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Beyond ‘knee jerk’ reaction: CISM as a health promotion construct

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Abstract

This grounded theory research explores U.K. firefighter perceptions of stress and coping, and describes the outcomes firefighters see as evidence of successful coping. Results of this study reinforce outcomes of similar research with Canadian firefighters who also reported their levels of distress post-incident are decreased or mitigated through talking to others about their reactions and coping strategies. Both studies explicated social support, personal coping, and meaning-making as necessary components to firefighter coping, and Critical Incident Stress Management (CISM) as a vehicle to support firefighters in developing and maintaining those strategies. This study confirms that CISM ‘works’, not because it is a medical intervention but because it is a health promotion concept embedded in the culture and coping of the fire service. Health promotion philosophy and practice are explicated, and implications of a health promotion model for firefighter stress are outlined.

Introduction

Much has been written about stress and trauma, but researchers, mental health professionals, and front-line staff differ in their perspectives of how to address the occupational stress encountered in fire and rescue services around the world. Firefighters are considered to be at high risk of negative physical and psychological sequelae to their jobs because they routinely face risks and work in conditions that are beyond the norm of most occupations and trades. (British Columbia Professional Fire Fighters’ Association, 1999). However, there remains controversy about how to address occupational stress with many authors continuing to study stress in the context of the disease of *post-traumatic stress disorder* (PTSD). Other authors are looking beyond the illness

context and considering occupational stress, trauma, and critical incident stress from a health promotion perspective. Lindsay & Hartrick (1996) provide a comparison of health promotion and traditional biomedical philosophy and practice:

Table 1 – Biomedical model contrasted with ‘health promotion’ model
(adapted from Lindsey & Hartrick, 1996)

Traditional biomedical model	contrasted with	Health Promotion
Problem-focused, disease-oriented		Health focused, strengths-based
Medical, behavioural solutions		Socio-environmental solutions
Problem-solving, disease-treating		Health promoting
Professional as ‘expert’		Client-community as ‘expert’
Predicts, controls, ‘fixes’		Facilitates, supports, educates
Provides professional opinion & advice		Fosters reflection, brings forward existing resources/coping strategies
Process is ‘power-over’, control		Process is empowerment
Diagnostic, prescriptive, prevent or treat ‘disease’		Provides opportunity for identifying & addressing distress
‘Expert’ driven		Participatory & collaborative

This article will discuss some of the ‘power’ dynamics associated with the biomedical/illness model of critical incident stress management and will provide evidence to support a shift to a health promotion philosophy and practice. The article reflects the tensions that exist within the theoretical, methodological, and organizational frameworks that trauma support and critical incident stress inhabit in any culture, and the tensions that surface when examining the sacred cows of history, culture, and ways of being. Those tensions, however, impact the emergency

service workers, in this case firefighters, who are often caught literally and figuratively in the storm of controversy about what 'works' to mitigate workplace stress.

Whether retained or whole time, firefighters are committed to the ideology of community service, to rescue/response, and to caring about and for others; they live the reality of 'service' to others but frequently neglect their own emotional and physical health. Shepherd (2005) noted: "Saving life is the first duty of a firefighter and can sometimes come at a cost" (p.62). As a result of their service, the firefighter is at times faced with occupational stressors that result in physical, emotional, cognitive, spiritual, and behavioural reactions.

It was recognized by Selye and others (Varcarolis, Carson, & Shoemaker, 2006, p.589), that there are normal and expected physical and psychological reactions to stressors and traumatic events. Despite these normal reactions, a common phenomenon in military and paramilitary cultures, particularly, is an expectation of machismo that requires stress reactions to be 'sucked up', repressed, and ignored (Shepherd, 2005). In the 1980's, an American psychologist and retired firefighter/paramedic, Dr. Jeffrey Mitchell, began working with the phenomenon of firefighter stress (which he called "critical incident stress") and proposed alternative ways to manage it. It was recognized by Mitchell (1983) and others (see for example: Dyregov, 2003; Lindemann, 1944; Raphael, Wilson, Meldrum, & McFarlane, 1996; & Yalom, 1995) that early intervention post-incident helped diminish distress and mitigate acute stress reactions. One of the key features to effective early intervention was the opportunity to put words not only to the experience but also to one's reactions and coping strategies - the antithesis of repression and silence. Mitchell's model of critical incident stress management (CISM) was the first formalized

program of psychological support offered in the emergency services and has been adopted by many fire departments around the world.

Mitchell's model of CISM, in particular the intervention of *critical incident stress debriefing* (CISD), has been criticized for over 10 years with much of the negative judgments arising from misunderstanding and misapplication of both the CISM model and the CISD intervention.

Unfortunately, the issue of effectiveness of homogeneous groups using verbal ventilation to decrease distress has been lost in paradigmatic posturing and personality attacks against debriefing. Much of the criticism of the model comes from competing interests and a fixation on preventing post-traumatic stress disorder (PTSD) even though there is: a) no evidence anything prevents PTSD; and b) the majority of existing post-incident support programs have other expected outcomes such as an "intent to minimize the effects of an event on those who dealt with it" (Barber & Lawrence, 2004, para. 7). Some authors further claim that debriefing is harmful (see for example Gist & Woodall, 1995, 1998, 1999; Gist, Lohr, Kenardy et al., 1997) and some national organizations have taken to 'banning' debriefing from the toolbox of post-incident support strategies even though it is clear that many authors have used differential definitions of CISM/CISD, and have different approaches to how, when, and why the service is used, and differences in by whom and for whom the intervention is applied – factors that totally confound claims of harm. Further confounding the picture in many organizations is the goal to meet the requirements of existing health and safety regulations around what is called 'duty of care' (Health and Safety at Work etc Act, 1974) in which the fear of litigation drives organizations to create rigid processes as contingencies against any litigious possibility. The language of disease, specifically the term 'risk assessment', is frequently used as well (see for example:

