RESEARCH THAT HAS IMPACT

Peer Support and Crisis-Focused Psychological Intervention Programs in Canadian First Responders: Blue Paper

University of Regina

Peer Support and Crisis-Focused Psychological Intervention Programs in Canadian First Responders: Blue Paper

Results from a review conducted by a team of researchers at the University of Regina have shown that there is an urgent need for more research on the effectiveness of peer support and crisis-focused psychological intervention programs designed to help First Responders — police, paramedics, and fire and rescue personnel — cope with the trauma often associated with their work. The Blue Paper was published by a research team led by Dr. Shadi Beshai and Dr. R. Nicholas Carleton with the Canadian Institute for Public Safety Research and Treatment (CIPSRT).

The "operational stressors" that First Responders regularly confront at work, including death, violence, and threats to their own lives, put them at risk for psychological challenges, including post-traumatic stress, depression, anxiety, and anger. Such challenges can lead to other problems, such as substance abuse, relationship difficulties, and absenteeism.

Many workplaces now offer programs designed to help First Responders manage the operational stressors they experience. Some programs are crisis-focused, while others try to build resiliency with programming before, during, and after critical incidents. Despite the prevalence of such programs, more work is needed.

The Blue Paper **a)** identifies the peer support and crisis-focused psychological intervention programs used by First Responder agencies, **b)** reviews existing research from both national and international sources, and **c)** evaluates the evidence for the effectiveness of several of these programs. In addition, the researchers designed, distributed, and analyzed results from a survey of First Responder agencies across Canada in order to learn more about programs currently being implemented.

The results of this project indicate that, although First Responders appreciate having peer support and crisis-focused psychological intervention programs, there is little or no empirical evidence supporting or refuting the effectiveness of such programs.

The research team concludes that First Responder agencies would benefit from the adoption of more uniform models for peer support and crisis management. Increased uniformity would ensure minimum standards, facilitate research, and provide enhanced support for First Responders enduring the effects of traumatic experiences on the job.

The research team also identifies a need for "methodologically rigorous" research that examines the effectiveness of peer support and crisis-focused psychological intervention programs. Among the few studies conducted to date, many have significant methodological limitations.

Other recommendations in the Blue Paper include: ongoing training, supervision, and support for personnel involved in implementing programs; gathering regular and more rigorous feedback from First Responders; and ongoing research conducted by independent, appropriately qualified, and established researchers to evaluate the effectiveness of programs.

According to the Blue Paper:

"Increasing standardization and incorporating rigorous methodological designs and outcome measures would be critical improvements for ensuring and improving the effectiveness of peer support programs and crisis-focused psychological intervention programs."

Les programmes de soutien par les pairs et les programmes d'intervention psychologique en situation de crise destinés aux premiers répondants canadiens : *Blue Paper*

Les conclusions d'une étude réalisée par une équipe de chercheurs de l'Université de Regina démontrent qu'il est urgent d'effectuer plus de recherches sur l'efficacité des programmes de soutien par les pairs et des programmes d'intervention psychologique en situation de crise conçus pour aider les premiers répondants (policiers, paramédics, pompiers) à gérer les traumatismes souvent associés à leur travail. Le *Blue Paper* a été publié par une équipe de chercheurs sous la direction des Dr Shadi Beshai et Dr Nicholas Carleton de l'Institut canadien de recherche et de traitement en sécurité publique (ICRTSP).

Les premiers répondants sont régulièrement confrontés à des « facteurs de stress opérationnel » au travail, y compris la mort, la violence et les menaces de mort, qui augmentent le risque de développer des difficultés psychologiques dont le stress post-traumatique, la dépression, l'anxiété et la colère. Ces difficultés peuvent aussi mener à d'autres problèmes tels l'abus de substances, les difficultés relationnelles et l'absentéisme au travail.

Des programmes visant à aider les premiers répondants à gérer les facteurs de stress opérationnel auxquels ils font face sont offerts dans plusieurs milieux de travail. Certains de ces programmes sont axés sur l'intervention en situation de crise alors que d'autres visent plutôt à renforcer la résilience avant, pendant et après les incidents critiques. En dépit de la prévalence de tels programmes, il y a encore du travail à faire.

Le *Blue Paper* **a)** identifie les programmes de soutien par les pairs et les programmes d'intervention psychologique en situation de crise mis en place par les organismes de premiers répondants, **b)** présente une revue de la littérature nationale et internationale sur le sujet et **c)** évalue l'efficacité de plusieurs de ces programmes. L'équipe de chercheurs a aussi développé, distribué et analysé les résultats d'un sondage complété par de nombreux organismes de premiers répondants canadiens, et ce afin de mieux connaître les programmes existants déjà implantés.

Selon les résultats de la recherche, les premiers répondants apprécient les programmes de soutien par les pairs et les programmes d'intervention en situation de crise, cependant, il y a peu ou pas de données empiriques confirmant ou réfutant l'efficacité de tels programmes.

L'équipe de chercheurs conclut que les organismes de premiers répondants bénéficieraient de la mise en oeuvre de programmes de soutien par les pairs et de programmes d'intervention en situation de crise axés sur des modèles plus uniformes. Une plus grande uniformité des programmes assurerait l'adoption de normes minimales communes, faciliterait la recherche, et permettrait ainsi d'accroître le niveau de support offert aux premiers répondants ayant vécu des évènements traumatiques au travail.

L'équipe de chercheurs spécifie le besoin d'une « méthodologie de recherche rigoureuse » pour évaluer l'efficacité des programmes de soutien par les pairs et des programmes d'interventions en situation de crise. Parmi le peu d'études complétées à date, plusieurs présentent d'importantes limites méthodologiques.

D'autres recommandations du *Blue Paper* incluent la formation, la supervision et le support continu pour le personnel responsable de l'application des programmes; la cueillette rigoureuse de réactions et de commentaires des premiers répondants utilisant de tels programmes; et le développement de recherches sur l'efficacité des programmes menées par des chercheurs indépendants, qualifiés et réputés.

Selon le *Blue Paper* :

« L'emploi d'une méthodologie plus rigoureuse et une normalisation accrue sont d'importantes améliorations qui permettraient d'assurer une meilleure efficacité des programmes de soutien par les pairs et des programmes d'intervention psychologique en situation de crise. »

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Glossary of Terms and Acronyms

First Responders	*Police Officers, Paramedics, Fire and Rescue Personnel*
Fire and Rescue	*Firefighters, Volunteer Firefighters*
Paramedics	*Paramedics, Advanced Care Paramedic (ACP), Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Primary Care Paramedic (PCP),*
Police Officers	*CMP, Municipal Police, RCMP, and other Police*
Tri-Services	*First Responders*
APA	American Psychiatric Association
ARC	American Red Cross
CACP	Canadian Association of Chiefs of Police
CAFC	Canadian Association of Fire Chiefs
CISD	Critical Incident Stress Debriefing
CISM	Critical Incident Stress Management
CPA	Canadian Police Association
CRT	Crisis Response Team
DMHS	Disaster Mental Health Service
GSD	Group Stress Debriefing
IAFF	International Association of Fire Fighters
MSD	Multiple Stressor Debriefing
NICE	National Institute for Health and Excellence
NOVA	The National Organization for Victim Assistance
OSI	Operational Stress Injury
PAC	Paramedic Association of Canada
PCC	Paramedic Chiefs of Canada
PFA	Psychological First AID
POPPA	Vermont State Police Department and the Police Organization Providing Assistance Program
PTSD	Post-Traumatic Stress Disorder
RCMP	Royal Canadian Mounted Police
SPVM	Service de police de la Ville de Montréal

Overview

Description of the project

First Responders are at risk for psychological difficulties following exposure to traumatic events. Such events are sometimes termed "critical incidents" and are included under the broader category of "operational stressors", which also include but are not limited to threats to own life and witnessing violence. Reported difficulties following traumatic exposure include post-traumatic stress symptoms, depression, anxiety, anger, substance use, and adjustment difficulties such as relationship difficulties and absenteeism. Efforts have been made to prevent or mitigate the impact of operational stressors on First Responders through development of peer support programs and crisis-focused psychological intervention programs; however, empirical evidence supporting the use of such programs remains scarce and the available evidence has important methodological limitations. Research regarding the effectiveness of crisis-focused psychological intervention programs has also been hindered by confusion and conflation of commonly used terms.

The *Peer Support and Crisis-Focused Psychological Intervention Programs in Canadian First Responders: Blue Paper* was designed to: 1) identify and review existing peer support programs and crisis-focused psychological intervention programs found in the literature; 2) review empirical evidence of the effectiveness of peer support programs and crisis-focused psychological intervention programs with First Responders; 3) identify programs currently being implemented across Canadian public safety personnel agencies; and 4) provide recommendations for future research and organizational policies.

The project was completed by a team of researchers at the University of Regina, led by Dr. Shadi Beshai and Dr. R. Nicholas Carleton, with the Canadian Institute for Public Safety Research and Treatment.

Method

From October 2015 to January 2016, a team of 10 researchers at the University of Regina conducted a comprehensive database search for empirical literature, both from national and international sources, regarding the use of peer support programs and crisis-focused psychological intervention programs with First Responders (i.e., police, paramedics, and fire and rescue personnel). Searches were conducted in both English and French. In addition, a survey was distributed with the help of the national Canadian tri-service (i.e., First Responder) agencies to identify which peer support and crisis-focused psychological intervention programs are currently in use among First Responders across Canada, as well as program elements and implementations.

Overview of Existing Programs

Many different programs exist for managing the psychological stress experienced by First Responders. Peer support tends to be used as a broad umbrella term, referring more often to a component of crisis-focused psychological interventions programs than to stand-alone programs. Crisis-focused psychological intervention programs, such as Critical Incident Stress Debriefing (CISD), are generally implemented following exposure to a critical incident. The intervention is designed to provide opportunities for assistance and support in the context of work-related stressors. Participants typically meet with their peers and are provided with information about common reactions to stress and healthy coping strategies; some interventions also encourage participants to make sense of their thoughts and feelings about the event. Depending on the program, the intervention may be conducted with a trained mental health professional, a trained provider, work peers, or a combination of such persons. That said, programs vary greatly in scope. Programs may focus on CISD as a time-limited intervention following a critical incident. Alternatively, programs may emphasize the importance of peer support, proactive preventative interventions, post-critical incident interventions, and ongoing support, all designed to foster resiliency. Critical Incident Stress Management (CISM) is an example of a broad crisis-focused psychological intervention program.

Overview of Empirical Evidence

Limited empirical evidence was found for the effectiveness of any peer support program, or any specific crisis-focused psychological intervention program, when used with First Responders to reduce or prevent psychological symptoms experienced following critical incidents. In addition, no robust evidence was found to suggest peer support programs or specific crisis-focused psychological intervention programs are harmful to First Responders when implemented in accordance with the programs described in the academic literature; however, there was substantive evidence that the programs are not typically implemented as intended. Accordingly, the limited availability of research evidence and the important methodological limitations in the existing research make conclusive decisions regarding the use of such programs impossible. The research does show that some First Responders perceive crisis-focused psychological intervention programs as beneficial.

Overview of Program Use in Canada

Results from the current survey of Canadian First Responder organizations indicated that approximately 20% of respondents reported that their agency offered a stand-alone peer support program. The most important goals for these programs were fostering psychological well-being and facilitating processing of work-related events. Most respondents reported that their agency offered some form of crisis-focused psychological intervention program to agency personnel, with the most common being CISD, which is typically referred to as the *Mitchell Model*. The primary program goals reported were processing critical incidents, preventing mental health problems after the incident, and providing psychological support. The results also revealed that modifications to crisis-focused psychological intervention programs were common. Finally, relatively few respondents indicated that their agency measured the outcomes of stand-alone peer support programs or crisis-focused psychological intervention programs.

Recommendations

1. Use consistent definitions of peer support or crisis-focused psychological intervention programs. Consistency would improve communications within and across agencies, as well as with practitioners and researchers.
2. Ensure training of personnel and application of peer support or crisis-focused psychological intervention programs involves systematic and comprehensive adherence to program protocols, or clearly identify a program as having been modified.
3. If implementing peer support or crisis-focused psychological intervention programs, do so in a proactive manner, as part of standard and regular procedures. Programs should focus on evidence-based education, facilitating support, building readiness to cope with work-related stressors, increasing resiliency, and reducing stigma.
4. Peer support or crisis-focused psychological intervention programs should be generally perceived as *potentially* beneficial and having *potential* to improve well-being, but only *possibly* preventing any aspect of the range of psychological responses First Responders may experience, such as PTSD, depression, anxiety, substance use, marital discord, and insomnia.
5. Remain current and transparent in the development, application, and assessment of peer support or crisis-focused psychological intervention programs.
6. Provide ongoing evidence-based training, supervision, and support for personnel involved in implementing peer support or crisis-focused psychological intervention programs.
7. Gather regular and methodologically rigorous feedback from First Responders on their experiences of peer support or crisis-focused psychological intervention programs, as well as individual preferences for receiving mental health care.
8. Participate in research studies and ongoing evaluations examining the effectiveness of peer support or crisis-focused psychological intervention programs with appropriate sample sizes, empirically supported outcome measures, and using methodologically rigorous designs, such as randomized controlled trials and longitudinal studies. First Responder organizations should seek to have such research conducted with independent, established researchers who have been appropriately vetted by, and are currently explicitly supported by, established and accredited research organizations.
9. Separate and evaluate the unique and shared needs of police officers, paramedics, fire and rescue, and other public safety personnel, such as corrections officers, when conducting research on the effectiveness of peer support or crisis-focused psychological intervention programs.

Introduction and Background

First Responder vocations inherently involve exposure to operational stressors, such as shift work, extensive public scrutiny, workplace harassment or bullying, and to potentially traumatic events, such as threats to own life and witnessing violence, scenes of accidents, homicide, and suicide (Berger et al., 2012; Hegg-Deloye et al., 2013; Pasiack & Kelley, 2013). Repeated exposure to operational and organizational stressors can have harmful effects on First Responders' well-being. Robust statistical trends specific to Canadian First Responders are severely lacking, but the available data and literature suggest a significant proportion of police officers, paramedic personnel, and fire and rescue personnel will experience psychological difficulties such as anxiety, depression, post-traumatic stress disorder (PTSD), and suicidal thoughts at some point in their life (Berger et al., 2012; Stanley, Hom, & Joiner, 2016). Not all psychological difficulties can be attributed specifically to public safety work; however, effective and empirically validated organizational policies can help cultivate psychological well-being.

Most efforts to prevent or mitigate the impact of operational stressors on First Responders have involved implementation of peer support programs in the workplace, as well as crisis-focused psychological support and debriefing interventions. Despite the increased implementation of these programs and interventions, empirical evidence supporting the use of such programs and interventions is scarce and is hampered by several methodological limitations. Research regarding the effectiveness of crisis-focused psychological intervention programs is also hindered by confusion and conflation of terms and phrases, which creates substantial controversy as to whether crisis-focused psychological interventions should be used with First Responders (Hawker, Durkin, & Hawker, 2011; Regel, 2007). Further, limited information is available regarding the use of peer support and crisis-focused psychological interventions across Canadian First Responder agencies.

The *Peer Support and Crisis-Focused Psychological Intervention Programs in Canadian First Responders: Blue Paper* was designed to: 1) identify and review existing peer support and crisis-focused psychological intervention programs; 2) review empirical evidence and effectiveness of the use of peer support and crisis-focused psychological intervention programs with First Responders; 3) identify programs and interventions that are currently being implemented across Canada; and 4) provide recommendations for future research and organizational policies.

Definitions and Usage

Research Term Descriptions. In order to assist the reader's interpretation of the presented results, commonly-used research terms have been defined in Table 1.

Operational Stress Injury (OSI) OSI originated as a Canadian military term used to describe psychological difficulties arising from traumatic events during the course of operational or employment duties. Generally speaking, an OSI refers to psychological symptoms of stress resulting from a traumatic experience, which may have been a critical incident. An OSI can refer to clinically significant symptoms of post-traumatic stress, depression, anxiety, substance use, problematic anger, or interpersonal discord. An OSI can also refer to other responses that are distressing or impair function (DeBay et al., 2014). The term can also encompass the unique experience of First Responders who consistently place themselves in stressful and potentially harmful environments to protect others. Trauma exposure does not have to be singularly acute to cause clinical symptoms; an OSI can also result from an accumulation of multiple exposures to stressors or traumas (DeBay et al., 2014).

