However, given the limited recognition of psychosocial trauma by legislators and administrators, this “top-down” push to change internal policies will likely be limited for years to come. However, if one considers the push to changing organizational support as a bottom-up initiative, or as initiating from front-line staff, then immediate supervisors can be instrumental in changing the organizational culture. More specifically, supervisors need to know their team, be proactive at providing services before an emergency incident occurs, and be flexible in making a variety of services available to staff. How policies and procedures become formalized is “up to the supervisor. The supervisor should know his team and how much it affected them. It might take a day or week to find out was that really a big deal?” (P4)

Specifically referring to the provision of time away from work to promote recovery from an incident, the participant added:

[Leave] should be available and flexible [to the ERs]. The best one to authorize it would be your low line-level manager because they should know their people. The upper guys, sometimes there’s politics involved and they’re chasing things. But the line managers usually care for the individuals and they typically were peer people and they’re senior, more experienced. They’re almost like your dad or your mom, these guys. And they usually care about their people, and there’s usually a bit of respect there too. (P4)

Proactive approaches were a rarity in this study. However, several participants indicated that they see a major benefit in developing self-resiliency and improving the well-being of staff. One suggestion was to encourage ERs to take time off work/sick leave when they are mentally unwell,

We rack up so much sick hours and we never use them and when we need them at the end of our career ... those sick bank hours just disappear. There’s no reward in that. I have 2,000 sick hours right now and never called in sick. And yet, I would really think, if we could do it, it would be so beneficial to take a mental health day and use our sick bank because I just need to take care of that stress bucket. (P25)

### *Changing the culture*

For some organizations, the culture for recognizing and responding to the psychosocial well-being of the staff and volunteers was omnipresent not only during traumatic incidents but also when carrying out everyday tasks. On the other hand, other organizations appeared to place less emphasis on the emotional well-being of their members. Although some organizations appeared to have stronger support programs in place, there was room for improvements in each participant’s organization. Cultural awareness and recognition needs to start in recruitment, continue into training, and carry on throughout one’s career. These shifts in the focus on the psychosocial well-being of ERs do not need to be dramatic; rather, as P18 suggested, “in police work you go from those hard-nosed cops 20 years ago to

how we are now. Those best practices evolve [and] something that might work today could work better tomorrow.”

Flannery’s (2015) multimodal model recognizes that psychological trauma affects multiple domains of mastery (i.e., the capacity or skills to shape and influence daily events insofar that results are advantageous) resulting in a variety of clusters of symptoms. Participants in this study also indicate that education, treatment, preventative programs, and other services need to be multifaceted, made widely available, and absorbed into cultural practices. However, some ERs were hesitant to pursue post-event treatment because of the stigma that surrounds some services. The perception of psychiatrists and psychologists was not always positive, “I’ve never used a quack or a psychologist. I don’t want to go to psychologist and sit in his office and talk to him about my feelings. I just don’t feel comfortable with that” (P4). As a counter argument to this perception of clinical treatment, P4 indicates that consulting with peers was more helpful in terms of providing information and recovering from trauma as external clinicians are not well informed of the nature of working as a first responder. One potential way to address this is to promote, or make available, informal approaches as a way of breaking down silos of communication about trauma within and between organizations:

I think a lot of it is facilitating informal networks, not just training. But people, when they get together like you learn so much by a person by seeing them and having coffee with them or breaking bread with them, right. I’ve got nothing but great respect for firemen, even though you know it’s a different job. Same with the ambulance workers, right. So that was all done informally. (P4)

## **Conclusions**

The results from this study suggest that organizations would benefit from creating and maintaining a work environment that recognizes the importance of the psychosocial well-being generally, while also more specifically helping staff recover from a traumatizing incident. Exactly what this support looks like will be unique to each agency. However, to ensure there is some degree of consistency between emergency organizations, changes in policy (particularly at the state and federal legislative level) may need to hold organizations more accountable so that psychosocial rights are considered comparable to other legislated health and safety policies.

As with any study, the current study is not without limitations. Although the sample of ERs covers multiple agencies, it is possible that additional interviews with other workers from other agencies that respond to emergencies in British Columbia may have resulted in different trauma narratives and associations with organizational support. As such, the representativeness of the sample used in this study may not be generalizable to other ER populations outside of British Columbia. Secondly, the recommendations for improving organizational support were generalized to all participants in this study. Realistically, some suggestions will be limited in terms of applicability to different groups of ERs, particularly

civilian and other de facto ERs.