Jones, Roberts, & Greenberg, 2003) and is prevalent in the National Institute for Clinical Excellence (NICE) (2005) guidelines. ‘Risk’ (assessment or management) conceptually is not part of CISM lexicon but has become a prevailing concept in the trauma field and continues to support the medicalization of the human stress response. In contrast, other authors claim that debriefing is helpful when provided within the context recommended by Mitchell’s organization (the International Critical Incident Stress Foundation – ICISF) in which debriefing is one aspect of a broad post-incident support program within a framework of holistic health education and support (see for example: Blaney, 2003; Bonanno, 2004; Durkin & Bekerian, 2000; Lahad & Cohen, 2005; Noy, 2004; Orner, King, Avery, Bretherton, Stolz, & Omerod, 2003). Still other researchers are calling for a shift in how stress generally is conceptualized from the disease-model that focuses on PTSD to a health-model that considers coping, resilience, and decreased distress as outcomes for trauma support programs (Antonovsky, 1996; Blaney, 2003; Orner, King, Avery, Bretherton, Stolz, & Ormerod, 2003; Regehr, Goldberg, & Hughes, 2002).

In the case of firefighters, it is known internationally that firefighting is psychologically a high risk occupation and strategies for minimizing the effects of stress include social support, personal coping skills, and opportunities to make meaning of events (Blaney, 2003). Jones, Roberts, and Greenberg (2003) note that a “central and robust finding from research ...is that accessible social support is associated with lower levels of psychological illness” (p. 2). Rather than targeting resources towards illness and PTSD, current research suggests a broader comprehensive health promotion paradigm is required to address the needs of the majority of today’s firefighters.

Purpose of the Study

This study is a replication of research conducted by the same author (Blaney, 2003) with three fire departments in Canada, and arises from the investigator's 15 years of clinical work with emergency service personnel. The theory that evolved from the Canadian study found CISM "works", not because it is a medical intervention provided on an illness-wellness continuum, but because it is a 'health' concept that is embedded in the culture and coping of the fire service (Blaney, 2003). However, a single study provides limited empirical content and the question remains: is the theory robust enough to stand up to re-test in a similar sample with variations in culture and context? Hence, the theory was further explored in this study - the researcher was interested in seeing if the perspectives of U.K. firefighters matched those of Canadian firefighters who described critical incident stress and coping from a health promotion perspective. There were three main goals of this study: 1) to explicate the perspectives of U.K. firefighters in relation to stress and coping; 2) to compare those perspectives with Canadian firefighters' perspectives; and 3) based on those outcomes, provide evidence for a health promotion and salutogenic theoretical framework for critical incident stress management in the fire and rescue services (FRS).

METHOD

In order to build on the theory developed in Canada (Blaney, 2003), the study method was replicated for this research. True 'replication' is not possible but the research design controls for a number of factors that frame the study as similarly as possible to the original research:

- A similar cohort (firefighters);

- The same criteria for participation in the study resulting in purposeful sampling;
- The same questionnaire containing only slight changes to regional jargon that do not change the intent of questions;
- The same data analysis programs and processes in order to avoid confounding factors;
- The same methodology (grounded theory).

The study does not explicitly seek to control factors or variables. It is instead looking at relationships, and the study is designed to examine the relationship between CISM and health promotion using grounded theory methodology.

Participants

Participants were members of two fire rescue services (FRS) in the northeast of England; other services in the United Kingdom were considered for inclusion, however, the selected brigades met all the criteria for participation. Originally, three FRS were invited to participate; as data collection got underway, one FRS withdrew from the study, citing ‘labour’ issues. Sampling was purposeful in order to provide concurring and confirming data, and to ensure saturation. Criteria for sampling were defined to address such issues as: homogeneity of the sample, FRS culture, ‘inclusiveness’ in the project, expected low returns of surveys, contagion effects of trauma research, etc. by specifying that: project participation is open to all members of the FRS including command, control, fire suppression, and fire investigation personnel; participating FRS have both whole-time and retained members, and each have more than 100 active members; participating FRS have an existing CISM or trauma support program; etc. (Blaney, 2003).

Design

In the field of traumatology, the accepted and recommended research paradigm has been quantitative (NICE, 2005). However, within the field, there are questions that cannot be addressed using purely quantitative paradigm, methodology, and methods. Deep divisions exist within the field, resulting in an inductive-deductive dichotomy: CISM works/doesn't work; CISM prevents PTSD/causes harm; CISM is a therapeutic intervention best left to therapists/ CISM is not therapy but as a process has therapeutic effects. The paradigmatic debate has polarized the academics in the field. The firefighters, for whom the program was originally developed however, insist that they benefit from CISM, and their voices seem to have been lost in quantitative methodology. Firefighters are demanding their perspectives be considered and their voices heard; as well CISM itself is a peer-led model – firefighters are active participants in the design and implementation of CISM programs. Hence the design of this research project needed to be congruent with, and true to, those same principles. Therefore, after criteria for participation was developed, and concurrent with the granting of authority for the project, an FRS Advisory team was formalized to ensure firefighter input into the project; the team was made up of the coordinators of the participating fire and rescue services' CISM programs. The Advisory team was critical for a number of reasons: the researcher is an 'outsider' to the fire culture, so the Advisory team provided entrance into the closed culture of the fire service; the researcher was from out-of-country, and needed local contacts to provide introduction and follow-through of the research project; and, the Advisory team brought fire-specific perspectives to the project to ensure the project was relevant to the FRS. E-meetings were held prior to piloting (then again prior to distribution) with members of the advisory team to discuss such

issues as: survey design and analysis, how to encourage participation without biasing or harassing the firefighters, data entry, data analysis, etc.