Table 1. Research Term Descriptions

Term	Description
Cross-sectional research	A research study design that involves assessing a group or groups at one single time point. Strengths: The research design can give a 'snapshot' perspective of large numbers of individuals. Weaknesses: The research design does not allow researchers to understand how the group changes over time; the design cannot determine which variables are causing certain outcomes.
Descriptive studies	A research study design where the researcher primarily describes characteristics of the group or groups as they currently are, without experimentally manipulating the groups.
Effect size	An effect size is a statistical result of comparing two or more groups that are suspected to be different. The larger the effect size, the larger and more meaningful the difference between groups.
Effectiveness	Refers to how well a treatment works in the way it is intended to and in the "real-world" rather than the lab. For example, a treatment for anxiety is considered effective if it reduces an individual's symptoms of anxiety. Individuals may perceive a treatment to be useful for many reasons (e.g., because they felt supported, because it helped in other areas of their lives); however, perceptions that a treatment is useful do not necessarily mean the treatment was effective in treating the targeted symptoms.
Longitudinal research	A research study design that involves examining a group or groups at multiple points over time. Strengths: The research design provides information about changes over time; researchers can understand how events at one time predict outcomes at another time; the design can determine which variables are causing certain outcomes. Weaknesses: The research design requires exceptional expertise, and can be expensive and time-intensive to carry out; individuals may not want to participate multiple times.
Quasi-experimental	A research study design where different groups of individuals are compared, but the group assignment is not random.
Randomized Controlled Trial (RCT)	A research study design where individuals are randomly assigned to an active treatment group (e.g., where they are expected to improve) or a control group (e.g., where they are expected not to improve) in order to test the effectiveness of the treatment. Random assignment allows the researchers to know that it is truly the treatment which is causing improvements, rather than specific characteristics of the group (e.g., demographics, desire to improve, desire to participate) causing improvement. This research design is often longitudinal, but in any case, the design is one of the most methodologically rigorous and defensible.
Standardized measure	A standardized measure is a psychological test that is administered and scored in the same manner each time. Such measures are typically tested beforehand, often extensively, to ensure reliability (i.e., consistency) and validity (i.e., accurately measures what the test was designed to measure). Many standardized measures are 'self-report measures,' where the individual answers questions on paper or the internet based on their own thoughts; however, other standardized measures assess characteristics for which a person may not be readily able to self-report (e.g., intelligence, psychological disorders).

Trauma The American Psychiatric Association (APA, 2013) currently defines trauma broadly as "exposure to actual or threatened death, serious injury, or sexual violence" through "directly experiencing the event(s), witnessing, in person, the event(s) as it occurs to others, learning that the traumatic event(s) occurred to a close family member or close friend... [or] experiencing repeated extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse)" (p. 271). Essentially, an incident is considered traumatic if the incident causes significant distress or impaired functioning in those who experience or witness the incident, with a key component of a traumatic event being the challenge to cope with the incident (Everly & Mitchell, 2000). First Responders regularly experience a broad range of operational incidents, many of which may fit with the APA definition of traumatic, such as risk of death or serious injury. Traumatic events are often referred to as "critical incidents."

Organizationally Deployed Intervention Strategies Several strategies have been attempted as responses to, or preventative measures for, OSIs. Many of the strategies share overlapping goals and techniques. All methods involve creating structured, formal opportunities for First Responders to receive assistance and support after a critical incident. The opportunities involve discussing the incident, expressing feelings and reactions, all in pursuit of *closure,* or a feeling of resolution and completion of the critical incident experience (Armstrong, Lund, Townsend, McWright, & Tichenor, 1995), or facilitating awareness that further assistance is available if necessary, such as with a mental health professional (Irving & Long, 2001). Programs described in the contemporary literature include **Critical Incident Stress Management** (CISM), **Critical Incident Stress Debriefing** (CISD), **Demobilization**, various versions of **Debriefing** (i.e., Raphael, Dyregrov, Emotional Decompression, Group Stress Debriefing, Multiple Stressor Debriefing programs), **Defusing**, **Psychological First Aid** (PFA), **Psychoeducation**, and **Peer Support** (including On-Scene Support; see Table 2). Information on the various programs that exist can be found in Appendix A and Appendix B. **Readers are strongly encouraged to familiarize themselves with the programs in Appendix A prior to reviewing the associated results.**

Method

The following literature review was conducted between October 2015 and January 2016. A team of 10 researchers conducted a detailed database search for empirical literature, both from national and international sources, regarding the use of peer support programs and crisis-focused psychological intervention programs with First Responders including police officers, paramedics, and fire and rescue personnel. The empirical review was divided amongst six team members based on program type and First Responder category. There were two researchers responsible for completing a parallel literature search in French. The review was conducted for Canadian First Responder and Public Safety agencies.

Initial article selection was based on titles and abstracts; however, final selection was made based on the full article content. Articles included in the current report described the use of a specific peer support or crisis-focused psychological intervention program, with an identifiable First Responder population, and at least some program outcome measurement. Articles included in the present review were first approved by the team coordinator and subsequently by the principal investigators.

The survey was designed based on the review of peer support and crisis-focused psychological intervention programs conducted for the current report. The survey was made available in both English and French and subsequently reviewed by five experts with diverse expertise and agency affiliations. Following approval from the University of Regina Research Ethics Board, the reviewers, and the principal investigators, the anonymous survey was distributed to First Responder agencies across Canada through the Canadian Association of Chiefs of Police, Canadian Police Association, Canadian Association of Fire Chiefs, International Association of Fire Fighters, Paramedic Chiefs of Canada, and Paramedics Association of Canada. The survey was designed to collect information regarding the use and implementation of stand-alone peer support and crisis-focused psychological intervention programs. The participation invitation letter requested the survey be forwarded to individuals with specific knowledge regarding the use and implementation of these programs. Respondents were free to leave any survey question unanswered.

Table 2. Crisis Response Programs: Core Components

	Intervention	Activation	Timing	Goal	Format	Provider
1	Peer Support	Stress	Anytime	Mitigate stress responses	Group or individual	Peer Support Personnel
2	Critical Incident Stress Management (CISM)	Varies depending on phase	Before, during, & after crisis	Mitigate stress responses	Varies depending on phase	Mental Health Professionals, Peer Support Personnel, Community Members
3	Critical Incident Stress Debriefing (CISD)	Crisis	After crisis	Ventilation	Group	Mental Health Professionals, Peer Support Workers
4	Demobilization	Crisis	After crisis	Ventilation	Group	Mental Health Professionals, Peer Support Workers
5	Debriefing, Raphael Model	Crisis	After crisis	Ventilation	Group or individual	Mental Health Professionals
6	Debriefing, Dyregrov Model	Crisis	During & after crisis	Mitigate stress responses	Group or individual	Mental Health Professionals
7	Emotional Decompression	Crisis	After crisis	Ventilation	Group or individual	Peer Support Personnel
8	Group Stress Debriefing (GSD)	Crisis	After crisis	Ventilation, strengthen group cohesion	Group or individual	Mental Health Professionals, First Responder Team Leaders
9	Multiple Stressor Debriefing (MSD)	Large scale disaster	After crisis	Education, ventilation	Group or individual	Social Workers
10	NOVA	Crisis	During crisis	Education, mitigate stress responses	Group or individual	Members of a NOVA National Crisis Response Team (CRT)
11	Defusing	Crisis	During & after crisis	Regroup & continue work	Group or individual	Peer Support Personnel

	Intervention	Activation	Timing	Goal	Format	Provider
12	Psychological First Aid (PFA)	Crisis	After crisis	Mitigate stress responses	Group or individual	Mental Health Professionals, Peer Support Personnel, Community Members
13	Psychoeducation	Before or after crisis	Before or after crisis	Resiliency & mitigate stress responses	Group or individual	Mental Health Professionals, Peer Support Workers
14	On-Scene Support	Crisis	During crisis	Mitigate stress responses & facilitate early intervention	Individual	Peer Support Personnel

Note. NOVA = The National Organisation for Victim Assistance

Results

Caveats of the Literature

Review and interpretation of the effectiveness of peer support and crisis-focused psychological intervention programs was hindered by what appeared to be confusion and conflation of terms. Psychological debriefing has been used as a blanket term that includes CISD, CISM and several other programs (for descriptions of programs, see Appendix A). On several occasions, psychological debriefing has been conflated with *peer support*. Peer support is inherent within most crisis management and intervention programs; however, as a program, workplace peer support extends far beyond psychological debriefing. There has also been confusion regarding exactly which program was being examined, and whether the program was being used with the population the program was originally intended for. One result has been the pervasive, but often under-informed, controversy as to whether or not crisis-focused psychological interventions should be used with First Responders (Hawker, 2011; Regel, 2007).

Results from Research with Police Officers

Empirical evidence for peer support programs in police officer populations

Inclusion in the current review required that studies provide descriptive information of a peer support program. The peer support program could overlap with crisis-focused psychological intervention programs, such as a crisis hotline, but also had to stand as an independent program. No randomized controlled trials regarding the effectiveness of peer support programs in police officers were identified; all of the included studies provided only descriptive results. A total of nine studies were identified that specifically assessed peer support programs in police officer populations (see Table 3).

Based on the current literature reviewed, no empirical evidence was found to support the effectiveness of peer support programs in reducing negative post-trauma responses in police officer populations; however, the available studies provided initial descriptive information about peer support program use among police officers.

- The San Francisco Police Department peer support program reported receiving approximately 6,000 calls per year for approximately 2,200 officers (Chamberlin, 2000; Levenson Jr. & Dwyer, 2003).

- The Vermont State Police Department and the Police Organization Providing Assistance Program (POPPA) reported 200% and 33% increases in the number of phone calls received per year, respectively, over a three-to-four-year period (Dowling, Genet, & Moynihan, 2005; Greenstone, 2000). Almost half of police officers with mental health needs accepted referrals to professional mental health services from POPPA (Dowling et al., 2005). Approximately 30% of respondents who accessed the Vermont State Police Peer Support Program reported being satisfied; nevertheless, most reported feeling stigmatized (Goldstein, 2002).

- The COP-2-COP program in New Jersey was certified by the American Association of Suicidology in 2002, making COP-2-COP the first specialized peer support program for police officers and, by extension, all First Responders (Ussery & Waters, 2006). After September 11, 2001, the POPPA and COP-2-COP confidential help-lines reported 28,000 and 5,100 calls, respectively, with the COP-2-COP calls increasing by 300% (Dowling, Moynihan, Genet, & Lewis, 2006; Ussery & Waters, 2006).

Despite extensive use, the effectiveness of peer support programs remains relatively unknown. Interpreting results from all of the available research studies requires caution because the data were collected with cross-sectional designs (e.g., assessing a group at one point in time, instead of before exposure to the critical incident and then one or more times afterwards) and very small sample sizes of participating police officers.

There was one longitudinal (e.g., assessing the same group at multiple points over time) study available. This study examined the benefits of a peer support program available to members of the Service de police de la Ville de Montréal (SPVM) ("Ensemble pour la vie"; Mishara & Martin, 2012). Most participants identified the peer support training as helpful and reported feeling better equipped to understand, identify, and respond to co-workers struggling with suicidal thoughts. Perhaps most importantly, following program implementation, the SPVM reported suicide rate decreased by 78.9%, a decrease that was not observed in other police departments across Quebec. The decrease in suicide rate may have been due to extraneous factors; however, the authors assert no changes occurred within the SPVM during the research that would otherwise account for the reduction in suicides.

Conclusions. Based on the current review, the available evidence suggests that some police departments are implementing peer support programs to support officers in need, such as crisis help-lines. Research examining the effectiveness of peer support programs for supporting psychological well-being or reducing PTSD symptoms, using rigorous methodology, including randomized controlled trials and longitudinal studies, remains extremely limited.

Developing a uniform program of peer support to be implemented by all police organizations would facilitate minimum standards, research, and enhanced support for police officers enduring the effects of traumatic workplace experiences. In Canada, the SPVM "Ensemble pour la vie" program may be a promising avenue to explore with police departments outside of Montreal, PQ. Program descriptions also suggest the COP-2-COP program in the United States may be the most comprehensive peer support program currently available; nevertheless, more research would be needed to assess program effectiveness with Canadian police officers (and first responders more broadly; Ussery & Waters, 2006; Waters & Ussery, 2007).

Empirical evidence for crisis-focused psychological intervention programs in police officer populations

Inclusion in the current review required studies to provide enough description to clearly indicate what program, or adaptation of which, was being implemented and to involve samples comprised solely of police officers, as opposed to mixed samples of individuals from various professions[1]. No randomized controlled trials were identified regarding the effectiveness of crisis-focused psychological intervention programs in police officers; instead, all of the included studies were descriptive or quasi-experimental in nature. A total of 15 studies were identified that specifically investigated a form of psychological intervention following a critical incident for police officer populations (see Table 4). All of the included studies had methodological limitations such as small samples, absence of control groups, failure to control for degree of trauma exposure and other confounding variables, or lack of uniformity or adherence to crisis-focused psychological intervention programs; however, the studies were nonetheless included as the only evidence available for variant programs of psychological interventions following a critical incident for police officers.

Based on the literature identified in the present study, no empirical evidence was found for the effectiveness of crisis-focused psychological intervention programs for reducing PTSD symptoms in police officers. There were studies indicating debriefing reduced anger (Bohl, 1995; Leonard & Alison, 1999), depression symptoms (Bohl, 1995), and anxiety symptoms (Alexander, 1991, 1993); however, the evidence of symptom reductions was undermined by the absence of control groups and contrasting results that revealed no such evidence of reductions (Bohl, 1995; Carlier et al. 2000). There was also no evidence of a relationship to post-traumatic adjustment, including return to duty, sick

[1] Mixed First Responder population studies are included in the tables to ensure a comprehensive literature review; however, results are not discussed here given that Everly and Mitchell (2000) do not recommend the use of CISD interventions with mixed First Responder groups. Studies also did not always report results for specific First Responder populations, making it difficult to draw any accurate conclusions on the effectiveness of crisis-focused psychological intervention programs in police officer populations.

time and absenteeism/tardiness, and psychological debriefing (Carlier et al., 2000; Wesselink, 2007). Despite the lack of empirical support regarding the effectiveness of crisis-focused psychological intervention programs, the studies did indicate police officers typically perceived the psychological intervention as useful.

Conclusions Evidence from the available studies cannot support definitive conclusions regarding the effectiveness of specific crisis-focused psychological intervention programs on PTSD, depression, or anxiety and PTSD symptoms. The available evidence does suggest crisis-focused psychological interventions may be beneficial and are perceived as beneficial by some police officers.

Methodologically rigorous studies are urgently needed to investigate the potential benefits of crisis-focused psychological intervention programs for police officers. Developing a uniform program of crisis management to be utilized by all police organizations would likely ensure minimum standards, facilitate research, and enhance support for police officers enduring the effects of traumatic workplace experiences.

Table 3. Empirical Evidence for Peer Support Programs in Police Officers

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Chamberlin, 2000; Levenson & Dwyer, 2003	San Francisco Police Department (SFPD)	No study conducted; program statistics published.	LEO Peer Support Program.	Descriptive.	Descriptive statistics based on utilization of program.	With a department of 2200 officers, the peer support program receives 6000 calls per year. The number of referrals to professional mental health services has increased since program inception.
Dowling, Genet, & Moynihan, 2005	New York Police Department	No study conducted; program statistics published.	The Police Organization Providing Peer Assistance Program (POPPA).	Descriptive.	Descriptive statistics based on utilization of program.	From 2001-2004, the number of calls received increased from 900 to 1,200 per year, with 30-45% of officers in need accepting referral to professional mental health services. Following the World Trade Center Attacks of September 11, 2001, an estimated 39,000 police officers utilized the confidential help-line.
Goldstein, 2002	Vermont State Police	141 returned surveys; a response rate of 30.5%.	Vermont State Police Peer Support Program (PSP).	Descriptive.	Satisfaction: Satisfaction with the program was evaluated using an adapted version of Oher's (1993) survey. Stigma: To assess stigma, questions were adapted from Judge (1997), a questionnaire entitled "Psychotherapy & Stigma Scale (PASS)."	Of the 141 officers, 99% indicated awareness of the program. Regarding confidentiality, 55% did not answer, with 23% stating the program was confidential, 9% stating it was not, & 14% were unsure. Of the respondents, 23% utilized peer support services, while 77% did not. Of 57 respondents, 72% indicated that they were, "to some degree or another" satisfied with the program. Evaluating stigma, of 133 responses, 43% reported that stigma was not attached to seeking peer support services, with 52% stating that stigma is attached.
Greenstone, 2000;	Fort Worth Police	No study conducted; program statistics	Departmental Peer Counselling	Descriptive.	Descriptive statistics based on	Since implementation, the number of peer support team members has

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Greenstone, Dunn, & Leviton, 1995	Department	published.	Program.		utilization of program.	grown from six to between 25 & 30. Between 1994 & 1998, utilization of the program increased from 400 to 1200 contacts.
Mishara & Martin, 2012	Service de police de la Ville de Montréal (SPVM)	2,620 police officers participated in meetings. 197 supervisors trained in 1998, 119 completed questionnaires at 3-year follow-up, response rate 60.4%; 9 of 51 supervisors who had to intervene with at least one officer were randomly selected to participate in a qualitative interview about their experience. Two supervisors declined; seven were interviewed.	Ensemble pour la vie (Together for Life).	Longitudinal.	Questionnaires were used to assess perceived usefulness & suitability of training. Three focus groups were conducted to discuss reactions to training sessions & general usefulness. Qualitative interviews were conducted with seven supervisors to discuss their experience with supporting at least one officer in need.	Participants involved with the meetings stated that the success of the training could be attributed to the trainers being able to "speak their language" (p. 165). Two years after the training sessions were conducted, 29% indicated that the training was "very helpful" & 61% noted "somewhat helpful." Participants reported that training aided in their ability to better understand suicide. Following the three-year follow-up, 51 supervisors who returned their questionnaires reported intervening with at least one officer who was struggling. Of the trained supervisors, 51% reported intervening with officers in crises on several occasions. Referring to police counselling services (82%), listening to difficulties (76%), making modifications within job duties (69%), & helping officers increase their support network (33%) were all reported as subsequent courses of action. Suicide rates within the Montreal Police Department decreased significantly by 78.9%, which was not seen in other police

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
						departments across Quebec.
Ussery & Waters, 2006; Waters & Ussery, 2007	New Jersey	No study conducted; program statistics published.	COP-2-COP.	Descriptive.	Descriptive statistics based on utilization of program.	Following the World Trade Center Attacks of September 11, 2001, COP-2-COP received over 18,000 calls. In April of 2002, the American Association of Suicidology certified COP-2-COP.

