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Hartness, Michelle R. ***Supporting Your Hero: Critical Incident Stress Management Training Needs Assessment for Firefighters' Spouses/Significant Others***

Abstract

The purposes of this research is to conduct a needs assessment and identify the critical incident stress management knowledge base and training platform that can provide an educational opportunity for firefighter spouses or SOs to recognize, support and deal with their hero after critical incident(s). The evaluation method used in this research was an online survey of firefighter spouses and significant others. The survey link was emailed to fire chiefs, which distributed it to their firefighters, who then emailed or shared the link with their spouse or significant other. The evaluation was done to measure the participant's knowledge of critical incident stress, the need to develop critical incident stress management training for firefighter spouses or significant others and how best to implement the training. This paper discusses the analysis of results for both the quantitative and qualitative data collected followed by recommendations for training programs.

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Table of Contents

List of Tables

Chapter I: Introduction

When professional or volunteer firefighters rush into a burning building or respond to a five car accident with fatalities on the interstate, they are doing what they are trained to do. If one of those incidents becomes a critical incident there are trained professionals to assist the firefighter in dealing with the problem using critical incident stress management. A critical incident is any “event that generates such intense emotional energy that it overwhelms an individual’s or a group’s ability to cope and causes impairment in work or personal activities” (Mitchell 2006 p. 56). Kirschman (2007) writes about what families need to know about how and why emergency first responders react to critical incidents and indicates that reading a book is not a substitute for consulting a healthcare professional after critical incidents.

> As firefighters, we were trained to search in the hidden places where people will hide if they cannot escape. We finally found the woman in an empty fireplace, dead from burns and smoke inhalation. She was two feet away from a partially open sliding glass door. The mood at the firehouse changed significantly for several days. I was only 18 years old at the time, and I wasn’t really sure what the change was all about. But I did know that the jokes were different; they were more biting, hurtful, and accusatory. My emotional response was confusion. I didn’t know what to make of it. I suppose I was too naïve to actually grasp the magnitude of finding a dead body and failing to revive her. I was, however, fully cognizant of the other firefighters’ reactions. These changes in their behavior were repeated numerous times thereafter in what we call critical incidents. (Snyder 1988, p. 98)

Firefighter training standards in Wisconsin vary between career and volunteer departments. Volunteer departments attend an initial 60 to 96 hours of firefighter training paid by the state see Appendix A for an area technical college class listing. The personal protective equipment (PPE) needed to perform the job and mileage to attend the trainings is paid for by the departments. Personal protective equipment (PPE) or initial turn out gear can cost the fire department anywhere from $5,000 on up; depending the level of gear, see Appendix B for the cost of basic turn out gear (Peter Silva, Jr., personal communication, October 22, 2013).

Career departments' hiring requirements and training vary by department because the state of Wisconsin does not have a standard requirement. Peter Silva, Jr., Fire Education Director for Wisconsin Technical College was the training officer with the City of Kenosha fire department. The fire training academy was nine weeks long and cost the city approximately $30,000 per new hire. This included the overtime wages of the instructors, new firefighter PPE, salary of the new recruit, and sometimes overtime when not on the line (P. Silva, personal communication October 22, 2013).

Volunteer departments' recruit training varies by department also. In Wisconsin, firefighters need to have 60 to 96 hours of firefighter certification (Personal conversation, Peter Silva, Jr, October 21, 2013). Owen-Withee- Curtiss Fire Department requires the following training:

1. Fire ground access must complete: Entry Level FF Part 1 – 30 hours and Entry Level FF Part 2- 30 hours.
2. Complete Certified Firefighter I- 96 hours, as soon as class is available.
3. Entry Level Driver Operator- 30 hours
4. Required to drive engines: Pumper Operator – 6 hours (only pumper operators can drive engines)
5. Certified Driver Operator- Aerial- 36 hours

6. Haz-mat Operations-24 hours
7. Emergency Medical Technician (EMT) trained
8. ICS courses (Mark Renderman, personal communication April 5, 2014).