Tools

The tools utilized in this project were survey/questionnaire, and spontaneous yet structured interviews with Advisory team members. The original surveys were drafted using principles of survey design (Blaney, 2003), and were simply adapted to the current context to address regional language differences. The survey is attached as Appendix A. Consideration was given, in the questionnaire's design, to such issues as: *situational thresholds* (Palys, 2003) – the intent was to situate the participant in the last critical incident, not in the cumulative work or home stressors; and, the *availability of alternatives* (Palys, 2003) – explicating the participants' perspectives by asking for explanation of how they know they felt better, or why/why not did they attend an intervention. As well, the questions attempted to avoid normative or prescribed answers; inquiries, hence answers and options are left as open as possible in an attempt to derive the various personal perspectives from the data. The more times the questions are asked and the more ways they are asked, the more reliable will be the characterization of the person and responses (Palys, 2003).

Consideration was given to the limitations of survey/questionnaires, particularly relating to perceived bias and limitations of self-report. This project is utilization-focused, therefore needs to respect the current cultural context under study – in this case, a population who requested anonymity and stated their opposition to face-to-face discussions that may be perceived as counter-culture (Blaney, 2003).

Procedure

The surveys were piloted with a test cohort of U.K. firefighters and adapted to reflect their recommendations, then, with consents and return envelopes attached, were distributed by members of the Advisory team and CISM teams through the internal mail systems to all stations in the services. As well, discussions about culture and politics with the Advisory team resulted in subsequent adjustment of expectation of return (resistance to the project was noted in some of the fire services due to what was termed ‘politics’) hence a large number of surveys were sent out to overcome an anticipated very low return (Palys, 2003). The surveys were prepared and distributed with return instructions that explicated consent, and guaranteed confidentiality and anonymity (Blaney, 2003).

Of the 1050 surveys distributed to the two FRS, 244 were returned with useable data, a 23% return rate. This is generally considered a reasonable return rate for surveys (Palys, 2003), however contrasts starkly with the return rate of the Canadian research (47%); factors such as ‘survey fatigue’ were cited to Advisory team members.

Analysis

The same template for establishing standards for qualitative research was employed as with the original study (Rippon, 2002). Triangulation, hence confirmation of findings, was achieved through convergence among the researcher, the advisory team, and an independent data analyst. Narrative replies, as with the previous research, were transcribed verbatim until saturation was reached. Morse (1994) has suggested indicators of saturation include repetition of the

information and confirmation of previously obtained information. The survey responses were roughly themed, and a running tally was kept of subsequent replies as they were assigned to a theme or category within each question. The framework described by Huberman and Miles (1994) that includes 13 factors (such as noting patterns and themes, clustering, etc.) in data analysis was utilized. Themes were generally self-evident, as were outlier or negative cases, commensurate with a grounded theory approach (Glaser, 1992). The themes were further validated with the Advisory team, and with the same independent researcher as in the Canadian study. The outcomes were presented to the Advisory team who provided additional validation by functioning as a quasi-focus group, providing more data through discussion of themes and recommendations. Advisory team meetings were electronic and reflected the intent of the particular message; for example, providing interpretations and feedback about the research recommendations. All electronic communications were treated as confidential and kept by the researcher for incorporation into the final report (Altheide & Johnson, 1994).

RESULTS

The research questions evoked rich description and interpretation of participants' lived experience in 'what works' and 'how do we know'. The quality and quantity of responses demonstrated the time spent articulating thoughts and feelings, and greatly enriched the meaning of the data. Themes were quickly self-evident, and provided natural and sequential categorization as they had with the Canadian study. Many of the U.K. firefighters' replies use exactly the same words and phrases as the Canadians to describe experiences, reactions and coping – rather remarkable given the two samples were half a world apart. Questions were asked about the impact of critical incidents, strategies that help after a critical incident, strategies that

are least helpful after a critical incident, personal attributes that are helpful after an incident, and included a request for 'other comments about CISM'.

Impact of critical incidents

Several themes emerged in response to the inquiry about firefighter perceptions of the impact of critical incidents; the reactions to stressful events that the participant experienced subsequent to a critical incident fell into four response categories: physical, emotional, cognitive, and behavioural. As well, respondents again wrote about the *spiritual* aspects of the reactions: *I prayed...made me think how precious life is/how easily it can be lost/make the most of opportunities...thought about the victims/survivors/family members.*

U.K. firefighters identified *physical* symptom clusters, such as gastrointestinal upset: *upset stomach*; sleep disturbance: *difficulty sleeping/insomnia...bad dreams*; and fatigue: *physically drained*. Many more, similarly to Canadian firefighters, described a wide variety of *emotional* reactions (118) including: *empathy... guilt...concern... sense of inadequacy... shock... sadness/sorrow/sense of loss/grief...I cried...worried...emotionally drained...more bad-tempered/short-tempered/irritable than usual...frustrated/mad/angry/pissed off...second guessing...withdrawn/quiet/thoughtful/reflective/introspective*. The *cognitive* (thinking) reactions (89) expressed included: *worried about my crew/colleagues/watch...couldn't stop thinking about it/dwelled on it...couldn't concentrate...poor memory...self-doubt...thought about death...thought about my own family/it could have been my family...gruesome images/flashbacks...flashbacks during next call/training...detached/removed myself mentally from incident...personal contemplation/reflection...feeling that no one who wasn't there can't*

possibly relate/understand. The **behavioural** aspects (27) of reactions were articulated by: *I didn't want to handle the bodies...didn't want to go back to work...make sure I have a fire plan at home*. Unlike the Canadian firefighters, many (50) U.K. respondents denied any reactions to critical incidents experienced in the course of their careers (1-25+ years). Although this finding is somewhat unusual, it may be explained by the phenomenon of cognitive and emotional “distancing” described by Regehr, Goldberg, & Hughes (2002, p. 506), and respondents may have simply suppressed their reactions. Several participants (5) reported *stress from investigation/reports/court case* as a reaction, but did not articulate how ‘stress’ was manifested.