Table 4. Empirical Evidence for Crisis-Focused Psychological Intervention Programs in Police Officers

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Alexander, 1991, 1993	Aberdeen, Scotland	70 Scottish police officers, 35 had received debriefing following a CI & 35 were not involved in the CI & had thus not received debriefing. All took part in a survey a few months prior to the CI, which provided baseline scores for the outcome measures.	Debriefing (termed "induction" in this study, which included discussion of safety, hygiene, security & emotional & physical reactions to the CI).	^ ^ Matched control descriptive study: police officers who had been involved in the CI & received debriefing were matched with police officers for age, gender, marital status, seniority & individuals were assessed 3 months & 3 years after the CI.	Prior to the CI: The Impact of Event Scale Revised (IES), & the Hospital Anxiety & Depression (HAD) scale. Post CI: IES, HAD, & five items on the Body Handling Questionnaire (BHQ).	Compared to baseline assessment, the anxiety of the debriefed group decreased at 3 months & 3 years post CI. ^ ^ Based on review of the original paper, no results were reported regarding the comparison between the debriefed group & the control group.
Bohl, 1991 (from Bohl, 1995)	Empire area of southern California, United States	71 police officers: 40 debriefed & 31 non-debriefed.	The Bohl Law Enforcement model, a modified version of CISM. 1.5 hour group intervention administered within 24 hours of the critical incident.	Quasi-experimental: officers in a police department with mandatory debriefing compared to officers from a police department without mandatory debriefing participation. Responded to outcome measures 3 months after the debriefing.	State-Trait Anxiety Inventory (STAI), Beck Depression Inventory (BDI), the Norvaco Provocation Inventory. Investigator developed a questionnaire to assess the frequency & severity of stress symptoms.	No differences between the groups in terms of anxiety. The debriefed group was less angry & depressed & reported fewer & less severe stress symptoms compared to the non-debriefed group.
Brookshire, 2011	Surveys emailed from Webster University, Missouri to Military Police Corps leaders across the United	179 Military Police Corps leaders (e.g., chief warrant officer, captain).	Modified version of CISM.	Descriptive study: police leaders responded to a questionnaire on current application & efficacy of CISM.	Investigator developed questionnaire to assess police leaders' subjective experience of CISM application & efficacy.	Majority of responders agreed that CISM was beneficial, but approx. half of the responders neither agreed nor disagreed that CISM programs reduced the effects of traumatic experience. Findings indicated a need for more effective CISD & CISM

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
	States					training.
Carlier et al., 1998	Precinct of Amsterdam, Netherlands	105 Dutch police officers: 46 debriefed, 59 non-debriefed.	CISD only (i.e., no CISM).	Quasi-experimental: officers who attended debriefing were compared to those who could not attend due to operational reasons. Individuals were assessed at 8 & 18 months after CI. Interviewers were blind to whether officers had been debriefed.	Structured interview for PTSD (SI-PTSD) adapted for DSM-III-R Criteria.	No group differences in diagnosis or symptoms endorsed at 8 & 18 months.
Carlier et al., 2000	Police Departments in the Netherlands	243 Dutch police officers: 86 debriefed, 82 non-debriefed, & 75 control (who had experienced trauma prior to implementation of debriefing).	Three debriefing sessions (24 hours post-trauma, 1 month, & 3 months post-trauma) based on the Mitchell 7-stage CISD procedure, but adapted for individual use.	Quasi-experimental: officers who attended debriefing were compared to those who could not attend due to operational reasons & an external group of officers who had not received debriefing following a trauma. Individuals were assessed prior to debriefing, after debriefing (24 hrs post-trauma), & at 1 week post-trauma & 6 months post-trauma. Interviewers were blind to whether officers had been debriefed.	Pre- & post-debriefing assessments: State-Trait Anxiety Inventory (STAI) 1 week post-trauma: Self-Rating Scale for PTSD (SRS-PTSD) according to DSM-IV criteria for internal groups, Impact of Event Scale (IES) for external group, Peritraumatic Dissociative Experiences Questionnaire (PDEQ-R). 6 months post-trauma: SI-PTSD for DSM-IV & Anxiety Disorders Schedule-Revised (ADIS-R), feedback on sick leave, work resumption, & debriefing.	There were no group differences on measures of psychological morbidity at pre-debriefing, post-debriefing, & 6 months post-trauma. At 1 week post-trauma, debriefed officers reported more re-experiencing symptoms. There were no differences in rates of sick leave or work resumption. Officers (98%) reported satisfaction with the debriefings.
Chang, 2008**	Nebraska, United States	89 first responders (~10% were police officers): 42 received immediate debriefing after a critical incident, 47 received delayed debriefing (seven days after a critical	CISD only (i.e., no CISM).	Quasi-experimental: Symptoms of PTSD & post-trauma adaption (i.e., psychological distress & alcohol consumption) were assessed prior to the debriefing & 3 months after the debriefing.	The Peritraumatic Distress Inventory (PDI), The Peritraumatic Dissociative Experiences Questionnaire (PDEQ), The Work Environment Inventory (WEI), The Source of Support Scale (SOS), The Impact of Events Scale-Revised (IES-R, The Brief Symptom Inventory-18 (BSI-	No impact of CISD timing was found for PTSD symptoms or post-trauma adaption.

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
		incident).			18), questions from the Alcoholic Use Disorders Identification Test (AUDIT).	
Kuykendall, 2010	11 police departments across the United States	181 police officers in departments with either mandatory or voluntary CISD.	CISD.	Quasi-experimental: comparisons were made between responses of debriefed & non-debriefed police officers & between debriefed police officers in departments with mandatory vs. voluntary CISD.	Questions about demographics & general information, the Impact of Event Scale-Revised (IES-R).	No post-traumatic stress symptom differences were found on the IES-R between the debriefed & non-debriefed police officers. Mandatory & voluntary CISD had no effect on the perceived effectiveness of CISD. More PTSD symptoms were associated with higher perceived effectiveness of CISD.
Leonard & Alison, 1999	New South Wales Police Service, Australia	60 police officers: 30 debriefed & 30 non-debriefed following a CI. Debriefed officers were matched to non-debriefed officers on length of service, age, duties at the time, & time passed since incident. Non-debriefed officers were either overlooked by department (21) or refused (9) debriefing.	7-step Mitchell Model CISD within 72 hours.	Quasi-experimental: comparisons were made between responses of debriefed & non-debriefed police officers. Assessments ranged in time from event but were matched between participant groups.	Coping Scale (to measure adaptive & maladaptive coping strategies) & State-Trait Anger Expression Inventory (STAXI).	Debriefed officers reported less anger & greater use of adaptive coping skills. Many debriefed officers did not perceive it to be useful & majority of the officers did not think it changed the way they coped.
Nurmi, 1999**	Finland	133 individuals from 4 groups: 37 male & female police officers from the	Rescuers, firefighters, & police received Mitchell Model CISD from trained	Quasi-experimental: comparisons were made between responses of debriefed groups & non-debriefed	Impact of Events Scale-Revised (IES-R), Penn Inventory, & the Symptom Checklist 90-Revised (SCL-90-R).	Nurses reported greater distress on all outcome measures compared to the other 3 groups.

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
		Disaster Victim Identification Team of the National Bureau of Investigation of the Finnish Police; 38 male winchmen & helicopter pilots from Finnish Frontier Guard (rescuers); 30 male firefighters; 28 female nurses.	peer & mental health debriefers, 3 days to 1 week after disaster. Nurses did not receive debriefing.	group.	Additional questions surveyed attitudes towards CISD & necessity of CISD for personal help.	The results suggest that CISD was successful; however, group confounds, including sex & proximity to the disaster, may have also impacted the results. Most of all debriefed groups found debriefing useful (i.e., 81% of the police, 84% of the winchmen & helicopter pilots, & 63% of the firemen).
Robinson & Mitchell, 1993**	Victoria, Australia (program statewide)	117 firefighters; 24 ambulance officers, 21 state emergency workers, & 13 police officers	Psychological debriefing conducted by the first Combined Emergency Services CISD team established in Australia (no description of the debriefing).	Questionnaires distributed two weeks post-debriefing.	Authors developed a questionnaire which asked participants to assess the value & impact of debriefing & impact of critical incidences (rating scales & open-ended).	Significant difference in the impact of the event from the time of the incident to 2-weeks post debriefing; reported reduction in the stress symptoms.
Smith & de Chesnay, 1994	South Carolina police department	10 officers interviewed after a debriefing lead by interviewer	CISD (i.e., no CISM).	Qualitative design: subjective evaluation & descriptions on critical incident & CISD experience.	Investigator designed semi-structured interview on reactions to a critical incident & debriefing experience, lasted approximately one to three hours.	9 out of 10 felt the CISD was beneficial in helping reduce their stress; no group comparisons were reported.
Van Den Heever, 2013	Police National Intervention Units (NIU), Pretoria, South Africa	22 police officers: 13 debriefed with a modified CISM, 9 not debriefed	Modified CISM.	Quasi- Experimental Design with convenience sampling: police officers receiving debriefing compared to police officers that were unable to attend debriefing.	Impact of Event Scale-Revised (IES-R), Davidson Trauma Scale.	Significant reductions in PTSD symptoms were observed in both groups, no differences in recovery rates.
Watchorn, 2001**	Tasmania, Australia	Total sample of 96 emergency services personnel: 8 ambulance	CISM.	Semi-structured interviews accompanied by standardized symptom measures conducted at 8	Impact of Event Scale- Revised (IES-R), Symptom Check List (SCL-90-R), General Health Questionnaire (GHQ-28), Trauma	Personnel who self-disclosed during the CISD reported lower SCL-90-R & GHQ scores 8

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
		service officers, 1 fire service investigator, & 87 police officers.		months & 20 months following the incident.	Symptom Inventory (TSI).	months later. Self-disclosure did not appear to have an impact on IES-R scores. Personnel who self-disclosed during CISD rated the value of the CISD higher than those who did not self-disclose.
Wesselink, 2007	The Savannah/ Chatham County Police Department & the Gainesville/ Hall County Police Department, Georgia, United States	72 police officers: 55 debriefed with a modified CISM & 17 debriefed with NOVA. Of the 72, 12 participated in a follow-up interview (10 who had received the modified CISM & 2 who had received NOVA).	Modified CISM & NOVA.	Integrated (qualitative & quantitative) study design with convenience sampling: participants endorsing CI that agreed to further participation were interviewed about PTSD symptoms.	The Clinically Administered PTSD Scale (CAPS) & an investigator designed questionnaire on CI exposure, sick time, absenteeism/tardiness, sick time, & return to duty.	No associations between officers' health or PTSD symptoms & participation in CISM or NOVA. Some officers reported that debriefing was helpful, others that it was a waste of time.
Young, 2003; Young & Parr, 2004	Police department in a midsize southwestern city, United States	37 police officers from patrol & investigator departments: 11 patrol officers in the intervention group & 9 patrol officers in the control group; 9 investigators in the intervention group & 8 investigators in the control group.	A modified CISD administered once a week for 1 hour over 8 weeks to the intervention group while the control group waited. The purpose of the ongoing administration was to examine whether ongoing support could mitigate job-related stress.	Quasi-experimental: participants were grouped based on rank & availability.	Beck Depression Inventory (BDI), Impact of Event Scale-Revised (IES-R), & the Social Readjustment Rating Scale (SRRS).	No statistically significant differences between groups. All officers involved in treatment perceived it to be positive & helpful although there was no change in symptom measures.

*Note. **Samples were mixed. References are provided for information purposes but caution is advised when generalizing the results of the study to law enforcement personnel; CI = Critical Incident.*

Results from Research with Paramedic Personnel

Empirical evidence for peer support programs in paramedic personnel

Inclusion in the current review required studies to provide descriptive information of a peer support program. The peer support program could overlap crisis-focused psychological intervention programs, such as a crisis hotline, but also had to stand as an independent program. No such studies were identified; however, Ostrow (1995) and Scully (2011) described peer support programs for paramedics and EMTs, as published in a peer-reviewed journal article and a professional magazine, which were then implemented in Australia and New York (see Appendix B). In addition, the COP-2-COP peer support program in New Jersey has extended availability to paramedics (see Appendix B).

Conclusions. Based on the current review, there is no available evidence to support the effectiveness of peer-support programs for supporting psychological well-being or reducing PTSD symptoms among paramedic populations. Peer support programs are available and used with paramedic personnel; however, no evaluation or empirical evidence is currently available to support the effectiveness of any current program.

Methodologically rigorous effectiveness studies are needed to investigate the potential benefits of peer support programs for paramedic personnel. Developing a uniform program of peer support to be implemented by all paramedics would facilitate minimum standards, research, and enhanced support for paramedics enduring the effects of traumatic workplace experiences.

Empirical evidence for crisis-focused psychological intervention programs in paramedic personnel.

Inclusion in the current review required studies to provide enough description to clearly indicate what program, or adaptation of which, was being implemented. Studies also had to involve samples comprised solely of paramedics, as opposed to mixed samples of individuals from various professions[2]. A total of five studies were identified that specifically investigated psychological intervention programs in paramedic populations following a critical incident (see Table 5). An additional four studies were identified that specifically investigated a form of psychological intervention following a critical incident for populations that included paramedics, but the studies were not limited to paramedics.

There was one randomized controlled trial identified regarding the effectiveness of crisis-focused psychological intervention program in paramedics; all of the other included studies were descriptive or quasi-experimental in nature. All of the included studies had methodological limitations such as small samples, absence of control groups, atypical nature of critical incident (e.g., natural disaster), failing to control for degree of trauma exposure and other confounding variables, or lack of uniformity or adherence to crisis-focused psychological intervention programs; however, the studies were nonetheless included as the only evidence available for variant programs of psychological intervention in paramedic populations.

Based on the literature identified in the present study, only limited empirical evidence was found for the effectiveness of crisis-focused psychological intervention programs in reducing PTSD symptoms and general psychological distress in paramedic populations. The only randomized controlled trial identified found no difference in post-trauma stress response between participants who received CISD and participants who did not (Macnab et al., 2003). Crisis-focused psychological intervention programs other than CISD in paramedic populations have not produced consistent results. One study found evidence that crisis-focused psychological interventions were associated with reduced stress symptoms in paramedics (i.e. EMS), welfare personnel, and hospital personnel (Robinson & Mitchell, 1993); in contrast, another study did not find evidence of improvement in stress response and general health following a psychological intervention (Kenardy, Webster, Lewin, Carr, Hazell, & Carter, 1996).

[2] Mixed First Responder population studies are included in the tables to ensure a comprehensive literature review; however, results are not discussed here given that Everly and Mitchell (2000) do not recommend the use of CISD interventions with mixed First Responder groups. Studies also did not always report results for specific First Responder populations, making it difficult to draw any accurate conclusions on the effectiveness of crisis-focused psychological intervention programs in paramedic populations.

The remaining research evaluated CISD for paramedics and other populations, but produced mixed results. Specifically, in one study EMS personnel who completed CISD reported fewer symptoms related to PTSD relative to personnel who did not complete the program (Wee et al., 1999); however, CISD was not evidenced as effective in three other investigations (MacNab et al., 1999; MacNab et al., 2003; Warren, 1995).

Conclusions Based on the current review, there is limited available evidence to suggest crisis-focused psychological intervention programs are effective for reducing PTSD symptoms in paramedic populations; however, there was also no evidence that psychological intervention programs have been harmful for paramedics. Some evidence suggests crisis-focused psychological intervention programs may be valuable for improving general stress symptoms and post-trauma symptoms in paramedic personnel, but significant limitations of the psychological intervention literature suggest that substantial caution is warranted regarding such interpretations.