Officers within the department are required to take an additional eight courses. A volunteer firefighter for Owen Fire Department would have a minimum of 290 hours of classroom training at the technical college costing over $1,500 in tuition, no wages or per diem is included in the cost. During these required trainings there is little to no mention of critical incident stress management (CISM). If the volunteer department has a policy on CISM or procedure on debriefing the new recruit will be advised of it during the initial orientation with the entire department's other critical information.

Currently in north central rural Wisconsin, CISM training and debriefing are available for the firefighter through the fire station but not the spouse or significant other (SO). Most spouses or SOs do not know how to recognize critical incident stress much less how to help their spouses or SOs cope with the problem. In addition, spouses or SOs can become secondary victims (Figley, 2007) from the critical incident stress the firefighter brings home.

Firefighters that experienced critical incident stress can themselves become a trauma victim. Their marriages or significant relationships can become distressed and once distressed it can become an endless circle of lack of communication, defensiveness, and distrusting. The bad relationship environment then fuels the continuation of trauma symptoms and builds emotional and communication walls between the partners. The walls prevent the partners from coping with the effects of the critical incident stress (Johnson & Williams-Keeler, 1998). Firefighter spouses and SOs trained in critical incident stress gain the tools to assist in the everyday stress the firefighter is experiencing. Johnson and Williams- Keeler (1998) stated one of the major contributions to recovery is a healthy marital relationship after a critical incident. A growing group of research advocates the involvement of spouses/intimate partners in PTSD treatment (Buchanan, Kemppainen, Smith, MacKain, & Cox, 2011; Monson, Taft, & Fredman, 2009. Their research concluded with the involvement of spouses/intimate partners lead to decreased combat veteran stress and contributions to the recovery from PTSD symptoms.

Statement of the Problem

Firefighters' spouses or significant others are not trained to identity, provide support, or cope with critical incident stress. With appropriate and accessible training spouses and SOs can contribute to keeping the firefighter saving lives and protecting property.

Purpose of the Study

The purposes of this research is to conduct a needs assessment and identify the critical incident stress management knowledge base and training platform that can provide an educational opportunity for firefighter spouses or SOs to recognize, support and deal with their hero after critical incident(s).

Assumptions of the Study

This paper is based on the Critical Incident Stress Management Model of the International Critical Stress Foundation, Inc. (Mitchell, 2006). And that crisis intervention/disaster psychological intervention is useful. The collection of data will be inclusive of firefighters' husbands, wives, signification others, and life partners. At no time, should the training of a spouse or SO for critical incident stress management be equated or substituted for that of professionally trained and licensed mental health personnel.

The future training models for spouses and SO's can be created or funded by firefighters' fraternity organization, CISM professional organization or other group understanding the needs and ensuring the cost of the training is free and distributed to all of the right networks.

Definition of Terms

Crisis. "An acute emotional reaction to a critical incident" (Mitchell, 2006, p. 57).

Critical incident. "Are unusually challenging events that have the potential to create significant human distress and can overwhelm one's usual coping mechanism" (Everly, 2006, p. 14). "Any event that generates such intense emotional energy that is overwhelms an individual's or a group's ability to cope and causes impairment in work or personal activities" (Mitchell, 2006, p. 56).

Critical incident stress. "The cognitive, physical, and emotional state of arousal that is part of the crisis response" (Mitchell, 2006, p. 57).

Critical incident stress debriefing (CISD). "Is a structured, small group crisis interventions process" (Mitchell, 2006, p. 126).

Crisis intervention. **"**A short term helping process; acute interventions designed to mitigate the crisis response; not psychotherapy" (Everly, 2006, p. 16). The idea is to target the emotional response to the event not the tactical event decisions.

Debriefing. Small group discussion typically held within 1 to 10 days after the critical incident and can last anywhere from 1 to 3 hours. The small group only includes personnel impacted by the event.

Defusing. Small group discussion typically held within 8 to 12 hours after a critical incident and does not last more than one hour. The small group only includes personnel impacted by the event.