Strategies that help after a critical incident

There were similarities in the wording of the ‘helpful strategies’ between U.K. firefighters and Canadian firefighters, and the themes once again emerged in three categories: social support, personal coping, meaning-making.

By far, the largest category of activities valued as helpful following a critical event was **social support**. In this category, verbal ventilation ranked highest, with 238 respondents saying *talking about it* was the most helpful. That category was further broken down into *talking to watch/colleagues/coworkers/peers* (145), and *talking to partner/family/friends* (71). Several respondents mentioned the need for family/partner critical incident stress awareness in order to better educate and prepare the significant other for the firefighter’s reactions. Twenty other respondents cited *defusing* and *debriefing* as helpful. Respondents described: *I feel/felt better* (17), *we move on...I feel less anxious...got over it faster...I feel less stressed...I return to normal...I was able to carry on with no adverse effects* as examples of their measures of helpfulness. Organizational support was also cited indirectly as helpful following a critical

incident through the activation and utilization of the existing CISM program. The U.K. firefighters' use of social support as a primary coping strategy in times of stress correlates with other research (see for example Blaney, 2003; Bonanno, 2004; Noy, 2004; Pearlin, 1989; Regehr, Dimitropoulos, Bright, George & Henderson, 2005; Regehr, Goldberg, & Hughes, 2001; Thoits, 1995), and supports the need for a 'matrix' of services that includes firefighter families.

The primary *personal coping* strategies defined by U.K. firefighters are *experience* (27) and what was themed by the researcher as *attitude* (43). A personal attitude of coping was described by firefighters as: *a resigned pragmatism...professionalism...detached attitude/emotional detachment...knowing it's part of the job...getting back to a routine quickly/ get on with it*. Reflective experiences were also listed as helpful personal coping techniques, and were described as: *thinking it through/reflecting on the incident...quiet contemplation of the event...reflective processes...reflection*. Another personal coping strategy identified as helpful by some firefighters (27) is *humour/black humour/watch humour/friendly banter with the crew*. These strategies differ somewhat from Canadian firefighters who articulated exercise ["exercise/worked out/went to gym/went running/lifted weights" (Blaney, 2003, p. 52)] as a primary coping strategy, followed by humour, and reflective experiences [such as journaling and "being by myself for awhile" (Blaney, p.52)] as their secondary strategies. For U.K. firefighters, exercise was in a minority of responses (4) as a technique that works to decrease levels of distress; however, exercise and physical fitness were noted to be 'personal attributes' that helped with coping.

As with the Canadian study, few U.K. respondents admitted to using alcohol or drugs of any kind as a preferred method of coping. Six of the U.K. respondents stated they enjoy *...a drink after work/a large glass of whisky/a nice chilled bottle of decent quality wine/a pint and a joke*; this finding may be consistent with the Canadian firefighters who articulated they enjoy the social aspect more than the actual alcohol consumption. Durkin & Bekerian (2000) found that alcohol and “soft drugs” (p.31) are not preferred coping strategies for firefighters and also noted firefighters find social support from colleagues and families to be most helpful. These findings continue to endorse the concept of CISM as an opportunity to utilize and enhance the existing social network within the fire station post-incident.

Meaning-making included 34 responses focused on *the knowledge that...we do all we can to give people the best chance of survival with the techniques/equipment...believing I/we did the best we could do/how hard the crew worked to save him*, as well as others who described: *carrying out services with humility...thinking it through/dealing with it on my own...finding some weird meaning in what happened...trying to understand what happened*. Also included within the concept of meaning making was some overlap with the themes of social support and personal coping: *concern about others [paramedics] on-scene...doing everyday ordinary things/routine with people who are important to me...it wasn't/could have been me/there but for the grace of God go I*. Other aspects of meaning-making were described as: *I am grateful for what I have...I have confidence in my crew/my team who are willing to do whatever is possible to help people*. Again, these themes are consistent with the Canadian firefighters, and with recommendations that a variety of support services be available post-incident in order to accommodate a variety of coping styles.

Other coping strategies that were not easily themed, but were repetitive comments or phrases from participants include: *taking time away from the job/getting away from work/a trip overseas/vacation time* seem to provide credence to the need for interests and time outside/away from the fire rescue service.

These findings support the principle underpinning CISM philosophy that many firefighters value the opportunity to verbally and cognitively reflect upon events and to attempt to find meaning in them.

Strategies that are least helpful

When asked about strategies that were not helpful, respondents generally said that *not talking about it* was the least helpful (34). Variations on this theme were articulated as: *keeping quiet...ignoring it...doing nothing...keeping it all bottled up...carrying on as if nothing happened*. Firefighters responded that they knew those strategies are not helpful because they: *lost sleep...couldn't eat...my emotions build up and come out all at once...things were left not dealt with...keep replaying the incident...if I'm feeling this way, then others may be and we need to talk...prolongs the process...makes you think about it longer...observed others not getting any better...I get more anxious as I try to plough through thoughts and reactions, and to analyze things on my own – I feel worse*.

The second most common theme that emerged from the data about least helpful strategies was clearly related to mandated attendance at interventions. This was evidenced from over 30 respondents who commented for example that *being forced to go...being forced to talk...I was*

more upset at being forced to attend than I was about the incident... was counter-productive after critical incidents; this theme countering mandated attendance was strongly reinforced in the section asking for other comments about CISM. Mandated attendance was further sub-themed into areas that seem to relate to trust in, and confidence in the competence of, the intervention teams as reflected by comments such as: *offers of help from those with little credibility...the thought of unqualified inexperienced person encroaching on my space...insensitivity of debriefers...condescending behaviour and lack of feeling of the debriefer*. As well, one comment: *overzealous counselling by what appears to be people in it for the kudos – it's much better now with professional staff* contrasted with several (6) who felt differently about professional support: *counselling...being told you need counselling by someone who wasn't at the incident...people who know nothing about my job...telling me how I should feel/how I am feeling – how do they know!!!!* An outcome mentioned in conjunction with negative comments about mandated attendance was *I felt worse*. Trust and competence in the CISM teams were issues that were raised previously by British firefighters (Durkin & Bekerian, 2000), and to a lesser extent by the Canadian firefighters (Blaney, 2003). Other participants commented that they needed *time to reflect – not someone rushing in*, and that *not having enough time to think it through/work it out/reflect* was least helpful.