The results of this study present many possible avenues for future research, two of which appear to be a natural progression from the present study. The first involves a more detailed analysis of the similarities and differences in organizational support toward psychosocial well-being among ERs. That is, identifying the specific formal and informal policies that are currently being used in each agency and calculate the degree of organizational support that exists. The second avenue would be to test if changes to organizational support through culture shifts, developing insight and support from middle-management, and overall policy changes, result in improvements in the psychosocial well-being of persons who have experienced traumatizing incidents.

### Acknowledgments

The authors wish to acknowledge the support of co-principal investigators Colleen Vaughan from the Justice Institute of British Columbia and Robin Cox from Royal Roads University.

### Funding

This research was supported by funding from the Canadian Safety and Security Program, Centre for Security Science, Defence Research Development Canada and Project Champion Health Canada.

### References

- Ashkenazi, I., McNulty, E., Marcus, L. J., & Dorn, B. C. (2012). The role of bystanders in mass casualty events: Lessons from the 2010 Haiti earthquake. *Journal of Defense Studies & Resource Management*, 1(2), 1–5. doi:10.4172/2324-9315.1000103
- Beaton, R., Murphy, S., Johnson, C., Pike, K., & Corneil, W. (1998). Exposure to duty-related incident stressors in urban firefighters and paramedics. *Journal of Traumatic Stress*, 11(4), 821–828. doi:10.1023/a:1024461920456
- Bloom, S. L. (2010). Organizational stress as a barrier to trauma-informed service delivery. *A public health perspective of women's mental health*. In M. Becker & B. Levin (Eds.), *A public health perspective on women's mental health* (pp. 295–311). New York, NY: Springer.
- Bride, B. E. (2007). Prevalence of secondary traumatic stress among social workers. *Social Work*, 52(1), 63–70. doi:10.1093/sw/52.1.63
- Cesur, R., Sabia, J. J., & Tekin, E. (2013). The psychological costs of war: Military combat and mental health. *Journal of Health Economics*, 32(1), 51–65. doi:10.1016/j.jhealeco.2012.09.001
- D'Andrea, W., Sharma, R., Zelechoski, A. D., & Spinazzola, J. (2011). Physical health problems after single trauma exposure: When stress takes root in the body. *Journal of the American Psychiatric Nurses Association*, 17(6), 378–392. doi:10.1177/1078390311425187
- Feinstein, A., Owen, J., & Blair, N. (2002). A hazardous profession: War, journalists, and psychopathology. *American Journal of Psychiatry*, 159(9), 1570–1575. doi:10.1176/appi.ajp.159.9.1570
- Figley, C. R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. New York, NY: Brunner/Mazel.