Methodologically rigorous studies are urgently needed to investigate the potential benefits of crisis-focused psychological intervention programs for paramedics. Developing a uniform program of crisis management to be utilized by all paramedic organizations would likely ensure minimum standards, facilitate research, and enhance support for paramedics enduring the effects of traumatic workplace experiences.

Table 5. Empirical Evidence for Crisis-Focused Psychological Intervention Programs in Paramedic Personnel

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Chang, 2008**	Nebraska, USA	210 but only 89 completed both initial & follow-up (only 8-17% of *n* was EMS)	CISD only (i.e., no CISM).	Ideally they wanted to assign participants to Immediate (24-72 hours) vs. Delayed (2+ weeks) but limited amount were assigned to delay due to practical factors. Questionnaires completed pre-CISD & 12 weeks post-incident.	Peritraumatic Distress Inventory (PDI), Peritraumatic Dissociative Experiences Questionnaire (PDEQ), Work Environment Inventory (WEI), Sources of Support Scale (SOS), Impact of Events Scale - Revised (IES-R; Weiss & Marmar, 1997), Brief Symptom Inventory - 18 (BSI-18), Questions adapted from the Alcohol Use Disorders Identification Test (AUDIT).	No difference in effect between immediate & delayed debriefing & CISD on outcome variables.
Jenkins, 1996**	Killeen, Texas	36 EMTs, paramedics, & firefighters (no breakdown of sample)	CISD provided by the state of Texas within 24 hours (refer to the Mitchell Model but no other description of program provided).	Quasi-experimental design: Examined the effects of 4 forms of social support (CISD; self-reported social support; feeling that others understood concerns; & amount of time spent with people post-incident) Completed measures 1 week post-incident & 1 month follow-up	Semi-structured interview; The Incident Questionnaire; Support Questionnaire; Symptom Check List-90, Revised (SCL90R); Psychosomatic Distress (13 health problems widely regarded as psychosomatic (only given1 month post-event)	Strongest recovery effects were for those who participated in CISD – better recovery from depression & anxiety; CISD attendees said triage decisions (not emotions) were biggest stressor, more likely to mention obsessive-compulsive symptoms, say debriefing helped them get through event, less likely to report no symptoms, half endorsed that CISD helped them cope, rated that they joked more about the incident.

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Kenardy et al., 1996**	Newcastle, Australia	195 "helpers" 48% were specialized helpers (e.g., EMS), 52% were community members	Quasi-experimental design (participants were asked a yes/no question if they received debriefing): (1) Debriefing ($n=62$) (2) No debriefing ($n=133$)	Longitudinal repeated-measure design: Questionnaires completed four time-points post-incident. On average 27, 50, 86, & 115 weeks post-incident.	Questionnaire developed to assess exposure to threat, exposure to disruption, if they were helping in a "threat" situation or "nonthreat" situation, & how stressful helping was, Impact of Event Scale (IES), General Health Questionnaire (GHQ).	No evidence for an improved rate of recovery for those who were debriefed (those who were debriefed showed less improvements in symptoms than those who were not).
MacNab et al., 2003	British Columbia, Canada	Paramedics/ EMTs (18 enrolled, 12 completed 1-week measures, & 6 completed all 3 time points)	CISD No details provided on the CISD program – recruitment came from CISD program coordinators across province.	RCT – 3 group design (1) Mild: listening ear over the phone & pamphlet ($n=3$) (2) Moderate: listening ear, pamphlet, & referral to a critical-incident stress coordinator for debriefing ($n=5$) (3) Severe: defusing with others involved in incident & debriefing with a critical incident stress coordinator ($n=4$) Completed measures at 1 week & 3 & 6 months follow-up	1-week post: Stanford Acute Stress Reaction Questionnaire, Life Impact Score & Schedule of Recent Events.	No relationship between outcomes & intervention.

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Macnab et al., 1999	British Columbia, Canada	EMS at scene & a random sample of nurses from dispatch/ receiving institution & paramedics from around the province (*n* = unknown)	"On-going drop-in session" debriefing session for spouses, & formal debriefing two-days following incident Conducted by Critical Incident Stress Teams.	6-months post incident & 24-most post incident.	Questionnaire developed to assess level of involvement, immediate opportunities to discuss event, availability, relevance, & usefulness of intervention, symptom checklist, & open ended questions, Impact of Events Scale (IES), General Health Questionnaires (GHQ).	Debriefing was not significantly related to symptom severity on any of the measures.
Robinson & Mitchell, 1993**	Victoria, Australia (program statewide)	117 firefighters; 24 ambulance officers, 21 state emergency workers, & 13 police officers (18 debriefing sessions were examined)	Psychological debriefing conducted by the first Combined Emergency Services CISD team established in Australia (no description of the debriefing).	Questionnaires distributed two weeks post-debriefing.	Authors developed a questionnaire which asked participants to assess the value & impact of debriefing & impact of critical incidences (rating scales & open-ended).	Significant difference in the impact of the event from the time of the incident to 2-weeks post debriefing; reported reductions in stress symptoms.

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Rogers, 1993**	Public safety personnel of Maryland, USA	114 EMS/fire rescue (EMS composed 32-31% of each group)	CISD (no details provided but referred to the Mitchell Model).	Quasi-experimental design: (1) CISD: those offered & completed ($n=82$) (2) No CISD: offered but not completed ($n=32$) Completed questionnaires pre-intervention & 60 days post-intervention.	A subscale of the Impact of Event (IES), Everly Stress Inventory (ESI), Questions about CISD, Semi-structure follow-up interview (10 participants).	CISD process was helpful in reducing psychosocial stress through a moderate increase in a sense of control about the critical incident; over 95% of CISD participants endorsed agreement or strong agreement with an item that asked if the "CISD was useful to do with our unit."
Warren, 1995	Fresno County, California	80 EMS	CISD (however some participants attended a CISD approximately 72-hours post & some were in one 5-days post [no break down provided] & no mention of a follow-up with individuals who received the CISD).	Quasi-experimental design: (1) CISD: EMS at scene & completed CISD ($n=9$) (2) No CISD: EMS at scene but did not complete CIISD ($n=14$) (3) Control: not at scene, no CISD ($n=57$) Completed questionnaire 2 months post-incident	CISD questionnaire – two series of 8 questions based on diagnosis for PTSD (DSM-3-R) & distress	No differences across groups Time on scene only variable that predicted PTSD & distress

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Wee et al., 1999	Los Angeles Country Emergency Medical Services Agency & the State Emergency Medical Services Authority	66 EMS responders from several organizations	CISD "all teams reported using Mitchell's model."	Quasi-experimental design: (1) CISD ($n=42$) (2) No CISD ($n=23$) Completed mail-out surveys 2-3 months post-incident	Emergency Medical Services Survey for the South Central Los Angeles Civil Disturbances (designed to examine EMTs response); Frederick Reaction Index-Adult (FRI-A; symptoms of PTSD)	CISD completers had fewer symptoms & scored lower on FRI-A

Note. **Samples were mixed. References are provided for information purposes but caution is advised when generalizing the results of the study to EMS/EMT/Paramedics specifically.

Results from Research with Fire and Rescue Personnel

Empirical evidence for peer support programs in fire and rescue personnel

Inclusion in the current review required studies to provide descriptive information of a peer support program. The peer support program could overlap with crisis-focused psychological intervention programs, such as a crisis hotline, but also had to stand as an independent program. No such studies were identified; however, the COP-2-COP peer support program in New Jersey has extended availability to fire and rescue personnel (see Appendix B).

Conclusions. Based on the current review, there is no available evidence to support the effectiveness of peer support programs for supporting psychological well-being or reducing PTSD symptoms among fire and rescue populations. Based on available research, fire and rescue personnel appear to prefer informal support from their peer network, as opposed to more formal interventions (Herbert, 2013; Jahnke, Gist, Poston, & Haddock, 2014; Jeannette & Scoboria, 2008); however, preference for formal interventions may increase alongside the severity of critical incident exposure (Jeannette & Scoboria, 2008).

Methodologically rigorous effectiveness studies are needed to investigate the potential benefits of peer support programs for fire and rescue personnel. Developing a uniform program of peer support to be implemented by all fire and rescue personnel would facilitate minimum standards, research, and enhanced support for fire and rescue personnel enduring the effects of traumatic workplace experiences.

Empirical evidence for crisis-focused psychological intervention programs in fire and rescue personnel

Inclusion in the current review required studies to provide enough description to clearly indicate what program, or adaptation of which, was being implemented and to involve samples comprised solely of fire and rescue personnel, as opposed to mixed samples of individuals from various professions[3]. A total of four studies were found that specifically investigated a form of crisis-focused psychological intervention following a critical incident for fire and rescue populations (see Table 6).

There was one randomized controlled trial identified regarding the effectiveness of crisis-focused psychological interventions in fire and rescue personnel; all of the other included studies were descriptive or quasi-experimental in nature. Moreover, all of the included studies had methodological limitations such as small samples, absence of control groups, failing to control for degree of trauma exposure and other confounding variables, or lack of uniformity or adherence to crisis-focused psychological intervention programs; however, the studies were nonetheless included as the only evidence available for variant programs of psychological intervention in fire and rescue personnel.

Based on the literature identified in the present study, only limited empirical evidence was found for the effectiveness of crisis-focused psychological intervention programs at providing positive benefits and almost no evidence for reductions in PTSD symptoms. The only randomized controlled trial (Tuckey & Scott, 2014) found fire and rescue personnel who completed a CISD intervention reported less alcohol consumption than a control group; however, there was no difference in alcohol consumption between fire and rescue personnel who completed a CISD intervention and those who completed a stress management education intervention (Tuckey & Scott, 2014). In the same study, participants who completed a CISD intervention reported better quality of life than participants in the control or stress management education groups, but there was no reported difference in PTSD symptoms or general psychological distress between the groups.

One study found CISD was associated with higher levels of PTSD symptoms for fire and rescue personnel by a statistically significant amount, but the amount was not substantial (Sattler et al., 2014); in contrast, other studies

[3] Mixed First Responder population studies are included in the tables to ensure a comprehensive literature review; however, results are not discussed here given that Everly and Mitchell (2000) do not recommend the use of CISD interventions with mixed First Responder groups. Studies also did not always report results for specific First Responder populations, making it difficult to draw any accurate conclusions on the effectiveness of crisis-focused psychological intervention programs in fire and rescue personnel.

have found no statistically significant relationship between CISD participation and PTSD symptoms (Harris, Baloglu, & Stacks, 2002; Hokanson & Wirth, 2000). The available research has associated CISD interventions with increased post-traumatic growth (i.e., improvements in self-perception, relationships, and outlook on life following recovery from traumatic incidents; Sattler et al., 2014), positive beliefs, and reduced negative affect (Harris et al., 2002). Only one study found evidence that fire and rescue personnel who received a CISD intervention reported trauma-related symptom reductions sooner than personnel who did not receive the intervention (Hokanson & Wirth, 2000); however, the study design did not allow for inferences regarding causality.

Conclusion Based on the current review, there is limited available evidence to suggest that crisis-focused psychological intervention programs are effective for reducing PTSD symptoms in fire and rescue personnel populations. Some evidence suggests crisis-focused psychological intervention programs may be valuable for improving general affect and quality of life for fire and rescue personnel, but limitations of the psychological intervention literature suggest that caution should be used when reviewing such research.

Methodologically rigorous effectiveness studies are needed to investigate the potential benefits of crisis-focused psychological intervention programs for fire and rescue personnel. Developing a uniform program of crisis management to be implemented by all fire and rescue personnel would facilitate minimum standards, research, and enhanced support for fire and rescue personnel enduring the effects of traumatic workplace experiences.

Table 6. Empirical Evidence for Crisis-Focused Psychological Intervention Programs in Fire and Rescue Personnel

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Chang, 2008**	Nebraska, USA	210 but only 89 completed both initial & follow-up (only 20.5% of *n* was fire fighters)	CISD only (i.e., no CISM).	Ideally they wanted to assign participants to Immediate (24-72 hours) vs. Delayed (2+ weeks) but limited amount were assigned to "delayed" due to practical factors. Questionnaires completed pre-CISD & 12 weeks post-incident	Peritraumatic Distress Inventory (PDI), Peritraumatic Dissociative Experiences Questionnaire (PDEQ), Work Environment Inventory (WEI), Sources of Support Scale (SOS), Impact of Events Scale - Revised (IES-R; Weiss & Marmar, 1997), Brief Symptom Inventory - 18 (BSI-18), Questions were adapted from the Alcohol Use Disorders Identification Test (AUDIT).	No difference in effect between immediate & delayed debriefing & CISD on outcome variables.
Harris et al., 2002	Texas	660 firefighters (264 attended CISD following the stressful incident)	CISD (1 session).	Participants completed measures & reported having experienced a stressful incident in the last 6 months.	Ways of Coping Questionnaire (WOCQ), Perceived Social Support Scale (PSSS), Hospital Anxiety/Depression Scale (to measure negative affectivity), World Assumptions Scale (WAS), Impact of Event Scale (IES) – measures PTSD symptoms.	Participants who received CISD had lower negative affectivity & more positive beliefs about the world & the self (which serve as protective factors against stress). CISD was not associated with any other variable (therefore did not predict PTSD symptoms).
Hokanson & Wirth, 2000	Los Angeles	2073 participants	CISM.	Survey distributed within LA COFD; 70.8% response rate (47% attended one or more debriefings; 37% participated in at least one defusing; 6% contacted a peer supporter) – only 13 people used all 3 CISM interventions.	Created a 26-question measure asking about: a) effectiveness of debriefings, defusings, & peer support b) overall helpfulness of debriefings c) symptom reductions.	Participants who were debriefed reported symptom reduction sooner than the non-debriefed participants. Of the participants who were debriefed, 56% of participants reported significant symptom reduction within 72 hours, & 14% reported less persistent PTSD symptoms.
Jenkins, 1996**	Killeen, Texas	36 EMTs, paramedics, & fire fighters (no breakdown of sample)	CISD provided by the state of Texas within 24 hours (refer to the Mitchell model but no other	Quasi-experimental design: Examined the effects of 4 forms of social support (CISD; self-reported social support; feeling that others understood concerns; & amount of time spent with people post-	Semi-structure interview; The Incident Questionnaire; Support Questionnaire;	Strongest recovery effects were for those who participated in CISD – better recovery from depression & anxiety; CISD attendees said triage decisions (not emotions) were biggest stressor, more likely to

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
			description of program provided).	incident) Completed measures 1 week post-incident & 1 month follow-up	Symptom Check List-90, Revised (SCL90R); Psychosomatic Distress (13 health problems widely regarded as psychosomatic (only given1 month post-event)	mention obsessive-compulsive symptoms, say debriefing helped them get through event, less likely to report no symptoms, half endorsed that CISD helped them cope, rated that they joked more about the incident
Nurmi, 1999**	Finland	38 winchmen & pilots, 30 firefighters, 38 police officers, & 28 nurses (as a comparison group that was not debriefed)	Rescuers, firefighters, & police received Mitchell Model CISD from trained peer & mental health debriefers, 3 days to 1 week after disaster. Nurses did not receive debriefing.	All First Responders received CISD, while the nurses did not. Therefore, the group of nurses served as the comparison group.	Impact of Event Scale- Revised (IES-R) Penn Inventory (examines different levels of feelings related to a traumatic event) SCL-90-R (self-report measuring somatization, anxiety, hostility, paranoia, etc) Survey questions examined attitude towards CISD & necessity of CISD for personal help	Nurses (who were not debriefed) experienced significantly more PTSD than the police or firefighter populations) – the DVI team also showed significant PTSD symptoms. General distress (by SCL) was found in all populations, but significantly higher for nurses (same as the Penn).
Robinson & Mitchell, 1993**	Victoria, Australia (program statewide)	117 firefighters; 24 ambulance officers, 21 state emergency workers, & 13 police officers (18 debriefing sessions were examined)	Psychological debriefing conducted by the first Combined Emergency Services CISD team established in Australia (no descriptions of the debriefing).	Questionnaires distributed 2-weeks post-debriefing.	Authors developed a questionnaire that asked participants to assess the value & impact of debriefing & impact of critical incidences (rating scales & open-ended)	Significant difference in the impact of the event from the time of the incident to 2-weeks post debriefing; reported reductions in stress symptoms.