Post-traumatic stress disorder (PTSD). "Develops after a terrifying ordeal that involved physical harm or the threat of physical harm" (National Institute of Mental Health, 2008, "Post-traumatic stress disorder", para. 1).

Limitations of the Study

This paper is based on the Critical Incident Stress Management Model of the International Critical Stress Foundation, Inc. and that crisis intervention/disaster psychological intervention is useful. It is inclusive of firefighter's husbands, wives, SOs, and life partners regardless of age, gender, religion, social economic class, ethnic background or sexual preference. The survey distribution relies on firefighters forwarding the survey link to their spouse or significant other. At no time, should the training of a spouse or SO for CISM be equated to that of professionally trained and licensed mental health personnel.

Methodology

A Qualtrics survey was the research methodology utilized to assess firefighter spouses and SO's understanding of critical incident stress, platforms used for training and background demographics. The survey was emailed through Qualtrics including to ten fire departments in Clark County and two career departments in Wood County plus 4 individual responders. The survey included an email of introduction and purpose with survey link to firefighter spouses and SOs. Because this email needed to pass between other people before arriving at the intended participant, the email included three messages: one for the fire chief, one for the firefighter and one for the participant. Participants were granted three weeks to complete the survey with a reminder email sent out 10 days later. The data that was collected in the survey: basic demographics of the population (e.g.: years of service for the firefighter, volunteer or career fire department, male or female, years in a "relationship" with firefighter). Accessible training platform(s), training style, level of critical incident stress education or experience. The data was analyzed to assess the need to develop a critical incident stress training program for spouses and SOs.

Chapter II: Literature Review

Firefighters' spouses or significant others are not trained to identify, provide support, or cope with critical incident stress. This chapter reviews the literature on critical incidents, the use critical incident stress management, and the benefits of martial or intimate relationships in coping with critical incident stress and post-traumatic stress disorder (PTSD). In addition, this chapter discusses the difference between the use of focus groups and online surveys for data collection. This chapter then compares adult learning styles and platforms available for training modules.

Critical Incidents

Critical incidents are defined as "the unusually challenging events that have the potential to create significant human distress and can overwhelm one's usual coping mechanisms" (Everly 2006, p. 14). Snyder (1988) explained individuals' reactions to critical incidents are as different as the individuals that respond to the event; some have an immediate reaction, others have delayed reactions and yet others may not react to an incident that caused stress for another firefighter. To establish criteria for an individual's critical incident stress would be difficult because people have many personal characteristics that help them in coping and individual trigger(s) that cause them to react to stress. There are three types of calls which are almost guaranteed to cause an array of symptoms: house fires with child fatalities, horrifically burned bodies, and multiple death situations. The reason these three calls usually trigger symptoms is "the sights, the sounds, and the smells leave lasting effects" (Snyder, 1988, p. 98).

The ability to cope or process an incident depends on the firefighter's individual make up or personality. Different triggers or incidents will affect firefighters differently. It could be experiencing the skin removal of a burn victim while the firefighter attempts to rescue the victim from the second floor of a burning apartment or it could be the accumulation of previous calls over the last three days including: suicide victim on railroad tracks, farmer's arm caught in silo auger, followed by a multiple vehicle pile-up in dense fog that causes the firefighter's coping mechanism to become overwhelmed and begin to experience critical incident stress symptoms.

Volunteer fire departments have a limited population from which to select competent candidates so the fire departments need to retain their qualified firefighters. Recruitment and retention is such a problem throughout the United States that the Federal Emergency Management Agency (FEMA) has created the Staffing for Adequate Fire and Emergency Response (SAFER) grant located at www.fema.gov which is part of the assistance to firefighter grant program (AFG) (www.fema.gov , 2014). As the narrative on fema.gov/staffing-adequate-fire-emergency- response website, SAFER grant was created to assist local fire department in increasing competent firefighters and safe response times in an area. Safe response standard recommendations established by the National Fire Protection Association (NFPA) based on career (NFPA 1710) or volunteer department (NFPA 1720). Critical incident stress left untreated in a firefighter can result in burn out to the point the firefighter leaves the department. The exit of firefighters reduces retention rates within a department. While some fire departments have critical incident stress management plans as part of their standard operating procedures, other departments call in volunteer critical incident stress management teams to perform single session defusing or critical incident stress debriefings on an as need basis (Snyder, 1988). The volunteer CISM teams can also provide individual interventions as well as group interventions (Mitchell, 2006).