Other strategies that were not helpful after an incident were: *being given a pat on the back...purposeless/ongoing/circular discussions about it*, and *a lack of information about casualties/no follow-up...about victim's status*. Again these comments were contrasted by an opposing perspective *too much information about the victims – I don't want to get involved with them*, which is in keeping with some of the personal coping strategies of detachment and

professionalism. Nine participants commented that the *wait* for CISM services, and subsequently *going over the incident when it has passed/been dealt with* was not helpful. There were frequent criticisms of managers/senior officers becoming involved in the incident aftermath: *managers arriving and questioning actions...criticisms of work...managers using hindsight to try to apportion blame...lack of understanding from senior/middle management.*

These comments may well reflect the reality of divisions of roles and tasks within a hierarchal organization, but may also simply be a common part of a stress response for both firefighters and managers: a constriction of thinking and sense that others are being critical (Everly, 1990; Selye, 1959 cited in Varcarolis, 2006); pre-incident education as well as ensuring the stress debriefing stays away from operations critique and second-guessing will help address this issue. Others mentioned *poor management-employee relations* and *station politics* as cumulative stressors that contributed to their critical incident stress reactions.

Again, three respondents said that CISM was not helpful; one respondent suggested it would be more helpful to *instead of picking fault to make a point, make it through drill nights/training* apparently in reference to operational critiques.

Middle and senior officers/managers, as with the Canadian study (Blaney, 2003) and as noted by Shepherd (2005) continue to feel CISM services *don't involve me – I'm senior and there are no services...*as evidenced by comments such as *...lack of contact with fellow attendees – I am the supervisory officer...feeling isolated...services are not offered to senior officers/investigators...as a duty officer, I have never been offered this service in the way the operational crews are!!*

Ensuring there are CISM-trained personnel in all ‘levels’ of the hierarchy will help to decrease the sense of isolation experienced by senior officers.

Personal attributes contributing to coping

There were a wide array of responses to the question which asked about personal attributes that contribute to coping, but overwhelmingly U.K. fire and rescue personnel felt “experience” was the attribute that was most helpful to them (50). They described experience *...on the job...with previous critical incidents...life* as beneficial. As with the Canadian study (Blaney, 2003), participants’ replies essentially self-themed into emotional, cognitive, physical, and spiritual attributes.

Emotionally, many respondents described *temperament* (26) as helpful and described their temperament as: *even...calm...rational...balanced...focused...mature*. As well, being able to *talk with others...*, being *open with my thoughts and feelings*, and the *ability to talk through stressful situations with my family/friends/peers ...talking and releasing are vitally important*.

Cognitively, many participants again described remaining detached from the events (33): *being a firefighter, I’m trained to cope/I just learned to cope...*, further describing the ability to *disconnect/switch off emotionally/not get emotionally involved/leave it at work/don’t think too deeply/emotional control...* as valued and effective attributes. These comments are congruent with Regehr, Goldberg, and Hughes (2002) work with paramedics, but are somewhat different than Canadian firefighters who recognize and articulate the need to emotionally disconnect from events at work, yet remain cognitively and emotionally attached to relationships (work, family).

Physically, respondents (10) noted that *sports...physical exercise...being physically fit/working out*, are attributes that help them cope with critical incidents, as well as *hobbies/fishing/walking* (3). Being *fit for work*, and ongoing *training...technical skills...operational skills* were noted to be attributes that are valued. Again a *balanced lifestyle* was obviously seen as a positive and necessary coping strategy.

Spiritually, *my Christianity...prayer, faith...personal beliefs...a realistic acceptance of our mortality/acceptance of fate – nothing can change what's going to or has happened...whatever happens does so for a reason*, and *knowing that events like this were beyond my control* were cited as personal attributes to aid coping. Others describe *self reliance...resilience*, and note they *...cope well*.

Another fairly common attribute was the ability to *reflect/be reflective/introspective/quiet for awhile* (20), indicating a need for a 'menu' of CISM services with varied timelines to be available for personnel. Other attributes overlap with the question about strategies that are most helpful and include: *a sense of humour* (20), and *laughter* (6) as being essential to the firefighters' well-being. Many spoke, again using common language with Canadian firefighters, of the necessity for a *support network* of friends, co-workers, and family to help balance the emotional toll of critical incidents in the form of *good home life...supportive spouse/friends/family...strong family* which point to the need for enhanced support and education for fire service families/spouses. Firefighters describe themselves as: *team player/strong team member* and three note that their *leadership* skills and attributes help cope with critical incidents.

It is evident that personal attributes are tied closely into the themes of ‘what works’ after a critical incident. The effective coping strategies and personal attributes articulated by U.K. firefighters reflect those of Canadian firefighters, and also raise questions about effects of those strategies on firefighters themselves as well as their families. Strategies such as cognitive and emotional ‘distancing’ are seen by Regehr, Goldberg, & Hughes (2001) as having negative consequences to FRS personnel and their families. Therefore, CISM programs need to provide a menu of services that support both distancing, as well as identification and articulation of emotional material as needed; there is also clear evidence of the need for improved access to these services for families. Finally, the strategies noted as useful and helpful to firefighters lend credence to the argument that a self-efficacy and health promotion approach to occupational stress will be, not only accepted by firefighters, but internalized more easily hence able to be utilized in times of stress.