Study	Location	Sample	Program	Study Design	Outcome Measures	Key Findings
Rogers, 1993**	Public safety personnel of Maryland, USA	114 EMS/fire rescue (fire personnel composed 68-69% of each group)	CISD (no details provided but referred to the Mitchell Model).	Quasi-experimental design: (1) CISD: those offered & completed ($n=82$) (2) No CISD: offered but not completed ($n=32$) Completed questionnaires pre-intervention & 60 days post-intervention.	A subscale of the Impact of Event (IES), Everly Stress Inventory (ESI), Questions about CISD, Semi-structure follow-up interview (10 participants).	CISD process was helpful in reducing psychosocial stress through a moderate increase in a sense of control about the critical incident. Over 95% of CISD participants endorsed agreement or strong agreement with an item that asked if the "CISD was useful to do with our unit."
Sattler et al., 2014	Washington	286 firefighters	CISD.	94% of participants experienced exposure to critical incidents 52% participated in CISD.	Questionnaire asking about effectiveness of critical incident stress debriefing, amount of critical incident exposure, coping styles, & PTSD symptoms.	CISD attendance was negatively associated with PTSD symptoms & positively associated with post-traumatic growth.
Tuckey & Scott, 2014	Australia	67 firefighters	CISD (reported following the 7-step Mitchell Model).	RCT – participants randomly assigned to one of 3 treatment conditions (CISD $n=20$, stress management education $n=28$, screening/ no treatment $n=19$). Interventions were conducted within 3 days of the critical incident.	Measured 4 outcomes before & after the intervention: PTSD (with the IES), psychological distress (Kessler-10), quality of life (Quality of life enjoyment & satisfaction questionnaire-short form), & alcohol consumption in the last 7-day period.	Controlling for pre-intervention scores, CISD was associated with less alcohol use than the screening condition, but no different than the education group. CISD was also associated with greater quality of life when compared to either education or control; however, there was no effect on PTSD symptoms or psychological distress when comparing either intervention (CISD or education) with the screening group.

Note. **Samples were mixed. References are provided for information purposes but caution is advised when generalizing the results of the study to fire & rescue personnel specifically.

General Research Results and Limitations

In summary, the current review of peer support programs for First Responders identified articles describing programs currently offered within departments across North America, Europe, and Australia. The literature review results indicate that most studies simply describe peer support programs for First Responders, rather than use methodologically rigorous evaluations of symptom changes, such as randomized controlled trials, standardized measures, and large sample sizes.

There is currently no standard peer support program utilized within or across First Responder organizations. There is also insufficient research explicitly examining the role and impact of professionals who often provide initial support services prior to professional psychological interventions (e.g., chaplains, social workers) within the context of peer support and crisis intervention programs in Canadian First Responders.

There has been increased interest in, and evidence of, collaborative program development; however, contemporary programs still differ with respect to language, mission, criteria, training, and methods of implementation.

Empirical evidence supporting the use of crisis-focused psychological intervention programs among First Responders is also relatively scarce and the available research has several methodological limitations, such as small samples, unstandardized measures, lack of strict adherence to psychological intervention protocols, absent comparison groups, and confounded comparison groups. The literature review results indicate that most studies examining the effectiveness of these programs are either descriptive or quasi-experimental in nature. As such, even with reports of perceived benefits from Crisis-focused psychological intervention programs, there is currently no way to know with confidence what produced any such perceived benefits.

Increasing standardization and incorporating rigorous methodological designs and outcome measures would be critical improvements for ensuring and improving the effectiveness of peer support programs and crisis-focused psychological intervention programs.

Survey of Canadian Public Safety Personnel Agencies

A bilingual anonymous online survey was distributed to First Responder agencies across Canada (see Appendix C) to collect information regarding the use and implementation of crisis-focused psychological intervention programs and stand-alone peer support programs. The participation invitation letter was distributed by email with the help of the national Canadian tri-service agencies, including the Canadian Associations of Chiefs of Police, Canadian Association of Fire Chiefs, Canadian Police Association, International Association of Fire Fighters, Paramedic Association of Canada and Paramedic Chiefs of, as well as the Collaborative Centre for Justice Studies. The email requested the invitation be forwarded to individuals with specific knowledge regarding the use and implementation of these programs. The distribution method made identifying the number of invitations impossible; however, there would be approximately 270 police agencies, 150 paramedic agencies, and more than 1000 fire and rescue agencies, depending on inclusion criteria for the volunteer agencies.

Respondents were not required to answer any given question contained within the survey. Participants completed the survey between February 1 and March 1, 2016. A total of 229 respondents initiated the survey and 134 (58.5%) provided complete responses. Analyses were conducted on all available data (including participants who did not fully complete the survey); however, in order to protect the anonymity of respondents, any survey response options endorsed by fewer than five individuals were omitted from the results or grouped with other similar response choices whenever possible.

Please note that some percentages in the results section may not add up to 100% of the total respondents because all survey questions were presented as optional and did not require a response to continue.

Most respondents reported working for an agency that provides services related to law enforcement or police ($n = 47$; 28.1%), or to fire and rescue ($n = 47$; 28.1%), followed by emergency medical services ($n = 24$; 14.4%), several other first response services ($n = 11$; 6.6%), more than one agency ($n = 6$; 4%), or another type of agency ($n = 5$; 3%). Most individuals reported working for a government agency at the municipal ($n = 108$; 65.5%), rural ($n = 23$; 13.9%), provincial or federal ($n = 12$; 7.3%), or regional ($n = 10$; 6.1%) level.

The most commonly reported events considered to be critical incidents were events involving actual or threatened death or disaster (see Table 7). Critical incidents were commonly described by participants as not only events explicitly involving death or injury, but also as "incidents that attract excessive media attention."

Table 7. Events Qualifying as Critical Incidents

Events	*n*	%
Line of duty deaths	149	93%
Disasters/multiple casualty incidents	146	91%
Serious line of duty injuries	144	89%
Incidents involving unusual or sudden death of children or harm of children	141	88%
Emergency personnel's suicide	138	86%
Incidents that seriously threaten the lives of the responders	128	80%
Significant events where the victims are relatives or friends of emergency personnel	126	78%
Incidents that attract excessive media attention	74	46%
Other	46	29%

Peer Support Programs

Participants reported a wide range of peer support programs. For a description of the programs, see Appendix B.

Program implementation methods across agencies included stand-alone peer support programs ($n = 46$; 20%), peer support programs as part of broader crisis-focused psychological intervention programs (i.e., CISM; $n = 52$; 23%), and peer support programs as part of a specific crisis-focused psychological intervention programs (e.g., a stand-alone CISD; $n = 51$; 22%). Several participants also reported their agency provided no peer support program ($n = 31$; 13.4%). Approximately half of respondents indicated that their peer support program was available to both public safety personnel members and their families ($n = 22$; 55%), whereas the remainder reported the program was available only to public safety personnel members ($n = 18$; 45%).

The intended goals for stand-alone peer support programs have been summarized in Table 8. Respondents rated the following goals as most important: the ratings indicated that fostering psychological well-being and facilitating emotional and cognitive processing of work-related events. Participants rated the effectiveness of their program at reaching the overall goals at 6.5 ($SD = 1.4$) on a scale ranging from 0 (*very ineffective*) to 10 (*very effective*). Relatively few respondents reported their agency measured the outcome(s) of their peer support program ($n = 7$; 27%). The most commonly reported assessment method was informal feedback ($n = 6$; 86%).

The perceived strengths and limitations of stand-alone peer support programs have been summarized in Table 9. Respondents rated those strengths and limitations; the ratings indicated their subjective perceptions of increased mental health and the well-being of their members were the most important program strengths, whereas a focus on crisis management rather than continuous prevention was reported as the most important limitation.

Table 8. Identified Goals of Stand-Alone Peer Support Programs

Goal	*n*	%
Foster psychological well-being	25	83%
Facilitate access to mental health resources	21	70%
Instill hope	21	70%
Facilitate emotional & cognitive processing of work-related events	19	63%
Model positive coping behaviours	19	63%
Provide assistance & support to families	19	63%
Reduce stigma	18	60%
Increase cohesion & cooperation within the organization	13	43%
Other	10	33%

Table 9. Identified Strengths and Limitations of Stand-Alone Peer Support Programs

Strengths	*n*	%
Increased mental health & well-being of the members	25	83%
De-stigmatization of mental health issues	18	60%
Increased well-being of members' families	18	60%
Improved crisis intervention management	16	53%
Increased access to professional mental health care	15	50%
Increased camaraderie amongst members	12	40%
Cost-effectiveness	8	27%
Other	8	27%
Limitations	***n***	**%**
Lack of training for the peer supporters	11	38%
Program focused on crisis management rather than continuous prevention	10	35%
Minimal mental health professional involvement in the program	9	31%
Lack of guidelines for the peer relationship	9	31%
Increased workload for the peer supporters	9	31%
Stigma associated with mental health prevents participation in/provision of the program	9	31%
Lack of consistency in the way the program is applied/administered	8	28%
Lack of awareness about the program	7	24%
Lack of coordination among the peer support members, mental health professionals & management	6	21%
Lack of interest in the program	6	21%
Other	12	41%

Crisis-Focused Psychological Intervention Programs

Participants reported a wide range of crisis-focused psychological intervention program implementations. For a description of the programs, see Appendix A.

Many respondents ($n = 140$; 61%) reported their agency has implemented either a broad crisis-focused psychological intervention program (i.e., CISM) or a specific crisis-focused psychological intervention program (e.g., CISD as a stand-alone intervention). Many of those ($n = 62$; 54%) reported using the Mitchell Model or Psychological First Aid ($n = 10$; 9%), with a substantial proportion reporting using some other program ($n = 24$; 21%) or being unsure of what program was being used ($n = 31$; 27%). Relatively few respondents reported implementing the selected program as intended by the designer ($n = 26$; 24%); instead, many reported implementing the selected program with modifications ($n = 55$; 51.0%) or being unsure about implementation fidelity ($n = 27$; 25%). Many respondents ($n = 57$; 51%) reported the broad crisis-focused psychological intervention programs (i.e., CISM) were available to public safety personnel members and their families; however, a substantial proportion reported the programs were only available to public safety personnel ($n = 45$; 45%). Specific crisis-focused psychological intervention programs (e.g., CISD as a stand-alone intervention) were typically offered to public safety personnel members only ($n = 92$; 70%) or to both members and their families ($n = 37$; 28%). Most respondents reported psychological intervention programs were implemented using individual and group formats ($n = 80$; 76%). Many respondents ($n = 60$; 57%) reported a pre-crisis component of their program was available and that their agency followed up with members after psychological interventions ($n = 107$; 90%); however, most ($n = 59$; 61%) reported the number of follow-up occasions varied depending on the situation. Among respondents who reported their agency used the Mitchell Model exactly as prescribed, several reported not having any pre-crisis component to their program ($n = 8$; 36%) or implementing the program as a group intervention ($n = 6$; 27%), suggesting incidental deviations despite intentions to maintain program fidelity.

The reported intended goals for crisis-focused psychological intervention programs have been summarized in Table 10 based on the number of people who identified those goals. Respondents rated those goals and the ratings indicated that cognitive or emotional processing of the critical incident, prevention of PTSD, prevention of other mental health difficulties, and emotional support and modeling of positive coping behaviors by peers were the most important goals. Participants rated the effectiveness of their program in reaching their overall goals at 6.3 ($SD = 2.0$) on a scale ranging from 0 (*very ineffective*) to 10 (*very effective*). Relatively few respondents ($n = 13$; 13%) reported their agency measured the outcome(s) of their crisis intervention and psychological intervention programs. The most commonly reported assessment methods were informal feedback ($n = 11$; 85%), surveying members ($n = 5$; 62%), meeting with an agency psychologist ($n = 5$; 39%), meeting with a peer ($n = 5$; 39%), and clinical interviews with a psychologist ($n = 5$; 39%).

The perceived strengths and limitations of crisis-focused psychological intervention programs have been summarized in Table 11 based on the number of people who identified those strengths and limitations. Respondents rated those strengths and limitations, and the ratings indicated increased subjective perceptions of mental health and well-being of the members, de-stigmatization of mental health issues, and increased access to professional mental health care as the most important strengths. Inconsistent program application or administration, focus on crisis management rather than continuous prevention, and lack of awareness about the program were reported as the most important limitations.

Table 10. Identified Goals of Crisis-Focused Psychological Intervention Programs

Goals	*n*	%
Cognitive/emotional processing of the critical incident	113	90%
Emotional support & modeling of positive coping behaviors by peers	106	85%
Peer support	105	84%
Prevention of other mental health difficulties following a potentially traumatic event	101	81%
Prevention of post-traumatic stress disorder (PTSD)	98	78%
Familiarization with mental health resources & members	89	71%
Providing structure for the members	77	62%
Organizational support to families	56	45%
Assess members' fitness for duty	46	37%
Other	9	7%

Table 11. Identified Strengths and Limitations of Crisis-Focused Psychological Intervention Programs

Strengths	*n*	%
Increased mental health & well-being of the members	103	84%
De-stigmatization of mental health issues	86	71%
Increased access to professional mental health care	74	61%
Increased well-being of members' families	51	42%
Reduced organizational "stressors"	47	39%
Increased camaraderie amongst members	46	38%
Increased managerial awareness of the workforce's needs	45	37%
Cost-effectiveness	33	27%
Increased work performance	27	22%
Reduction of workplace interpersonal conflicts	21	17%
Other	11	9%
Limitations	***n***	**%**
Program focused on crisis management rather than continuous prevention	59	48%
Minimal mental health professional involvement in the program	51	42%
Lack of consistency in the way the program is applied/administered	49	40%
Stigma associated with mental health prevents participation in/provision of the program	48	39%
Not enough personnel to deliver or administer the program	46	37%
Lack of training for management & individuals delivering the program	41	33%
Cost	29	24%
Lack of awareness about the program	27	22%
Disconnect between mental health professionals administering the program & reality of the members	26	21%
Program does not address stigma or stereotypes affecting members	21	17%
Lack of interest in the program	21	17%
Other	19	15%

Survey Limitations

The current survey had several limitations that underscore cautious interpretations of the results. First, the participant sample size was very small relative to the potential participant population. The participants were relatively representative of the population and there is no reason to expect that the results would have been substantially different with a larger sample size. Nevertheless, future research into the area should include a heavy focus on increasing participation. Second, the response format was anonymous self-report. There were no opportunities for interactive discussions and no opportunities to fact check the details provided. Future researchers should carefully consider whether confidentiality would be more appropriate and beneficial than anonymity. Third, and to increase participation, the questionnaire was designed to be short, but that necessarily precluded in-depth assessments. Fourth, the questionnaire was directed to leadership rather than membership, which meant reports of program effectiveness may be incongruent with member experiences.

Recommendations

The literature review informs nine key recommendations. Most of the reviewed research indicated First Responder personnel who participate in peer support or crisis-focused psychological intervention programs perceive the services as useful; however, perceived utility does not mean the programs are actually reducing symptoms, and methodologically rigorous research on the effectiveness of these programs is scarce. The literature review produced very limited evidence that such programs robustly impact operational stress injury symptoms at all, either positively or negatively. The most defensible recommendations involve increasing education regarding the current state of evidence for such programs, standardization of implementation, standardization of terminology, more rigorous research, and replication and extension of the survey on peer support and crisis-focused psychological intervention programs.

1. Use consistent definitions of peer support or crisis-focused psychological intervention programs. This would improve communication within and across agencies, as well as with practitioners and researchers.
2. Ensure training for and application of peer support or crisis-focused psychological intervention programs involves systematic and comprehensive adherence to program protocols as documented in the scientific literature, or clearly identify a program as having been modified.
3. If implementing peer support or crisis-focused psychological intervention programs, do so in a proactive manner, as part of standard and regular procedures. Programs should focus on evidence-based education, facilitating support, building readiness to cope with work-related stressors, increasing resilience, and reducing stigma.
4. Revisit expectations for the application of peer support or crisis-focused psychological intervention programs, so that persons involved understand such programs are perceived as beneficial and have potential to improve well-being, but only *possibly* contribute to the prevention of a range of psychological responses to First Responder occupational duties, including PTSD, depression, anxiety, substance use, marital discord, and insomnia.
5. Remain current and transparent in the development, application, and assessment of peer support or crisis-focused psychological intervention programs, as well as evidence-based expectations for such programs.
6. Provide ongoing evidence-based training, supervision, and support for personnel involved in implementing peer support or crisis-focused psychological intervention programs.
7. Gather regular and rigorous feedback from First Responders on their experiences of peer support or crisis-focused psychological intervention programs, as well as individual preferences for receiving mental health care.
8. Participate in research studies and ongoing evaluations examining the effectiveness of peer support or crisis-focused psychological intervention programs. The research should be done using methodologically rigorous designs such as randomized controlled trials, longitudinal studies, empirically supported outcome measures, and appropriate sample sizes. First Responder organizations should seek to have such research conducted by independent, established researchers who have been appropriately vetted by, and are currently supported by, established and accredited research organizations, such as professors working full time at accredited Canadian universities.
9. Separate and evaluate the unique and shared needs of police officers, paramedics, fire and rescue and other public safety personnel, such as corrections officers, when researching the effectiveness of peer support or crisis-focused psychological intervention programs.