Fire departments collect data through a National Fire Incident Reporting system (NFIR). This system collects data regarding apparatus, personnel, response time, type of fire, hazardous materials, etc. (NFIRS System Information, 2008.) Ron McGraw, Health and Safety Assistance at the International Association of Firefighters, is not aware of any statistics regarding critical incident stress affecting firefighters and there is not a reporting requirement to collect that type of data. Furthermore, he was not sure if firefighters would readily admit to answers to questions about the impact critical incident stress had on the individual or family. (R. McGraw, personal communication November 1, 2013). Chief Philip Stittleburg, Lafarge Fire Department (Wisconsin) is the NFPA board chair, National Volunteer Fire Council board member, and National Fallen Firefighter Foundation board member. He indicated that he is not aware that any of the national boards collect statistics on critical incident stress impact on firefighter divorce rates, command position turnover rates, and number of firefighters leaving the profession after a critical incident (P. Stittleburg, personal communication, November 7, 2013). Statistics that could be helpful include:

1. After a department experiences a line of duty death, what is the percentage of turnover in command staff? In a volunteer department or a career department within 5 years?
2. What is the divorce rate within a fire department for command staff within five years after a line of duty death?
3. What percentages of individuals and/or families need professional counseling after a line of deputy death without firefighter receiving defusing and debriefing services?
4. What percentage of individuals and/or families need professional counseling after a line of deputy death after firefighters received defusing and debriefing services?

5. In the last five years, how many fire departments are utilizing defusing and debriefings regularly? Does the department have a contract with another organization to provide defusing or debriefings? If so, with whom and is there a cost?
6. If a department is utilizing defusing and debriefings what is the rate of firefighter retention after critical incident stress?
7. How many firefighters leave the profession because of critical incident stress?

Until fire departments track these details regarding critical incident stress; we may never know the profound impact critical incident stress has on firefighters or the fire service.

Critical Incident Stress Management

Critical incident stress management (CISM) is the process of treating and acknowledging "critical incident stress generates considerable psychological and physical discomfort for a period of approximately two days to four weeks after the incident" (Kirschman, 2007, p. 89). Kirschman (2007) goes on to explain there are three types of reactions to a critical/traumatic event:

1. Acute stress.
2. Critical incident stress or trauma stress.
3. Posttraumatic Stress Disorder (PTSD).

Acute stress is more than general daily stress; it is discomforting. Traumatic stress sometimes refers to it as critical incident stress, can be tracked back to a specific event or incident. "PTSD is a formally recognized mental disorder affecting about 15% of emergency services workers." (Kirschman, 2007, p. 89)

The CISD facilitating team assists individuals through the seven phases: introduction, fact, thought, reaction, symptom, teaching and reentry. The CISD facilitating team will contain a minimum of “two CISM trained team members and at least one mental health clinician. Other team member(s) can consist of: peer support personnel, spiritual leader, another mental health, or physical health professional” (Mitchell, 2006 p. 120). He goes on to describe the need for facilitating team members to be certified in CISD small group process.

As the field of disaster mental health advances, it is essential to understand the historical foundation of CISM. Critical incident stress management (CISM) “represents, both strategically and tactically, an integrated multi-faceted approach to crisis intervention.” (Everly & Langlieb, 2003, p. 113) CISM has eight components, (Appendix C). The eight components include:

1. Pre-crisis preparation.
2. A. Demobilizations and staff consultation (rescuers.)

   B. Crisis management briefing (CMB).
3. Defusing.
4. Critical incident stress debriefing (CISD)
5. Individual crisis intervention.
6. Pastoral crisis intervention.
7. A. Family CISM

   B. Organizational consultation.
8. Follow- up/Referral (Everly & Mitchell, 1999).

The pre-crisis preparation is used to educate the firefighter and provides the guidance to build resistance and resiliency to critical incidents (Mitchell, 2006). Demobilization is the process of decompressing and transitioning responders from the critical incident to normal life. It should provide education regarding critical incident stress, screening for acute cases of critical incident stress and meet basic needs as responders are demobilized (Mitchell, 2006).