Other comments about CISM

There was richness in the data obtained from the request for other comments about CISM however respondents did not take as much advantage of this opportunity to give voice to their concerns as Canadian firefighters had. As noted by Blaney (2005), Canadian respondents “wrote long stories...scribbled in the margins and added extra pages” (p. 23) of notes outlining their experiences with CISM and organizational stress. The rich feedback provided direction for the CISM programs by summarizing issues, concerns, and kudos that had not been noted elsewhere on the questionnaire.

Generally, U.K. firefighters' ***other comments*** were supportive of the programs and articulated positive experiences and outcomes from some very stressful events. In support of the programs for example, participants said: *very good program/very good idea – they need to promote themselves better...I know what it was like without CISM...it is helpful and informative...it works – people need to talk...it's good to have the option.* Others suggested *...pre-incident education/awareness is necessary – I didn't know/trust what I was getting into until afterwards...CISM was never properly explained how it could help, what it should do, and ...it works extremely well for those who are receptive.* Several respondents described team-building and organizational support as important outcomes of the CISM process. Many commented that even if it is not necessary at that particular time for them...*it helps others for me to be there.*

Some who have not had experience with the CISM program also offered opinion: *I've heard good things about CISM...it's good to know they are available...I've never had the need but fully support the principles.* Others noted: *I've never been offered it...never come across it or knew it existed.*

There were responses from officers, control, fire prevention and investigation staff who said they did not have access to the CISM program; they articulated their disappointment at the lack of services and suggested *...make it available to everyone/don't forget about the officers...officers are forgotten about.* They are clear in their expectations that the program be available to all members of the brigades; some also categorically stated CISM training must be made available for retained, as well as whole time members. Some respondents noted that the CISM concept

...is not wholly committed to by senior management/we continue to talk the talk but don't always walk the walk.

A number of respondents noted their concern about the competence and experience of peer teams: *they should be uniformed/experienced...having 'non-uniforms' or staff carry out debrief is not seen as helpful, yet using internal personnel ...often becomes an operation debrief because CISM teams are brigade/station members, often managers.* Lack of trust was also noted as an issue: *the debriefers were not well trained;* concerns about confidentiality (or the perception of lack of confidentiality) were cited as reason for not using/trusting the CISM process: *the personnel who provide the service must be trusted...I've had what I've said in a debriefing get back to management...I don't trust them...they are not people I can relate to/trust.* Timing of interventions was also an issue: *service was offered a bit late...should have had it sooner – we had to wait a fortnight.* Others again noted their objection to mandated attendance: *it should be available for people...but not forced for all...should be voluntary...I was more upset at being forced to attend than with the incident... I have refused to attend any more.*

All of these concerns can be addressed through enhanced CISM training (pre-incident education) for all firefighters and an increased focus on CISM peer-team training and development. For example, new and existing FRS-CISM teams could begin building credibility and trust by re-focusing their programs on education: program awareness and pre-incident education delivered (as part of routine and ongoing FRS education) by trained and articulate peers who can credibly represent CISM and who can also present relevant information about normal stress reactions and healthy coping strategies. As well, issues of confidentiality should be explicated at every

opportunity, and consequences for breaches of confidentiality by team members must be articulated in CISM policies - hence illustrating the need for CISM programs to have clear policies/procedures (of which there are a number of 'best practices' templates available globally and locally) guiding each program.

DISCUSSION

The theory that emerged from the data has implications in three domains: theoretical, methodological, and organizational.

Theoretical implications

As noted in the literature, the concept of critical incident stress continues to be allied with the view of trauma as a 'science' and trauma responses as 'symptoms' of pathology (see for example: NICE, 2005), instead of viewing trauma as the norm in high risk professions such as the fire service, and trauma responses as evidence of resilience and survival. Lindstrom and Eriksson (2005) conclude there is "a need to change focus from problems and obstacles to resources" (p. 464), and firefighters support that shift.

In this research, first and foremost, there is evidence linking CISM to a health promotion theoretical framework. As with the Canadian study, U.K. firefighters focused on health, coping, resilience, and hardiness, and they clearly articulated their perspectives of how these concepts were actioned in the field. At no time did any participants discuss or reference post-traumatic stress disorder or any other example of diagnosis, disease, or illness, physical or psychological.

This is important when looking at evaluation of CISM programs, and when engaging in the debate over efficacy of CISM models. These participants endorsed CISM as a concept to be viewed in a broader social context than simply medical diagnosis and prevention/treatment of disease. As noted in the literature many academics, researchers, and therapists continue to situate CIS debriefing in the disease framework, and not surprisingly find little evidence that it impacts morbidity and mortality. CIS debriefing is one component of a broader health promotion framework (CISM) that has *salutogenesis* as its overall theory base. Salutogenesis explains how and why people stay well, despite ever-present physical and psychological stressors (Antonovsky, 1996) and “is a theory of the health of that complex system, the human being” (p.13).

How might the salutogenic model guide stress and trauma studies and programs? The prevailing assumption is that trauma creates distress and disease, which in turn creates pragmatic external needs for those exposed to trauma. This outcome is true for a minority of people, but recent literature (see for example: Bonanno, 2004; Durkin & Bekerian, 2000; Mitchell & Mitchell, 2006) recognizes that for many people, a traumatic event catalyzes internal resources of competence, coping, and resilience. Firefighters have strongly endorsed the concept of ‘meaning-making’ as a coping strategy post-incident, and view social support (such as a ‘chat with the crew’ and putting words to the event and their reactions) and personal attributes (such as ‘strong character’, ‘ability to reflect’) as helpful in making meaning. Clearly, this health orientation reflects capacity and resilience, and just as clearly shows an alternative to the illness paradigm of “those who have succumbed...to some disease” (Antonovsky, 1996, p.13).

Firefighters in this research have described that CISM ‘works’ (program efficacy and efficiency),

but also explicate how it works – which feeds back into the theories of health promotion and salutogenesis (participatory, strengths-based, client as expert). Future research now needs to shift into further evaluation of health and explore what ‘works’ to strengthen the components endorsed by firefighters: social support, personal coping, and meaning-making.