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Appendices

Appendix A. Program Reviews

1. Peer support
2. Critical Incident Stress Management (CISM; Mitchell Model)
3. Critical Incident Stress Debriefing (CISD; often referred to as the Mitchell Model despite only being one component of the Mitchell Model)
4. Demobilization
5. Debriefing, Raphael Model
6. Debriefing, Dyregrov Model
7. Emotional Decompression
8. Group Stress Debriefing (GSD)
9. Multiple Stressor Debriefing (MSD)
10. The National Organization for Victim Assistance (NOVA)
11. Defusing
12. Psychological First Aid (PFA)
13. Psychoeducation
14. On-Scene Support

1. Peer support

Description Peer support refers to a wide range of approaches wherein participants with shared roles or experiences provide structured assistance to their peers. The shared history before and after critical incident exposures has been thought to facilitate empathy and trust (Kemp & Henderson, 2012; Solomon, 2004). Peer support is different from friends providing informal assistance because the peers providing support are typically appropriately trained and potentially supervised in providing mental health support (Grenier et al., 2007; Mead, Hilton, & Curtis, 2001). Peer support also differs from professional mental health care because no power differential is intended between supporters and those supported (Greenstone 2000; Grenier et al., 2007).

Purpose Peer support was designed to help First Responders by making use of shared experiences. Engaging peers instead of, or in addition to, appropriately trained mental health professionals may be particularly helpful because of the potentially increased rapport due to shared historical experiences, ability to normalize, stigma reductions, and implicit understanding of the unique situations encountered by First Responders (Finn & Tomz, 1998; Hundt, Robinson, Arney, Stanley, & Cully, 2015). Peer support personnel may also provide aid or facilitate referral to other services (Finn & Tomz, 1998; Hundt et al., 2015).

Who provides peer support? Peers (other First Responders) and mental health professionals (as supervisors) can provide peer support to First Responders.

When does peer support take place? Peer support can be implemented at any point in time and is not exclusively recommended for critical incidents. Peer support has been used to offset cumulative stress resulting from other problems, such as marital conflict or substance use. Peer support personnel typically have significant contact with other First Responders; as such, peer supporters may be better able to detect stress accumulation early in their peers and intervene proactively (DeBay et al., 2014; Finn & Tomz, 1998; Greenstone 2000).

Implementation. Peer support personnel typically receive special training to provide peer support services in addition to their usual duties. Peer support with appropriately trained personnel is recommended for Critical Incident Stress Management (CISM), Critical Incident Stress Debriefing (CISD), debriefings, and defusings (Heber, Grenier, Richardson, & Darte, 2006). Peer supporters should voluntarily self-select, be considered trusted, available, reliable, experienced on the job, and have shared relevant experiences with those receiving support (Finn & Tomz, 1998; Greenstone 2000; Mead et al., 2001; Solomon, 2004; van Pelt, 2008). Peer support personnel can provide several types of support (e.g., emotional, information, instrumental; Grenier et al., 2007; Solomon, 2004) through attending and listening, which may buffer against stress responses to critical incidents (Finn & Tomz, 1998; Grenier et al., 2007). If professional mental health services become required, peer support personnel can liaise between First Responders and appropriately trained mental health professionals (Finn & Tomz, 1998; Greenstone, 2000).

Peer supporters can provide benefits that many mental health professionals cannot because of shared historical experiences. For example, peer supporters can provide trusted referrals, mentorship, and normalize stress reactions (Finn & Tomz, 1998; Hundt et al., 2015; Kemp & Henderson, 2012; Levenson Jr., 2007; Solomon, 2004), while also helping teach mental health professionals about the unique experiences of First Responders (DeBayet al., 2014; Everly, Flannery, & Mitchell, 2000; Heber et al., 2006; Kemp & Henderson, 2012; Mead et al., 2001; Solomon, 2004). Peer support personnel are typically more numerous than appropriately trained mental health professionals and, therefore, may be more capable of proactive (i.e., early) detection of stress responses and expedited interventions (Everly et al., 2000). That said, peer support personnel must be careful about their professional capacity boundaries, ensuring that unless they are appropriately trained therapists they are not providing therapy (Grenier et al., 2007). Peer supporters must also monitor themselves, and be monitored for, stress and burnout associated with providing support to others (Finn & Tomz, 1998).

Peer support programs typically require organizational resource support for establishment and implementation, including resources for training, supervision, and support for peer supporters (Finn & Tomz, 1998; Heber et al., 2006; Kemp & Henderson, 2012; Levenson Jr. 2007; Mead et al., 2001). By establishing peer support prior to a critical incident, proactive approaches can be implemented. For example, warm lines (i.e., pre-crisis telephone support services) or hotlines, as well as advocacy programs (Mead et al., 2001). Peer support programs can involve challenges such as the additional work load for peer support personnel, mismatches between peer support personnel and those needing support (e.g., experiences), boundaries, the need to provide training as well as support and supervision, and the limitations of expectations for peer support personnel capacity (Alberta, Ploski, & Carlson, 2012; DeBay et al., 2014; Finn & Tomz, 1998; Heber et al., 2006; Kemp & Henderson, 2012). Organizations can offset challenges by providing guidelines appropriate to the setting (Heber et al., 2006).

Variations. Organizations vary in the training expected for, and provided to, peer support personnel, with some organizations requiring no prior training for peer support personnel and others requiring formal training in counselling (Finn & Tomz, 1998). Implementation may also vary as to whether peer support is integrated into a larger mental health initiative (Alberta et al., 2012).

2. Critical Incident Stress Management (CISM).

Description CISM is a comprehensive system of preventative activities and interventions meant to complement each other and work as an integrated unit (Everly & Mitchell, 2000).

Purpose CISM was designed to mitigate the impact of critical incidents before, during, and after occurrence.

Who provides CISM? Appropriately trained mental health professionals and peer support personnel both support provision of CISM (Mitchell & Everly, 1996). A ratio of one-third mental health professionals to two-thirds peer support personnel is recommended for CISM teams (Mitchell & Everly, 1996).

When does CISM take place? CISM is meant to take place before, during, and after a critical incident (Everly & Mitchell, 2000).

Implementation CISM involves eight core components — pre-crisis preparation; demobilization and staff consultation or Crisis Management Briefing; defusing; Critical Incident Stress Debriefing [CISD]; individual crisis intervention; pastoral crisis intervention; family CISM or organizational consultation; and, follow-up and referral (see Table 12 for descriptions). All are considered required (Everly & Mitchell, 2000). Nevertheless, there are now several variations of the program in use. There are also several circumstances wherein peer support personnel are not recommended for conducting the debriefings. This may occur when the peer supporter a) is close friends with or a family member of anyone in the debriefing; b) works alongside anyone in the debriefing, such as in the same fire hall; c) was involved in the incident him/herself; or d) is a supervisor of anyone in the debriefing, or may be asked to take part in an investigation into the event (Mitchell & Everly, 1996).

Variations. CISM programs should include all eight core components of the program; however, many implementations do not, with several excluding the pre-crisis preparations.

Table 12. Core Components of Critical Incident Stress Management

Intervention		Timing	Activation	Goal	Format
1	Pre-crisis preparation	Pre-crisis phase	Crisis anticipation	Set expectations, improve coping, stress management	Groups/ organizations
2a	*Demobilizations & staff consultation (rescuers)	Shift disengagement	Event driven	To inform & consult, allow psychological decompression, stress management	Large groups/ organizations
2b	Crisis Management Briefing (CMB) (civilians, schools, businesses)	Any time post-crisis			
3	*Defusing	Post-crisis (within 12 hours)	Usually symptom driven	Symptom mitigation, possible closure, triage	Small groups
4	*Critical Incident Stress Debriefing (CISD)	Post-crisis (1-10 days; 3-4 weeks mass disaster)	Usually symptom driven, can be event driven	Facilitate psychological closure, symptom mitigation, triage	Small groups
5	Individual crisis intervention (1:1)	Anytime, anywhere	Symptom driven	Symptom mitigation, return to function if possible, referral if needed	Individuals
6	Pastoral crisis intervention	Anytime, anywhere	Whenever needed	Provide spiritual, faith-based support	Individuals/ groups
7a	Family CISM	Anytime	Symptom or event driven	Foster support &communications, symptom mitigation, closure if possible, referral if needed	Families/ organizations
7b	Organizational Consultation				
8	Follow-up/ Referral	Anytime	Usually symptom driven	Assess mental status, access higher level of care if needed	Individual/ family

Note. Adapted from Everly & Mitchell (1999), presented in Everly & Mitchell (2000).
**Defined in other sections of the current report.*

3. Critical Incident Stress Debriefing (CISD)

Description CISD, often referred to as the *Mitchell Model* after its creator Jeffrey Mitchell, is a highly structured peer-managed and peer-driven group crisis intervention protocol, during which participants discuss a recently experienced critical incident. CISD is occasionally referred to as *group psychological debriefing* (Everly & Mitchell, 2000; Mitchell & Everly, 1996) and represents one of the eight core components recommended for CISM. CISD was designed to occur within a full CISM program, not as a stand-alone intervention.

Purpose CISD was designed to enable participants to achieve a sense of closure following a critical incident, as well as to identify individuals who may need further assistance in managing their reactions to the incident (Everly & Mitchell, 2000).

Who provides CISD? CISD is designed to be provided by a team that includes an appropriately trained mental health professional with knowledge of the organization and one to three appropriately trained peer support personnel (Mitchell & Everly, 1996). The mental health professional should provide supervision, guidance, and expertise to the peer support personnel. The mental health professional is also responsible for ensuring against ethical or legal errors during CISD (Blak, 1991).

When does CISD take place? There are discrepancies in the literature regarding when CISD should take place. The original protocol recommended that the CISD occur 24 to 72 hours after the incident; however, other recommendations suggest CISD should take place between two and 14 days after the critical incident, or between three and four weeks after a mass disaster (Everly & Mitchell, 2000).

Implementation. CISD involves seven stages (not to be confused with the eight core components of CISM) that can require between 1.5 and three hours to complete (see Table 13). Everly and Mitchell (2000) emphasized that CISD should not be considered a stand-alone intervention. Instead, CISD should be delivered as a part of CISM. During CISD, discussing the critical incident of interest may also provoke discussions of several other critical incidents or related memories (Blak, 1991). Indeed, the discussion can afford an opportunity to discuss a culmination of other stressors that may not be directly related to the incident that triggered the CISD (Wollman, 1993). CISD has several therapeutic features, such as normalizing reactions, creating opportunities for connection, and improving self-efficacy (Blak, 1991). CISD is thought to address common concerns of First Responders, such as feelings of powerlessness, isolation, guilt, depression, anger, and moodiness (Blak, 1991).

CISD was originally deemed suitable for either individual or group delivery format; however, the recent recommendations suggest CISD be used only for groups and may cause harm if delivered individually (McNally, Bryant, & Ehlers, 2003). In the case of First Responders, the CISD group is typically the pre-existing work unit or crew. CISD participants likely share several characteristics in addition to having experienced the critical incident, which was part of the rationale for a group format (Wollman, 1993). Proponents of CISD recommend all individuals involved in the critical incident participate. The rationale for broad inclusion is that a wide range of people may have been affected; however, attention should be focused on participants engaged in the most potentially traumatic elements before participants on the periphery (e.g., supervisors or others who were not physically present to experience the critical incident; Blak, 1991).

CISD participants should be matched to peer support personnel based on role, experience, and demographics (Mitchell & Everly, 1996) to maximize benefits from shared experiences and nuanced understandings of being a First Responder (Mitchell & Everly, 1996). The mental health professional should lead the CISD discussion, with one of the peer support personnel serving as co-leader (Mitchell & Everly, 1996). According to the program developers, peer support personnel must be formally trained in CISD. Involving untrained peers, despite good intentions, is thought potentially harmful due to risks of re-traumatization (Mitchell & Everly, 1996).

Peer support personnel have been considered essential to the CISD team and carry substantial responsibility (Mitchell & Everly, 1996). In addition to CISD training, peer support personnel must be respected team players, with demonstrated emotional maturity, and a capacity to be attuned to the needs of others. Peer support personnel should also understand the importance of confidentiality in their work and demonstrate skills such as active listening, empathy, and problem solving (Mitchell & Everly, 1996). Training or education in psychology, social work, peer counselling, PTSD, or communications is considered beneficial for peer support personnel, but has not been required (Mitchell & Everly, 1996). Peer support personnel may be required to assist the mental health professional(s), provide reports, and serve on committees (Mitchell & Everly, 1996).

The existing relationship First Responders have with peers and the pre-established trust inherent in such a relationship enables peer support personnel to liaise with mental health professionals on the CISD team as needs arise (Mitchell & Everly, 1996). Peer support personnel who become aware of problems should initiate contact with the affected person(s) showing signs of stress. The contact may take place on-scene at a critical incident (e.g., defusing) or after the event (Mitchell & Everly, 1996). Peer support personnel also take on an active role during psychoeducation sessions and debriefings, such as facilitating referrals to mental health professionals or contacting an affected individual's family to provide them with information and support (Mitchell & Everly, 1996). In any case, peer support personnel carefully acknowledge and respect the boundaries of their roles and abilities, seeking regular supervision as indicated (Mitchell & Everly, 1996).

Variations. Many different debriefing techniques have been referred to as CISD without following the integrated CISM program or even the recommended CISD program (Rose & Bisson, 1998). Mitchell and Everly (1996) have stressed that verbal participation during a CISD must be voluntary, whereas proponents of other techniques have suggested participants who do not speak should be gently encouraged to do so, while still acknowledging that every participant has the right to their own reactions and need not speak (Blak, 1991). First Responders may fear that emotional or cognitive difficulties will arise if revisiting the critical incident location; accordingly, CISD proponents recommend personnel return to the location of the incident while not on duty to assess whether such difficulties actually occur and, if necessary, seek mental health services (Blak, 1991).

Table 13. Seven Stage Implementation of Critical Incident Stress Debriefing (Mitchell & Everly, 1996)

Stage	Goal
1. Introduction	Introduce the team, discuss the purpose & process of CISD, foster motivation as well as cooperation, answer questions, encourage members of the group to help each other
2. Fact	Discuss the facts of the critical incident
3. Thought	Shift the discussion to affective experiences by discussing thoughts that participants had
4. Reaction	Discuss affective experiences
5. Symptoms	Discuss symptoms of stress experienced by the participants
6. Teaching	Psychoeducation is provided
7. Re-entry	Clarify topics that were discussed, answer any remaining questions, & aid the group in re-entering their typical roles

Note. CISD – Critical Incident Stress Debriefing

4. Demobilization.

Description Demobilization refers to a crisis intervention designed to allow First Responders to receive psychoeducation about stress, to rest and "refuel," and to facilitate either their return to service or their transition home (Mitchell & Bray, 1990). There is no explicit indication regarding whether or not Demobilization can or should be offered as a stand-alone intervention or as part of a broader CISM program.

Purpose Demobilization was designed to allow First Responders to "ventilate" their feelings or verbally process stress reactions (Reyes & Elhai, 2004) about a critical incident on a one-on-one or group basis (Mitchell & Bray, 1990).

Who provides demobilization? Appropriately trained mental health professionals and peer support personnel typically provide demobilization (Mitchell & Bray, 1990).

When does demobilization take place? Demobilization typically takes place only during and after a large-scale event or mass disaster (an event that lasts longer than 8 hours) (Mitchell & Bray, 1990).

Implementation. Demobilization is a highly structured process lasting 30 minutes. The initial 10 minutes are dedicated to providing psychoeducation about stress, including common symptoms, range of possible reactions, and coping strategies. The subsequent 20 minutes are dedicated to allowing workers to rest, eat, and drink while fostering communication (Mitchell & Bray, 1990). Demobilizations are not conducted at the scene of the event. Instead, a comfortable and safe environment is selected for demobilization to take place. After the rest period, participants either return to their units, return to service, or return home (Mitchell & Bray, 1990).

Mitchell and Bray (1990) do not explicitly describe when "ventilation" occurs during the 30-minute timeline; however, the authors underscore the importance of ventilation. Ventilation has been defined as verbally processing stress reactions within a group context (Reyes & Elhai, 2004). The theory has been that sharing experiences about an event can demonstrate the need for additional services, which can then be detected by supervisory staff and appropriately addressed. Despite the theory, the protocol states personnel are not forced to speak about the situation or their resultant feelings and the opportunity is simply to regroup and rest (Mitchell & Bray, 1990).

Variations. Mitchell and Bray (1990) described First Responders as being "ordered" to demobilization when their work at a critical incident is complete, therein calling into question the voluntary nature of the intervention.