Crisis management briefing (CMB) informs responders of CISM timeline, provides rumor control and encourages camaraderie so the team watches out for each other (Mitchell, 2006). Defusing provides stabilization, allows the team members to talk about the incident and is designed to reduce acute stress, provide critical incident stress education, build team camaraderie, discussion normalization process, and build resiliency in the individuals. The defusing discussion should not last longer than an hour and are conducted within 8 to 12 hours after the critical incident (Mitchell, 2006). Debriefing increases camaraderie by allowing individuals to know they are not alone and are part of the team; sharing the same or similar emotions.

Small group debriefing allows for individual to share with the group. During small group debriefing, CISD facilitators provide educational awareness of critical incident stress, review the normalization process, triage anyone or group if follow up in needed, and build resiliency in the individuals. Debriefing is done within 10 days after the critical incident and usually takes longer than a defusing. Small group debriefing can last up to 3 hours; depending on the number of people, any remaining symptoms, and additional comments to be sure the responders have psychological closure of the incident (Mitchell, 2006).

After a traumatic/critical incident event the standard practice of departments is to do a single session debriefing and not include the other seven steps unless a department member needs individual follow up (Everly, 2006; Van Emmerik, Kamphuis, Hulsbosch, & Emmelkamp, 2002). The single session debriefing can be in a group or individual setting and the process is essentially the same. The model used by Mitchell (2006) suggests the CISD facilitating team creates a closed circle grouping with chairs then begins the debriefing with introductions, individual introductions are conducted and rules are established for the session. The rules may vary between CISD facilitating teams but are basically:

1. Turn off cell phone.
2. Comments are confidential.
3. No personal attacks.
4. No discussions on tactical operations.
5. Only your feelings and perception.
6. Cannot talk for someone else.
7. No one can leave in the middle of a session (Mitchell, 2006).

The individuals then share their experience about the incident; in a group debriefing each individual will be encouraged to talk about the incident and their feelings/symptoms to get psychological closure (Mitchell, 2006).

> The goals of critical incident stress debriefing (CISD) are not only psychological closure/normalization, but to also reduce distress, establish benchmarks for psychological/behavioral reactions, discussion stress management education, community coping resources available, and identify individual psychological triage and referral when appropriate. (Mitchell, 2006, p. 120)

Benefits of Martial Relationships in Coping with Critical Incident Stress

Qualitative research "examined the effects of emergency service work on spouses of firefighters" (Regehr et al., 2005, p. 423). The researchers interviewed 14 women. The women were contacted through letters sent home with firefighters after training. Originally, 12 women elected to participate. An additional two women were added from a snowball sampling. The majority of the 12 participants were married to firefighters, one was in a common law relationship, and one was divorced. Of the 12 married participants, two were second marriages. The methodology used was long-interview method of data gathering. The interviews included: family make-up, impact of shift work on the family, and firefighters family role from the wives' perspective, wives' opinions on the impact of traumatic events on the family, and family challenges they faced and how they dealt with the challenges. The interviews took place at the university, offices and homes and were audio taped for accuracy (Regehr et al., 2005).

The results from Regehr et al. (2005) research were summarized into four themes; with one theme relating to stress and trauma. Within the "You try to read them" theme, the majority of the firefighter wives felt confident in their husbands' skills and training; and did not fear for the firefighter's safety while on the job. However, one woman mentioned her stress level reflected her husband's; if he had low stress, she had low stress.