Antonovsky (1979) defined categories of resources available to people that determine whether stress becomes pathogenic or salutogenically strengthening. These resources include:

material resources, knowledge and intelligence, ego strength, mastery of flexible rational and far-sighted coping strategies, social supports, commitment to one’s social group, cultural stability, a stable system of values and beliefs derived from one’s philosophy or religion, a preventative health orientation, and genetic or constitutional strengths (Sullivan, 1989, p. 337)

All of these factors were mentioned more than once by both U.K. and Canadian firefighters. Firefighters actively engage in health-seeking, which is the antithesis of disease and pathogenesis. The philosophical underpinnings of CISM are also health-seeking (Mitchell, 1983; Mitchell & Everly, 2001), and must be clearly explicated as such. As well, future research into post-incident coping must assess disease resistance resources and health-seeking activities, with the perspective of ‘health’ rather than illness as the variable of interest.

In contrast with the perspective of risk, U.K. firefighters reveal that “talking about it” decreases their levels of distress and increases their sense of well-being (“I feel better”); as well, they clearly describe a comprehensive repertoire of coping mechanisms. Also, firefighters generally endorse the concept of group stress debriefing as a forum for verbal ventilation of stress reactions and for sharing coping strategies. Summerfield (2001) notes “there is tension between

these older, time honoured constructions, which centre on resilience and composure, and what is emerging today” (p.96) which he describes as the “social construction of PTSD and the outcome of ‘victim’ status” (p.96). Both Summerfield (2001) and Bonanno (2004) note that the concepts of resilience and coping have not received the appropriate attention and research; a salutogenic approach would encourage and support these concepts.

Firefighters endorse CISM as a health resource. This is in keeping with other voices in the field calling for a paradigmatic shift in the conceptualization of stress from pathogenesis to salutogenesis.

Methodological implications

Findings from this study are in keeping with recommendations to broaden the methodology and the focus of study into CISM and trauma (see for example: Blaney, 2005; Deahl, Scinivasan, Jones, Neblett, & Jones, 2001; Mitchell & Mitchell, 2006; Regehr, 2001; Regehr, Goldberg, & Hughes, 2002). Other authors have also suggested research into health, resilience, functioning, and coping using a variety of methodologies beyond randomized controlled trials (see for example: Antonovsky, 1996; Bonanno, 2004; Lindstrom & Eriksson, 2005; Lahad & Cohen, 2005; Lahad & Rogel, 2004; Orner et al, 2003; Satel & Sommers, 2005; Summerfield, 2001). Lahad & Cohen (2005) also state that “new and different projects need to be developed...and their outcomes need to be evaluated in new qualitative ways, not just statistically” (para. 56). Lahad and Cohen further suggest that enough studies have been done on the impact of traumatic events on people; now is the time to move beyond and engage in actions that “enable coping” (para. 55). However the “Bush science” belief system (Lather as cited by Denzin & Lincoln,

2005, p.9) prevails in the trauma field, and supports, enhances, and entrenches medical diagnosis and psychopathology as social and cultural ‘ways of being’. Various change theorists and authors (see for example: Bowe, Lahey, Armstrong, & Kegan, 2003; Bowe, Lahey, Kegan, & Armstrong, 2003; Ginsburg & Tregunno, 2005) note that a system’s existing assumptions and beliefs can seriously impede effective and sustained organizational change. In the trauma field, cultural beliefs around the medicalization of the human stress response create entrenchment and constricted vision; in turn, this results in territoriality as those beliefs are defended from the perceived attacks of researchers and practitioners suggesting acknowledgement of health and coping. Asking cultures with vested interests, especially interests linked to ‘power-over’ (ownership of expert, exclusive knowledge), and financial gain (the ‘business’ of psychology and medicine) to consider an alternative construct or broader vision such as salutogenesis or health promotion is a significant and long-term challenge. One of the limitations of this study is the potential for contributing to polarization and ‘dualistic’ perspectives of the medical model and health promotion model; further research supporting a ‘health’ approach to stress and trauma is needed.

Organizational implications

From an organizational perspective, it will be challenging for any fire and rescue service, as well as those engaged in the work of traumatic stress to maintain a salutogenic orientation in the face of a global pathogenic orientation to critical incident stress. However, there is precedent in the U.K. fire rescue service, as well as the Australian and American fire services for a health orientation in CISM (Durkin & Bekerian, 2000).

Health promotion is defined by the World Health Organization (WHO) as: “the process of enabling people to increase control over, and to improve, their health” (WHO, 1998, p.1).

Further, “Health is therefore seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, as well as physical capabilities” (WHO, p.1) Other authors define health promotion as a series of actions or “activities that increase the levels of health and well-being and actualize or maximize the health and potential of individuals, families, groups, communities, and society” (Pender, Murdaugh, & Parsons, 2002, cited in Murray, Zentner, Pangman, & Pangman, 2006, p. 44). As defined by participants in this study, it is clear that CISM is better situated in a health promotion framework.

A cultural shift from pathogenesis to health promotion can certainly seem too overwhelming to sort through and ‘action’ for FRS. However, as noted, precedent already exists for a philosophical shift to health promotion and several ‘models’ of practice are available. For example, Mitchell’s model of CISM is contextualized as a ‘continuum of services’, all of which meet standards for health promotion and salutogenesis (Mitchell & Mitchell, 2006).

Additionally, Blaney (2005) has contextualized CISM as a matrix, which helps to maintain a visual and cognitive representation of the inter-related domains of prevention, intervention, and post-vention (Figure 1) from the health perspective.