5. Debriefing, Raphael Model

Description Debriefing, when described as a stand-alone intervention rather than a component delivered within the context of CISM and CISD, generally refers to either the Raphael Model (1986) or Dyregrov Model (1997). Both programs appear to be derived from the Mitchell CISD Program. The Dyregrov Model (1997) of debriefing appears to be implemented more pervasively in Europe, whereas the Raphael Model (1986) appears to be implemented more pervasively in North America.

Debriefing has been broadly described as a stress-prevention technique that encourages First Responders exposed to a critical incident to discuss the experience. The rationale for the use of debriefing is that "ventilating" feelings will prevent lasting stress reactions (Armstrong et al., 1995).

Purpose Debriefing was designed to assist First Responders in overcoming the sense of helplessness and traumatization that often comes with facing critical incidents or mass disasters. The assistance was designed to occur via affected First Responders speaking about the critical incident. The goal of debriefing was to assist participants in understanding what happened and making sense of their thoughts and feelings surrounding the event (Raphael, Meldrum, & McFarlane, 1996).

Who provides debriefing? Appropriately trained mental health professionals provide debriefings to affected First Responders (Armstrong et al., 1995; Raphael et al., 1996).

When does debriefing take place? Debriefings have been recommended to occur between four and 14 days after a critical incident (Regel, 2010).

Implementation Program developers have argued that all First Responders who were present for the critical incident should be invited to attend a debriefing, but participation should not be mandatory. During a debriefing, Raphael (1986) suggested each participant discuss their own unique stressors with the group, including encounters with death, in the context of the critical incident. Program developers have stressed that positive feelings should also be discussed during debriefings, such as feelings of belonging or helping others (Bisson, 2003). Some authors have recommended incorporating education about dealing with stress and difficult experiences within the safe environment of debriefing (e.g., Armstrong et al., 1995).

Raphael and colleagues (1996) argue that debriefing does not account for different types of trauma within the critical incident (e.g., threat to one's own life, death of others), any of which may require different types of interventions. In addition, the program developers recommend persons providing debriefings should consider past traumatic events, other recent life stressors, and personal factors (e.g., coping abilities, level of arousal) as potentially influencing reactions to critical incident (Raphael et al., 1996).

6. Debriefing, Dyregrov Model

Description The Ralphael Model and Dyregrov Model both appear to be derived from the Mitchell **CISD Model**. For a detailed description see **Debriefing, Raphael Model** above.

The Dyregrov Model (1989) was designed as a form of psychological debriefing that involves a structured group meeting. During the meeting, people exposed to a critical incident explore their responses to the experience through a series of stages (Dyregrov, 1989). The available literature is unclear as to whether the Dyregrov Model can or should be offered as a stand-alone intervention or as part of a broader CISM program, but has been considered comparable to CISD, which has been recommended for delivery as part of CISM (Regel, 2010).

Purpose The Dyregrov Model (1989) of debriefing was designed to mitigate problematic psychological effects of a critical incident by building resilience and promoting recovery. The design has seven stages — introduction; facts; thoughts and expectations; reactions and sensory impressions; normalisation; future planning and coping; disengagement (see Table 14). It includes education about common stress reactions and resource provisions where appropriate, and underscoring that further assistance is available as needed (Dyregrov, 1989). Implementing the program as designed has been believed to implicitly encourage all potential participants to seek help when needed (Dyregrov, 1989).

Who provides the Dyregrov debriefing? Appropriately trained mental health professionals provide The Dyregrov Model (1989) of debriefing to affected First Responders.

When does the Dyregrov debriefing take place? Dyregrov (1989) recommended the debriefing take place between 24 and 72 hours after a critical incident; however, the author acknowledges other crisis intervention techniques may be useful within the first 24 hours of a critical incident (e.g., Psychological First Aid; Dyregrov, 1989).

Implementation. The Dyregrov (1989) psychological debriefing was designed as a seven stage semi-structured intervention similar to the original description of the Mitchell Model CISD (Bisson, 2003; see Table 14 for the stages and a comparison with CISD). The entire process typically takes between 90 minutes and 3 hours (Regel, 2010). The Dyregrov Model may be provided individually or in a group setting (Robbins, 1999).

Variations. In contrast to the Mitchell Model of debriefing, The Dyregrov Model (1989) has often been called *psychological* debriefing; however, adding the word psychological was thought to add a potentially negative connotation to the technique (Regel, 2010). The Dyregrov Model (1989) also includes different names for the stages of the Mitchell Model and a slightly different structure.

The Dyregrov Model (1989) differs from the Mitchell and Everly (1996) model in that, rather than participants sitting in a circle for the debriefing, a table is placed between participants and debriefing leaders. Dyregrov says demarcating leaders is beneficial, facilitating interactions between the leader and co-leader, and placing clearer responsibility on the leaders. Physically, the tabular configuration has been thought to facilitate leaders observing all participant reactions (Dyregrov, 1997).

Table 14. Typical Stages of a Psychological Debriefing Meeting (Regel, 2010)

Mitchell (1988) Stages	Dyregrov (1989) stages
1. Introduction	1. Introduction
2. Fact	2. Facts
3. Thoughts	3. Thoughts (and expectations)
4. Reactions	4. Reactions (and sensory impressions)
5. Symptoms	5. Normalisation
6. Teaching	6. Future planning & coping
7. Re-entry	7. Disengagement

7. Emotional Decompression.

Description Emotional Decompression has been a relatively new program of debriefing, which includes a mixture of debriefing techniques from other programs, but uniquely focuses on psychoeducation and normalization (Kinchin, 2007). Emotional Decompression has not been considered a stand-alone process or intervention (Kinchin, 2007).

Purpose Emotional Decompression was designed as an opportunity for participants to discuss a critical incident with each other to clarify details and facts of the incident, as well as react to the event. Participants are informed they need not react, but that reactions are normal (Kinchin, 2007). An Emotional Decompression session has been underscored as *not* being an opportunity for participants to complain about the event or organizational processes. Further, participants are informed that the information discussed in the session will not be used towards a formal investigation of the event (Kinchin, 2007).

Who provides Emotional Decompression? Peers act as debriefing facilitators providing emotional decompression. In Emotional Decompression, there is a lead person during the debriefing (a debriefer) and a co-facilitator (a co-debriefer) who supports the lead, but both are peer support personnel (Kinchin, 2007). Only in rare circumstances would a mental health professional lead Emotional Decompression.

When does Emotional Decompression take place? The time frame of implementation of emotional decompression is unique relative to other related programs. Kinchin (2007) suggested that Emotional Decompression should not take place until at least 2 days after the critical incident. The process is thought to be effective days, weeks, months, and even one year after the event. If provided one-on-one, the results have been thought effective even several years after the event. That said, Kinchin (2007) reported that the ideal implementation period is one to two weeks after a critical incident. The ideal nature of the window is based on allowing enough time to organize the debriefing, rather than effectiveness (Kinchin, 2007).

Implementation Emotional Decompression is not expected to resolve all issues resulting from a critical incident. As such, Emotional Decompression has not been considered a stand-alone process or intervention and participants may need further mental health services (Kinchin, 2007). Emotional Decompression has generally been delivered in small groups, but can also be delivered one-on-one. Kinchin (2007) suggested that the ideal group size is 12 people, but that up to 20 people can take part in a group if there are two or three debriefers.

Debriefers leading Emotional Decompression should familiarize themselves with the details of the incident before beginning (Kinchin, 2007). After an introduction phase wherein all participants briefly state how they were involved in the incident, emotional decompression takes place in four stages: facts, feelings, future, and endings/disengagement (see Table 15; Kinchin, 2007). Emotional Decompression group sessions typically range from 90 minutes to three hours. Progress through the stages of emotional decompression is neither rigidly adhered to nor necessarily linear. Instead, Kinchin has recommended flexibility for the stages. For example, if information pertinent to Stage 1 is discussed during Stage 3, the group may return to Stage 1 to incorporate that information into the whole picture of the event before returning to Stage 3 (Kinchin, 2007).

Emotional Decompression group sessions typically range from 90 minutes to 3 hours. Kinchin (2007) emphasized pacing to allow natural debriefing, rather than rushing or being needlessly prolonged. Emotional decompression with 10 people averages 80 minutes, with stage averages as follows: the introduction should take 12% of the time; Stage 1 (Facts) and Stage 2 (Feelings) should each take 33% of the time; Stage 3 (Future) should take 15% of the time; and Stage 4 (Disengagement) should take 7% of the time (Kinchin, 2007). Each stage is considered essential to the overall process and no stage should be omitted (Kinchin, 2007).

Variations. The substantial focus on normalization in Emotional Decompression has debriefers inform participants that *all* reactions to the critical incident are normal; however, such emphasis may be problematic because not all reactions are considered acceptable (e.g., harm to self, harm to others). Emotional Decompressions led by mental health professionals are uncommon and typically occurring only when there is evidence a participant requires further mental health services (Kinchin, 2007).

Table 15. Four Stage Implementation of Emotional Decompression (Kinchin, 2004, 2007)

Stage	Goal
1. Facts	Gather information from participants about what happened; create coherent story; start *before* the critical incident & continue to present.
2. Feelings	Explore participants' reactions to, & resultant feelings about, the event (e.g., emotions, physical reactions) through all sensory modalities (e.g., sight, sound, smell, touch); include discussion of positive feelings.
3. Future	Provide education around normal stress reactions; attempt to normalize participants' stress reactions; inform participants of other support sources available to them; inform participants of possible organizational outcomes that may occur as a result of an investigation into the event (e.g., court case, inquiry, inquest).
4. Endings & Disengagement	Final comments made; participants given two messages: first, that they may leave the debriefing feeling worse than before because the discussion may have primed traumatic memories; & second, that even if participants do not believe they benefited from the debriefing, others in the group may have found the information they shared in stage 1 invaluable to their own understanding of the incident.

8. Group Stress Debriefing (GSD).

Description Group stress debriefing (GSD) was designed as an intervention specifically for personnel such as public safety personnel who are repeatedly exposed to stressful events with the potential for traumatic effects (Raphael & Wilson, 2000). GSD is not meant for use as a stand-alone intervention outside of a comprehensive peer support program (Raphael & Wilson, 2000).

Purpose GSD was designed to 1) help each participant recognize and accept their emotions and stress reactions to a critical incident to facilitate grief work; 2) resolve misconceptions about the incident and consequences (i.e., all things considered, the operation went as well as it could have); 3) initiate communication about the incident among the participants who may not otherwise discuss the incident; and 4) recast the incident as a learning experience. For the team, GSD is designed to strengthen group cohesion, while preparing the members for continued action and repairing the "hidden injuries" to individual and group confidence (Raphael & Wilson, 2000).

Who provides GSD? The authors recommend GSD be led by First Responder team leaders with knowledge of the team functioning. Mental health professionals are only recommended for high-risk situations, such as when a large number of victims and/or fellow team members lose their lives, or there was substantial loss of control and an event was considered to have gone wrong, leading to a sense of helplessness (Raphael & Wilson, 2000).

When does GSD take place? GSD typically takes place within one week of a critical incident or rescue situation.

Implementation GSD differs from other programs because it addresses the fact that the First Responder personnel participating in the GSD were unaware of the critical incident details before beginning their rescue operation as the severity of damage or extent of casualties was unknown. As a result, the First Responder personnel could not be fully prepared, with goals to put into action, adding additional uncertainty and stress (Raphael & Wilson, 2000).

GSD is provided individually or in a group setting (Raphael & Wilson, 2000). In either case, participant expectations and plans for the event are compared to what actually happened. The impact of any discrepancy is discussed, with a focus on any perceived failures by the First Responder personnel (Raphael & Wilson, 2000). Accordingly, peer leadership is considered particularly advantageous because subject matter expertise is thought more likely to impact participants' perceptions of their own actions during the critical incident (Raphael, & Wilson, 2000).

9. Multiple Stressor Debriefing (MSD)

Description Multiple Stressor Debriefing (MSD) was a modification of CISD developed for use after long-term disaster relief operations. In contrast to CISD, which occurs after a single critical incident, MSD is implemented after a prolonged series of stressful events related to a large scale disaster, such as a natural disaster. The intent has been to facilitate closure and the transition back to home life (Armstrong, O'Callahan, & Marmar, 1991). The MSD program has also been called the *American Red Cross (ARC) debriefing approach* (Reyes & Elhai, 2004) and the *American Red Cross (ARC) Disaster Mental Health Service* (DMHS; Weaver, Dingman, & Morgan, 2000). The available literature remains unclear as to whether MSD can or should be offered as a stand-alone intervention or as part of a broader CISM program.

Purpose MSD was designed to facilitate processing of critical incidents at the conclusion of relief efforts (Armstrong et al., 1995); however, the MSD session was not expected to be sufficient to fully process the magnitude of the experience. Therefore, participants are provided psychoeducation about stress and coping strategies and are encouraged to continue working through the experience at home. Persons facilitating the debriefings should be well connected with existing mental health services for participants, ensuring robust communication and access to broad resources. The facilitators may also receive important information about participants that allows the debriefing to be more effective (Armstrong et al., 1995).

Who provides MSD? Appropriately trained social workers typically act as group leaders. Ideally there is also a co-leader trained in providing MSD for disaster relief personnel such as Red Cross personnel and First Responders. Participants have been typically grouped based on their role within the relief efforts. (Armstrong et al., 1995).

When does MSD take place? MSD takes place near the end of, or after, a large-scale disaster (Armstrong et al., 1995). In a case example, the authors describe scheduling several groups so participants could attend a group at their convenience before returning home; as such, the timing of MSD groups has been less structured relative to other programs.

Implementation All disaster relief personnel are encouraged to take part in MSD at the conclusion of their service (Armstrong et al., 1995). MSD is provided individually or in a group setting for about two hours; however, there are many benefits posited for group implementations, such as being cost-effective, normalizing symptoms, and allowing the sharing of coping strategies. (see Table 16; Armstrong et al., 1995).

The MSD developers recommend that the intervention should occur in three phases: 1) pre-disaster briefings; 2) informal meetings; and, 3) exit debriefings. Pre-disaster briefings focus on recognizing stress prior to engaging in disaster relief work. Informal meetings are comparable to defusings (a peer-led debriefing occurring within 12 hours of a critical incident). Exit debriefings take place at the conclusion of a relief worker's service and involve four phases: 1) disclosure of events; 2) feelings and reactions; 3) discussion of coping strategies; and 4) termination (Armstrong et al., 1995) (see Table 16). In practice, most implementations only provide exit debriefings.

Variations. In practice, most implementations only provide exit debriefings. Despite MSD sometimes being referred to as ARC DMHS, there are several significant differences that emerge in their implementation. First, unlike the recommended MSD implementation that focuses on trauma, the ARC DMHS implementation focuses on frustrations associated with working in disaster situations (e.g., coworker conflict). Second, the ARC DMHS implementation uses the terms *crisis intervention* and *defusing* from the Mitchell Model when referring to what MSD calls *pre-disaster briefings* and *informal meetings* (Reyes &Elhai, 2004). Third, the ARC DMHS implementation advocates individual delivery with a disaster mental health professional rather than a group intervention involving peers (Reyes & Elhai, 2004). Fourth, the ARC DMHS implementation uses a less structured approach than MSD, focusing instead on active listening, empathy, acceptance, and coping strategies (Reyes & Elhai, 2004).

Table 16. Multiple Stressor Debriefing Program Stages (Armstrong et al., 1995)

Stage	Goal
Disclosure of Events	Participants discuss the process & procedures of MSD, & reflect on negative & positive aspects of the experience.
Feelings & Reactions	Participants discuss the events & associate them with feelings & reactions to see links between the events & the impact that they have on the participant; positive learning experiences are also discussed.
Discussion of Coping Strategies	Participants share & discuss their own coping strategies & leaders provide additional strategies; group leaders must identify & help to redirect maladaptive coping strategies (e.g., substance use).
Termination	Participants explore the process of leaving the disaster site & acknowledge the positives & negatives of returning home; the participant's work is underscored as having been important, purposeful, & beneficial, but they should expect changes to their daily lives upon returning home; participants are encouraged to recognize bonds formed with other participants & to say goodbye where appropriate.

10. The National Organisation for Victim Assistance (NOVA).

Description The NOVA program of crisis intervention was not designed for First Responders because they were considered "secondary victims" of critical incidents since they experienced the critical incident through their rescue efforts. NOVA was created for "primary victims," the people in communities directly affected by a disaster or critical incident, but the program was later argued as effective for First Responders (Davis, 1996).

Purpose The NOVA debriefing service, called *group crisis intervention*, was meant to provide education and crisis intervention, as well as one-on-one services as needed to First Responders and citizens in communities affected by critical incidents (Davis, 1996). The main objective is to provide intense and immediate crisis intervention and emergency consultation, with additional follow-up over a limited period of time (Davis, 1996). NOVA adopted the term "group crisis intervention" instead of "debriefing" to avoid negative mental health connotations that might inhibit active group participation (Young, 1998).