Some researchers would argue that the woman had become a secondary victim of the firefighter's environment (Buchanan et al., 2011). Other comments from the study indicate that the wives' perceptions were that the firefighters received emotional support after critical incident event at the fire hall with other firefighters (Regehr et al., 2005). The wives then began to identify symptoms when their firefighter had experienced after a traumatic event. The symptoms they identified were: exhaustion, facial expressions, mood swings and lack of communication. These symptoms are critical incident stress symptoms.

Wives then commented on how they approached their husbands suffering (Regehr et al., 2005). A few of the strategies included: reading the facial expressions as the firefighter walked in the door, giving the firefighter an hour or two before approaching him, feeding him, accepting not knowing what happened at the critical incident and being okay with it (Regehr et al., 2005). This study concluded "they [wives] worked hard to develop adaptive strategies to improve the fit between the family and the workplace" (Regehr et al., 2005, p. 433). National Institute of Mental Health (NIMH, n.d.) supports family and friends are an important component to post-traumatic stress disorder (PTSD) therapy.

In the last years, research in the field of PTSD has grown. The National Institute for Mental Health (NIMH, n.d.), indicates that PTSD affects about 7.7 million American adults. NIMH research of individuals with PTSD has identified individual risk factors and resilience factors; hoping with this information people would be able to recognize and prevent PTSD in the future (NIMH, n.d.) see Table 1.

Table 1

Risk Factors and Resilience Factors of PTSD

Risk Factors of PTSD	Resilience Factors of PTSD
Surviving dangerous or traumatic events	Have friend and family support network
History of mental illness	Support group after event
Injured	Feeling positive about actions while in danger
Seeing people injured or killed	Having a coping strategy to get through the event and learn from it.
Feeling helpless or experience extreme fear	Conquer fear by responding and acting
No peer support after the event	
Dealing with outside family stress after the event.	

Buchanan et al. (2011) acknowledged little research exists in how spouses/intimate partners identify PTSD behavior patterns in a combat veteran and how to get the veteran into PTSD treatment. "Since the spouses or intimate partners of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) veterans may play a potential role in facilitating combat veterans' engagement in mental health treatment, there is a need to better understand their perspectives and actions in this regard" (Buchanan et al., 2011, p. 743). Other research agreed with Buchanan et al. (2011) in that spouses/intimate partners need to be involved in PTSD treatment, can lead to decreased combat veteran stress, and assists in recovery of the PTSD symptoms (Monson et al., 2009.)

Buchanan et al. (2011) mailed questionnaires to 100 women and received 34 useable questionnaires. To be included in the study participants needed to meet two criteria: "(a) being a spouse or intimate partner of a combat Veteran deployed to Iran or Afghanistan and (b) the ability to read and write English" (Buchanan et al. 2011 p. 745). The objectives of the study were to determine the knowledge level of spouses/intimate partners of military veterans regarding PTSD and how the spouses/intimate partners recognized the veterans' PTSD behaviors. Two thirds of the participants did not have PTSD training. The participants that reported receiving training were divided between: formal PTSD training from military resources, workshop and training materials given to families from the military, return home briefing and three participants (6%) had a formal PTSD college course (Buchanan et al. 2011). An interesting part of the study was that 100% of the participants agreed they would find a way to get the combat veteran PTSD assistance when needed. The responses varied from issuing ultimatums to negotiating acceptable levels of treatment including a few participants kept leaving PTSD materials around the house (Buchanan et al., 2011). The findings included that it was important to include spouses/intimate partners in the early planning sessions to determine appropriate strategies that would assist their combat veteran in recovering from PTSD (Buchanan et al., 2011).

Focus Group Verses Online Survey for Data Collections

Focus groups and online surveys are used to reach different results or form a cross section of information to support other findings. Duffy, Smith, Terhanian, and Bremer (2005) indicate a focus group will include a facilitator and a small group of people or several small groups of people. The facilitator directs and guides the interaction of the groups. Online surveys can be delivered to any group of individuals with an internet connection (Duffy et al., 2005).

Focus groups have advantages and disadvantages. Morgan (1996) listed several advantages and disadvantages of focus groups in Table 2.