Figure 1 – Matrix model of CISM

This model, based on Mitchell’s work (Mitchell, 1983; Mitchell & Everly, 2001; Mitchell & Mitchell, 2006), is currently used in various emergency service and business organizations in Canada and has as its philosophical underpinnings concepts of health, caring, knowledge-sharing, and peer support. Implementing this model in the U.K. would not be an onerous or costly effort; a number of CISM interventions already exist within the FRS, but as noted by firefighters there are significant gaps in the domains of prevention (pre-incident education, clear understanding of and universal access to CISM) and post-vention (follow-up), including

education and support to families. Adoption of a comprehensive coordinated model of practice is clearly endorsed by firefighters in their comments about the benefits of CISM and in their discussion of the gaps in service (support to families, availability of service to all levels of the hierarchy, trust in the competency of service providers, credibility of service providers, etc.). Enhancing the existing CISM programs highlights a platform from which more comprehensive support to firefighters and their families can be provided, including education and direct services to all. Encouraging selection of health opportunities from a 'menu' of services (vs. mandated attendance at a single service) will honour the various coping strategies endorsed by firefighters. These changes are congruent with a philosophical and program shift from illness management to a focus on health promotion, and will allow firefighters and their families to benefit from a broad array of prevention and post-vention services that augment existing 'interventions'.

CONCLUSIONS

This study acknowledges that firefighters are exposed to critical incidents in the course their daily work, yet notes that firefighters see themselves as essentially healthy and see CISM as an opportunity to reflect upon their reactions and reinforce their coping strategies. The qualitative findings of this research support the theory that emerged in a Canadian study (Blaney, 2003) suggesting that CISM is effective, not because it is part of a biomedical continuum of illness to wellness, but because it is a process of *health promotion* or *salutogenesis* that empowers individuals, in the context of their workplace, to define and maintain their own and others' health through education, communication, and enhanced social support. This study also finds that CISM has evolved beyond a biomedical model into one of *health promotion*, and that the evolved theory requires reconsideration of methods of service delivery, outcome measures, &

research methodologies. Other findings in this research show existing comprehensive CISM models provide a framework for applying health promotion philosophy and practice in the FRS. Although the philosophy and practice models of health promotion and biomedical treatment are not mutually exclusive, current practice is weighted heavily towards disease diagnosis and treatment. Firefighters in the U.K. and Canada say the time has come to shift the balance of power from disease to health.

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APPENDIX A

LEAPING INTO THE INFERNO
CRITICAL INCIDENT STRESS MANAGEMENT (CISM)
IN THE FIRE and RESCUE SERVICE of the UNITED KINGDOM:
What works and how do we know?
STRESS AND COPING QUESTIONNAIRE (SCQ)

1. Gender: M ____ F ____
2. Age: 18-24 ____ 25-34 ____ 35-44 ____ 45-54 ____ 55-64 ____
3. Current Fire Service: Whole time ____ Retained ____
Operational ____ Control ____ Prevention ____ Investigation ____ Command ____
4. Overall years of service: < 1 1-4 5-9 10-14 15-19 20-24 25+
5. Does your fire service have a CISM program? Yes No Don't know
Does your service have a Trauma Support program? Yes No Don't know
- If yes, how often are awareness/education sessions presented?
Annual Every 2 years Never Don't know
6. Please answer: *In my fire service, I feel supported by my peers*
Always Often Sometimes Not often Never
7. When did you last experience a work-related critical incident:
never in the past year past 2-4 years past 5-10 years over 10 years ago
8. What was the nature of the critical incident you last experienced?
- An event that was life-threatening, or had threat of serious injury, to yourself ____
 - On-scene fatality ____
 - Death or serious injury of colleague ____
 - Death of a child ____
 - Disaster or large-scale incident ____
 - Gruesome scene ____
 - Other (please describe) _____
9. What reactions did you have to this incident? (please describe any specific physical, emotional, thinking, spiritual, or behavioural reactions you had)
- _____

10. What helped you deal with/live with your reactions?
- _____

11. a) Was CISM/trauma support provided? Yes ____ No ____
b) Did you attend? Yes ____ No ____
c) Why, or why not? _____

12. **Before a CISM service was provided**, what impact did you notice the following common symptoms or reactions to the critical incident having on you:

	very distressed	upset	no effect	felt okay	felt great
Physical (sleep disruption, nightmares, upset stomach)	___	___	___	___	___
Emotional (anxiety, irritability, emotionally numb)	___	___	___	___	___
Cognitive (forgetfulness, flashbacks, difficulty concentrating)	___	___	___	___	___
Behavioural (restlessness, changes in routine activities)	___	___	___	___	___

13. If CISM/trauma support was provided for your last critical incident, what type of service(s)?

Education Session	___	1:1 Peer Support	___
Group defusing (peers led)	___	CIS group debriefing	___
Referral to a professional counsellor	___		
Family support or education	___		
Other (please describe)	_____		

14. **After a CISM service was provided**, what impact did you notice the following common symptoms or reactions to the incident having on you:

	very distressed	upset	no effect	felt okay	felt great
Physical (sleep disruption, nightmares, upset stomach)	___	___	___	___	___
Emotional (anxiety, irritability, emotionally numb)	___	___	___	___	___
Cognitive (forgetfulness, flashbacks, difficulty concentrating)	___	___	___	___	___
Behavioural (restlessness, changes in routine activities)	___	___	___	___	___

15. After you experience a critical incident, what helps you the most? _____
 How do you know it helps? _____

16. After you experience a critical incident, what is the least helpful?
 How do you know? _____

17. What personal attributes do you have that help you cope with stressful events?

18. Other comments about your experience with CISM/Trauma Support:

Thank you for your time and participation.

Leigh S. Blaney (Principal investigator) Email: BlaneyL@mala.bc.ca

*Please return this questionnaire in the sealed envelope (through the department mail) to me, c/o Local contact name, at _____ Fire and Rescue Service – by **July 7**. Preliminary results of the study will be available in September; a final report will be delivered in December.*