NOVA personnel assist local crisis management teams in responding to the current critical incident, as well as plan their immediate and longer-term activities in the aftermath. NOVA personnel provide training and modeling to local crisis management teams in immediate crisis response and long-term stress reactions to trauma (Young, 1998).

Who provides NOVA? NOVA National Crisis Response Team (CRT) members are described as highly trained specialists in disaster management, debriefing, victim assistance, victimology, and crisis intervention who go as national volunteers to various disasters. NOVA maintains a roster of active volunteers who have received their basic five-day training (Young, 1998). When a NOVA CRT is composed, each member is carefully selected by the NOVA organization to be representative of the community where the intervention will be deployed. NOVA CRTs comprise various disciplines, including clergy, emergency service providers, media personnel, public safety personnel, educators, nurses, psychologists, victim advocates, law enforcement officials, psychiatrists, social workers, and criminal justice specialists (Davis, 1996; Young, 1998). Responders trained by NOVA have been involved in one of three ways: 1) in their professional roles, such as First Responder or public official, but using skills from the NOVA training; 2) by responding with the state or local NOVA CRT; or 3) by official deployment from the NOVA headquarters (National Organization for Victim Assistance, 2016).

When does NOVA take place? The NOVA intervention has typically been provided as soon as possible after the event, but no longer than the first 24 to 72 hours after the initial impact of the critical incident (Davis, 1996).

Implementation NOVA has only becomes involved following an invitation made by a local authority or community in crisis (Davis, 1996). Sessions should be conducted at or near the site of the incident (Tramonte, 2000). Usually one team consisting of 10 professionals is deployed and works for three to four days before being relieved by additional teams as needed, depending upon the magnitude of the event (Davis, 1996). The NOVA intervention has been delivered one-on-one, or in large or small groups, depending on the situation (Davis, 1996). The ideal group size is believed to be between 20 and 25 people; however, group sessions have been conducted with as few as five people and as many as 600 people, with researchers arguing all can still benefit (Young, 1998). The intervention group can include a wide variety of persons, including survivors, caregivers, First Responders, or community members who want to attend (Young, 1998).

The NOVA intervention uses a chronological approach for addressing the critical incident. Group participants are asked to remember 1) what happened at the time of the incident — where were they? who were they with? what did they see, hear or smell? how did they react? what did they do?; 2) what has happened in the aftermath, such as how they have continued to react and what memories stand out); and 3) what they expect to happen in the future, including at work, with their family, practical concerns.

There are three key roles for persons providing the NOVA intervention: 1) a facilitator (a counsellor) who is in charge and the only team member to speak unless circumstances call for someone else; 2) a scribe who takes notes during the session and assists the facilitator; and 3) caregivers who assist as needed (Tramonte, 2000). Facilitators are responsible for introducing the session, stating the guidelines, asking the questions, providing validation, assisting group members in validating each other, summarizing the session, and concluding the session (Young, 1998). Other

crisis intervention team members are optional (e.g., local caregivers and other CRT team members), but believed valuable for providing additional care or referrals (Young, 1998).

The group sessions usually last between 1.5 and three hours (Young, 1998). Introductions by the facilitator should focus on providing guidelines for discussion and establishing parameters of safety and security for participants should last approximately 10 minutes (Young, 1998). Approximately 35 minutes should be spent answering questions designed to help review physical sensory perceptions and to give an opportunity for ventilation and validation of reactions. The next 25 minutes should be spent answering questions designed to help review emotional reactions and provide an opportunity for ventilation and validation. The next 10 minutes should be spent answering questions designed to elicit participant expectations for future coping strategies and to help prepare group members for what may happen over the next weeks or months. The facilitator should spend the next 10 minutes summarizing what has been said as part of validation and emphasizing future preparations, before concluding the session. NOVA allows between 15 and 30 minutes for distributing handouts, answering individual questions, mingling, and saying good-bye to participants (Young, 1998). NOVA argues their services can avert an OSI; however, they recommend referrals to appropriately trained mental health professionals for symptoms lasting for one month after the critical incident (Davis, 1996).

Variations. The NOVA CRT is sometimes called a Critical Incident Debriefing Team and some people refer to the NOVA CRT as CISD (Davis, 1996). If a critical incident lasts over an extended period of time, there may be a need for repetitive interventions (Young, 1998). The process of *repetitive group crisis intervention sessions* is employed when numerous different disasters have taken place in the same community in a relatively short time period (e.g., serial murders) or when there is a high level of ongoing criminal behavior that has caused community members to live in fear and feel helpless. At times, repetitive group crisis intervention has been used after a CRT has conducted an initial group session and local caregivers plan ongoing group sessions until the incidents subside or are terminated. Repetitive group crisis interventions have been thought particularly useful to facilitate coping with feelings of fear and vulnerability in crime situations when an offender is not yet identified or apprehended (Young, 1998).

11. Defusing.

Description Defusing refers to a strategy focused on verbally processing and ventilating stress as the crisis is ongoing or immediately after the stress occurs. Defusing tends to be brief and informal, which contrasts with many other methods of crisis management. Defusing is believed to prevent the accumulation of stress and cultivate constructive coping strategies by allowing participants to verbally process stress reactions (Reyes & Elhai, 2004). Defusing is a core component of CISM (see CISM for details), but has been implemented as a stand-alone intervention to mitigate stress reactions.

Purpose Defusing was designed to enable workers to return to work or home without significant stress. Furthermore, defusing was intended to prevent the need for a formal debriefing or to supplement a formal debriefing if necessary (Mitchell & Bray, 1990).

Who provides defusing? Unless support from appropriately trained mental health professionals is deemed necessary, defusings are typically provided by appropriately trained peer support personnel (Mitchell & Bray, 1990).

When does defusing take place? Defusing typically takes place between one and four hours after the critical incident. Defusing is believed ineffective if not conducted within 12 hours of the critical incident as rapid intervention is considered critical (Mitchell & Bray, 1990). Defusing is uniquely implemented during, or nearly during, a critical incident, allowing participants to return to normal duties (Reyes & Elhai, 2004).

Implementation Defusings have been intended for the First Responders most seriously affected by a stressor or critical incident, rather than all personnel (Mitchell & Bray, 1990). Defusing is a brief intervention lasting between 30 and 45 minutes, implemented in small groups, and typically at the scene of the critical incident (Mitchell & Bray, 1990). Defusing has typically included psychoeducation about stress and coping (Mitchell & Bray, 1990).

12. Psychological First Aid (PFA)

Description There are several definitions for PFA, but the intervention has typically been used to help mitigate the consequences of a critical incident (Dieltjens, Moonens, Van Praet, De Buck, & Vandekerckhove, 2014). PFA has been offered as a stand-alone intervention or as a precursor to more formal mental health interventions (Reyes & Elhai, 2004). In designing the program, PFA developers have recommended the intervention be: 1) informed by research-based evidence regarding resilience, risk, and trauma; 2) practical and applicable in real world situations; 3) developmentally appropriate; and 4) culturally sound, informed by and adapted to cultural contexts (Brymer et al., 2006). PFA has been used to provide for the basic needs of affected individuals and providing information, psychoeducation, treatment, and emotional support (Popa & Podea, 2007).

Purpose PFA was designed to minimize negative outcomes of critical incidents, supporting individual functioning and coping after a critical incident by fostering a sense of security, calmness, efficacy, connection, and hope (Dieltjens et al., 2014; Brymer et al., 2006).

Who provides PFA? A wide variety of people are believed capable of delivering PFA, depending on training and implementation. Providers may include mental health professionals, peer support personnel, and community members. PFA providers do not need formal training as mental health practitioners, but PFA training is typically required. Developers have argued PFA training should focus on enabling the helpers to provide practical assistance, reduce harm, and provide referrals (Reyes & Elhai, 2004). Compassion and empathy from PFA providers have been considered critical (Reyes & Elhai, 2004).

When does PFA take place? PFA takes place after a critical incident; however, the specific time frame varies depending on the implementation.

Implementation PFA implementations vary widely, but tend to be pragmatic, designed to meet physical needs, such as food, and to normalize stress responses (Alexander & Klein, 2009). Implementing PFA requires addressing a wide range of potential responses to critical incidents, pathological and otherwise. PFA can reduce the impact those responses have on distress and function (Brymer et al., 2006).

13. Psychoeducation

Description Psychoeducation involves providing evidence-based information about psychology, including contemporary information about stress responses. Psychoeducation is offered as a stand-alone intervention or in conjunction with other approaches.

Purpose Psychoeducation is designed to promote resilience through the provision of knowledge and cultivation of skills, as opposed to discussion of events or traumas (Phoenix, 2007). Psychoeducation is intended to help people mitigate negative reactions to stressful events (Phoenix, 2007).

Who provides psychoeducation? Depending on the implementation, a wide variety of people can provide psychoeducation, including appropriately trained mental health professionals, peer supporters, or other appropriately trained educators.

When does psychoeducation take place? Psychoeducation can take place before or after a critical incident, depending on whether the implementation is proactive or responsive.

Implementation. The content of psychoeducation is not standardized. Instead, content is tailored based on the expertise of the person providing psychoeducation and the intended audience. Psychoeducation typically provides participants with a range of information regarding responses to stress and coping strategies, including physiological stress responses, positive behaviours, and negative behaviours (Phoenix, 2007). Psychoeducation typically involves discussing critical incidents in general, what makes such incidents difficult to manage, and what can be done to improve coping (Phoenix, 2007). Psychoeducation is designed to improve individual understanding of stress responses and provide helpful options for mitigating the potential impact of critical incidents (Phoenix, 2007). Education regarding different stress responses may also help First Responders to be less critical of their responses to critical incidents (Phoenix, 2007).

Variations. Details of psychoeducation recommendations (e.g., when the education is provided) differ across implementations based on various factors, such as the person providing the education and the needs of recipients (Phoenix, 2007).

14. On-Scene Support.

Description On-scene support typically refers to First Responders monitoring for signs of distress in coworkers while performing their duties (Mitchell & Bray, 1990).

Purpose. On-scene support was designed to allow peer support personnel to provide emergency assistance to fellow First Responders experiencing distress during a critical incident (Mitchell & Bray, 1990).

Who provides on-scene support? Peer support teams comprised of public safety personnel with variable levels of training typically provide on-scene support (Mitchell & Bray, 1990).

When does on-scene support take place? On-scene support takes place during a critical incident (Mitchell & Bray, 1990).

Implementation If peer support personnel notice a colleague becoming distressed, they seek supervisory approval to temporarily relinquish their own duties to assist the distressed colleague. Peer support personnel may move a colleague away from the scene in an effort to reduce distress and then alert the supervisory staff when necessary. Peer support personnel are expected to return to their duties as soon as possible after assisting a colleague or transferring responsibility for that colleague to an appropriate alternate (Mitchell & Bray, 1990).

Variations. Peer support personnel may provide brief assistance to victims of the disaster and their family when symptoms begin to interfere with the First Responder operations (Mitchell & Bray, 1990).

Appendix B. Peer Support Programs in First Responder Populations

Police Organization Providing Assistance Program (POPPA).

POPPA was created in 1995 following an increase in suicides among police officers in the New York Police Department (Dowling, Genet, & Moynihan, 2005). POPPA is a confidential peer support program that uses trained volunteer police officers. Officers in need of support are able to contact a 24-hour help line to discuss personal issues or problems related to employment. The volunteer peer support officer and the officer in need of support can meet in person. To maintain confidentiality, meetings occur outside the departmental facilities and no identifying information is recorded. Referrals to professional mental health services are made if further assistance is needed.

COP-2-COP.

COP-2-COP is a peer support program developed in 2000 for New Jersey police officers and their families. The program was developed after an increase in committed suicide rates between 1996 and 1998. COP-2-COP was adapted from Robert's Seven Step Crisis Intervention Model (Roberts, 2005) and uses a 24-hour confidential hotline answered by volunteer retired police officers (Ussery & Waters, 2006). All volunteers are trained in crisis intervention and are required to conduct an initial interview using pre-established guidelines when calls are received. Volunteers are instructed to listen and explore past adaptive coping strategies with callers (Waters & Ussery, 2007). Follow-ups are provided every 10 days, more frequently if deemed necessary, by COP-2-COP volunteer police officers (Ussery & Waters, 2006; Waters & Ussery, 2007). Waters and Ussery (2007) report the success of COP-2-COP results from the therapeutic alliance and rapport that can be built quickly among peers. Ancillary programs similar to COP-2-COP were developed for other public safety personnel following terrorist attacks on the World Trade Center in September 2001; specifically, the World Trade Center Rescuer Support Victims Program (WTC-RSVP) and 1-866-NJFDEMS (New Jersey Federal Emergency Management Agency Team).

Vermont State Police Peer Support Program.

In 1996, the Vermont State Police Department developed the Vermont State Police Peer Support Program for their officers. The program has been considered similar to peer support programs developed and implemented by other law enforcement agencies (Goldstein, 2002). The program was designed to support police officers dealing with operational stressors. Officers wanting to access the program do so through referral. Peer support personnel must be officers with specific characteristics, such as being a good listener, sensitive to problems, and willing to attend a five-day intensive training workshop. Additional training sessions are offered based on interest. Monthly meetings among peer support personnel are conducted to facilitate discussion, feedback, and support.

Fort Worth Police Department Peer Support Program.

The Fort Worth Police Department in Texas implemented a 24-hour peer support program for officers in crisis (Greenstone, 2000; Greenstone, Dunn, & Leviton, 1995). Selected peer support personnel are required to attend a 40-hour training course. In order to maintain competency following the initial training course, additional training sessions are offered on a monthly basis. Since implementation, the number of peer support team members has grown from six to between 25 and 30.

Together for Life.

Together for Life is a program available to members of the Montreal Police Force. The program was designed to enhance support and camaraderie among police officers, and hopefully improve suicide prevention (Mishara & Martin, 2012). The program involves four components, detailed by Mishara and Martin (2012). Police officer peer support personnel receive training to identify risk factors associated with suicide ideation and how to help a colleague

in need. A telephone helpline is provided, which allows police officers to call and speak to a police volunteer who is trained in suicide prevention.

Queensland Ambulance Service Peer Support Officers.

Peer Support Officers (PSOs) act as embedded leaders of the employee assistance program offered by the Queensland Ambulance Service (Scully, 2011). PSOs are emphasized as a feature of a broader health program, rather than independent stand-alone service providers. As early as initial training, recruits receive training on occupational stress, are required to complete associated assignments, and must report to PSOs about significant cases during the first six months of operational duties. PSO training involves a six-day residential training program led by professional mental health workers. During training, PSOs are taught effective communication skills, essential counselling skills, support strategies, concepts of stress/distress/suicide, the impact of shift work, and healthy approaches to physical and mental health. Confidentiality, ethical behaviour, and the importance of supervision have all been emphasized throughout. In addition to an annual three-day skills maintenance workshop, PSOs receive monthly group supervision and a minimum of two individual supervisions per year with a mental health professional. Early introduction of recruits to the Peer Support Program is believed to aid rapport-building with PSOs, reduce stigma, and engage new recruits in maintaining their own mental health. PSOs are located in or near most ambulance centres to ensure visibility and accessibility. Scully (2011) reported that more than 390 personnel have been trained, with approximately 110 active PSOs at any time.

Peer Support Team for the EMTs and Paramedics of the New York City Emergency Medical Service.

The program was developed following a 1992 increase in New York EMS suicides, which was evidence of increased suicidal risk for paramedics (Ostrow, 1995). The program was designed as an intervention and prevention to help members with any problem. Peer support personnel have been volunteers with diverse cultural, religious, and sexual backgrounds. Peer support personnel have been available to discuss a range of issues experienced by paramedics and EMS personnel. Peer support personnel training typically spans a five-day intensive program where members are taught about CISD, active listening, assessment, problem identification, and intervention, while being provided appropriate referral information.

Appendix C. Survey of Canadian Public Safety Personnel Agencies.

Participants in the survey were asked to identify: the type of agency they worked for — law enforcement, correctional services, fire and rescue, emergency medical services, operational communications; geographical region; type of jurisdiction – rural, municipal, provincial, federal, regional; and, their own function in the agency.

Respondents were then asked what events qualify as a "critical incident." Choices were: line of duty deaths; serious line of duty injuries; emergency personnel's suicide; disasters/multiple casualty incidents; incidents involving unusual or sudden death of children or harm of children; events where the victims are relatives or friends of emergency personnel; incidents that attract excessive media attention; incidents that seriously threaten the lives of responders; other.

Then followed a series of questions aimed at determining whether the agency the respondent worked for has a Crisis Intervention Program in place; whether it has a Critical Incident Debriefing Program; and, whether it has a stand-alone peer support program. Respondents were given the opportunity to identify which programs their agencies used and how useful they feel these programs are, and whether their agency followed the program exactly, use a modified version, or use only some components of the program.

Others questions were aimed at determining the goals and outcomes of the programs, as well as strengths and limitations.

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