Table 2

Advantages and Disadvantages to Focus Groups

Advantages to Focus Groups	Disadvantage to Focus Group
Can be topic driven.	Some topics are unacceptable or difficult for group discussion.
Sociological topic discussion can get deeper into the question.	Focus group facilitator can have an agenda and lead the responses.
Clarify any answers provided.	Focus group facilitator can control the discussion.
Collecting more data as members share in greater detail.	Facilitator can become a variable or control if leading numerous focus groups.
Program development can better assess the thought of process of potential users.	Facilitator can interrupt/limit the interaction of the group.
Group dynamics and interaction.	Group dynamics and interaction.

Online surveys have advantages and disadvantages for research data collection. According to the U.S 2010 Census (n.d.), 71% of all U.S households have internet access. This allows researchers to access large number of participants for surveys. Advantages and disadvantages in the use of online surveys are included in Table 3 (Duffy et al., 2005).

Table 3

Advantages and Disadvantages to Online Surveys

Advantages to Online Surveys	Disadvantage to Online Surveys
Lower cost	Deleted easily
Greater speed of distribution	Portions of the population are excluded; they do not have internet.
Greater speed of response	Too large of sampling can create a concern with any topic.
More visual, flexible and interactive surveys.	Participants are likely to choose midpoint or "don't know" options.
Facilitator effects are avoided.	Use the internet to search for answers the participant does not know.
Higher admission of undesirable behaviors	Match questions to sampling demographic
Anonymity/confidentiality	Do not allow for interactive dialog
Complete at a convenience to participant	
Less likely to give inaccurate responses.	

The use of focus groups and online surveys both have advantages and disadvantages. If the research topic is too personal online surveys may be better but if the researcher needs to clarify answers and dig deeper into the questions focus groups would be more successful. Morgan (1996) found combining both face to face interviews and online survey to define the findings of the focus group or vice versa has been found to be productive.

Adult Learning

Understanding adult learning styles is important in creating focus groups, surveys or training programs. "Knowledge of adult learning styles helps instructors provide an optimal environment…" (Brady, 2013, p. 16). Adult learners need to be ready to learn, want to know why they should learn, are more self-directing, have a larger base of knowledge and have internal and external motivators. (Knowles, 1973).

Adult learners are motivated to learn for different reasons and have different learning style. Adult learners are motivated by six sources: learning, escape boredom, advance their career, make new friends, required to get an education by their employer, and wanting to serve the community in a better capacity (Lieb, 1991). There are different terms for learning styles but the most common learning styles are: visual, auditory, verbal, kinesthetic, logical, social, and solitary (Brady, 2013).

- Visual learning is the preference of seeing images, pictures and presentations (Ness, 1995).
- Auditory learning is the preference of hearing the learning materials (Coker, 1996). Lectures, webinars, podcasts are all types of auditory learning.
- Verbal learning is the preference of using oral and written communication.
- Kinesthetic learning is the preference of using the body and hands to experience the sense of touch (Ness, 1995)
- Logical learning is the preference of using reasoning.
- Social learning is the preference of learning with people or in a group setting.
- Solitary learning is the preference of learning by one's self through independent study.

To be effective, instructors need to understand adult learner motivation, and learning styles to create a positive and trusted learning environment. Knowles (1970) supported the adult learners' need for a safe or trusted environment with expectations clearly defined and respect for the learners life experience.

Online learning is a delivery method that can meet the needs of diverse adult learners. Advantages of online learning are self-paced learning, flexible to meet any students schedule and confidential. A few problems with online learning can be: "inadequate internet access, vague objectives, or technology problems" (Prymachuk, Gill, Wood, Olleveant & Keeley 2012. p. 157). Dagger, O'Connor, Lawless, Walsh & Wade (2007) agree that the internet can reach larger and more diverse groups and go further in stating, "One such opportunity is in e-learning, in which more dynamic platforms are emerging and replacing traditional, passive ones." (p. 28)