- Flannery, R. B., Jr. (2015). Treating psychological trauma in first responders: A multi-modal paradigm. *Psychiatric Quarterly*, 86(2), 261–267. doi:10.1007/s11126-014-9329-z
- Gorman, L., Blow, A., Ames, B., & Reed, P. (2011). National Guard families after combat: Mental health, use of mental health services, and perceived treatment barriers. *Psychiatric Services*, 62(1), 28–34. doi:10.1176/appi.ps.62.1.28
- Harrison, M. (2006). Bombers and bystanders in suicide attacks in Israel, 2000 to 2003. *Studies in Conflict & Terrorism*, 29(2), 187–206. doi:10.1080/10576100500496998
- Haugen, P., Evces, M., & Weiss, D. (2012). Treating posttraumatic stress disorder in first responders: A systematic review. *Clinical Psychology Review*, 32(5), 370–380. doi:10.1016/j.cpr.2012.04.001
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. doi:10.1177/1049732305276687
- Javidi, H., & Yadollahie, M. (2012). Post-traumatic stress disorder. *International Journal of Occupational and Environmental Medicine*, 3(1), 2–9.
- Jensen, R. A. (2000). *Mass fatality and casualty incidents: A field guide*. Boca Raton, FL: CRC Press.
- Lay, C., Allen, M., & Kassirer, A. (1974). The responsive bystander in emergencies: Some preliminary data. *Canadian Psychologist*, 15(3), 220–227. doi:10.1037/h0081755
- Leblanc, V. R., Regehr, C., Tavares, W., Scott, A. K., Macdonald, R., & King, K. (2012). The impact of stress on paramedic performance during simulated critical events. *Prehospital and Disaster Medicine*, 27(4), 369–374. doi:10.1017/s1049023x12001021
- Mitani, S., Fujita, M., Nakata, K., & Shirakawa, T. (2006). Impact of post-traumatic stress disorder and job-related stress on burnout: A study of fire service workers. *Journal of Emergency Medicine*, 31(1), 7–11. doi:10.1016/j.jemermed.2005.08.008
- McCanlies, E. C., Mnatsakanova, A., Andrew, M. E., Burchfiel, C. M., & Violanti, J. M. (2014). Positive psychological factors are associated with lower PTSD symptoms among police officers: Post hurricane Katrina. *Stress and Health*, 30(5), 405–415. doi:10.1002/smi.2615
- Neria, Y., DiGrande, L., & Adams, B. G. (2011). Posttraumatic stress disorder following the September 11, 2001, terrorist attacks. *American Psychologist*, 66(6), 429–446. doi:10.1037/a0024791
- Orsillo, S. M., Weathers, F. W., Litz, B. T., Steinberg, H. R., Huska, J. A., & Keane, T. M. (1996). Current and lifetime psychiatric disorders among veterans with war zone-related posttraumatic stress disorder. *Journal of Nervous and Mental Disease*, 184(5), 307–313. doi:10.1097/00005053-199605000-00007
- Palys, T., & Atchison, C. (2008). *Research designs: Quantitative and qualitative perspectives*. Toronto, Canada: Pearson.
- Perry, R. W., & Lindell, M. K. (2003). Understanding citizen response to disasters with implications for terrorism. *Journal of Contingencies and Crisis Management*, 11(2), 49–60. doi:10.1111/1468-5973.1102001
- Provincial Health Services Authority. (2015). *Disaster psychosocial services*. Retrieved from <http://www.phsa.ca/our-services/programs-services/health-emergency-management-bc/disaster-psychosocial-program>
- Shakespeare-Finch, J. E., Smith, S. G., Gow, K. M., Embelton, G., & Baird, L. (2003). The prevalence of post-traumatic growth in emergency ambulance personnel. *Traumatology*, 9(1), 58–71. doi:10.1528/trau.9.1.58.21634
- Sheen, K., Slade, P., & Spiby, H. (2014). An integrative review of the impact of indirect trauma exposure in health professionals and potential issues of salience for midwives. *Journal of Advanced Nursing*, 70(4), 729–743. doi:10.1111/jan.12274

- Simons, J. S., Gaher, R. M., Jacobs, G. A., Meyer, D., & Johnson-Jimenez, E. (2005). Associations between alcohol use and PTSD symptoms among American Red Cross disaster relief workers responding to the 9/11/2001 attacks. *American Journal of Drug and Alcohol Abuse*, 31(2), 285–304. doi:10.1081/ada-200047937
- Stellman, J. M., Smith, R. P., Katz, C. L., Sharma, V., Charney, D. S., Herbert, R., & Southwick, S. (2008). Enduring mental health morbidity and social function impairment in World Trade Center rescue, recovery, and cleanup workers: The psychological dimension of an environmental health disaster (dots). *Environmental Health Perspectives*, 116(9), 1248–1253. doi:10.1289/ehp.11164
- Styra, R., Hawryluck, L., Robinson, S., Kasapinovic, S., Fones, C., & Gold, W. L. (2008). Impact on health care workers employed in high-risk areas during the Toronto SARS outbreak. *Journal of Psychosomatic Research*, 64(2), 177–183. doi:10.1016/j.jpsychores.2007.07.015
- Venema, A. M., Groothoff, J. W., & Bierens, J. J. (2010). The role of bystanders during rescue and resuscitation of drowning victims. *Resuscitation*, 81(4), 434–439. doi:10.1016/j.resuscitation.2010.01.005
- Zimering, R., Gulliver, S. B., Knight, J., Munroe, J., & Keane, T. M. (2006). Posttraumatic stress disorder in disaster relief workers following direct and indirect trauma exposure to ground zero. *Journal of Traumatic Stress*, 19(4), 553–557. doi:10.1002/jts.20143