Online or e-learning is supplanting the traditional learning model. (Santally, Rajabalee, & Cooshna-Naik, 2012). The traditional learning model was delivered in classrooms located off campus at a central location utilizing the same textbooks and handouts distributed during classroom exercises. Distance e-learning is taking shape in classic e-learning with e-books or with rapid e-learning. Classic e-learning utilizes e-books; digital books that can be read by numerous students on tablets, smart phones and personal computers. In this digital age, students can study or participate in learning with e-books when it is convenient for them and in a location that is convenient for the student. Rapid e-learning utilizes software development to release short to medium length learning modules. (Santally et al., 2012) Rapid e-learning can include videos, annotated PowerPoint presentations, small group chats, interactive whiteboards and self-paced instructional modules with comprehension tests. It also creates a new environment where the participants can educate each other (Songhao, Saito, & Kubo, 2011). Rapid e-learning is only as limited as the designers knowledge of available technologies.

There are free websites that allow hosts for e-modules. These tools are available to people that know how to use them or are willing to learn. Problem-based learning (PBL) materials are flexible, easy to access, and appropriate for adult learners (Songhao et al., 2011).

Designers need to consider the target audience capabilities when designing the e-learning modules. Not only regarding the education materials but also the computer ability of the adult learner.

Students that are overwhelmed by technology may spend more time learning the technology than on course content. (Sivakumaran & Lux, 2011). There are three steps to reduce the stress and anxiety for those students:

1. Explain the purpose in using the computer; explain the student does not need to be an expert to use e-learning.
2. Encourage the learner to learn to use the computer in a positive learning environment. A helpful suggestion to adult learners would be attending workshops on computer use, at computer labs and libraries.
3. The adult learner needs a support network where they can feel comfortable in asking technical questions.

Designers and educators need to understand students' technology anxiety and provide a product or environment conducive to teach (Sivakumaran et al., 2011).

Conclusion

Critical incidents overwhelm one's coping mechanisms which can then be treated through critical incident stress management. The critical incident symptoms can be reduced or critical incident stress management can be enhanced through the benefits of a martial or intimate personal relationship. Focus groups or online survey can be used for need assessments to create a baseline for critical incident knowledge and understanding. To teach critical incident stress management the instructor need to understand adult learners' motivation, learning styles and create a trust and respectful learning environment. If using an online tool to train adult learners the instructional designer needs to create the modules targeting that population.

Chapter III: Methodology

The purpose of this research was to conduct a needs assessment and identify the critical incident stress management knowledge base and training platform that can provide a foundation to create an educational opportunity for firefighter spouses or SOs to recognize, support and deal with their hero after critical incident(s).

Subject Selection and Description

The subjects of this survey were spouses or significant others of firefighters located mostly in north central Wisconsin. The subjects' age and length of time in a relationship with a firefighter varied and there was no minimum age or amount of relationship time required. Because of the geographical location the majority of subject's firefighters were from volunteer fire departments. The sample size was difficult to predict because the survey distribution relied on the firefighters to forward the link. The survey link was distributed via email to 10 volunteer fire departments in Clark County, two career fire departments in Wood County, three individual responders and one DNR firefighter. The sample size of the survey was difficult to project; with an average of 20 firefighters per department, 12 fire chiefs received the survey link, which means potentially 244 firefighters received the participation request. This number does not account for firefighters without email addresses. And the survey does not know how many spouses/significant others received the survey link.

Instrumentation

A Qualtrics survey was created to evaluate the needs assessment of critical incident stress training for spouses and SO of firefighters. There were 18 multiple choice questions and 5 open ended comment questions, see Appendix E for the Qualtrics survey used.

Qualitative and quantitative data was collected to provide for the recommendation of base level of knowledge of critical incident stress, interest in receiving training, and training platform to create and distribute future critical incident stress training modules.

The survey was distributed to fire chiefs or firefighters; the email text is included in Appendix F. Fire chiefs were asked to forward the link to firefighters who in turn forwarded the email request to participate in the survey to spouse or significant other. The reminder email was distributed in the same manner. This processed was cumbersome because there was no direct link to the firefighter spouses or significant others.

Data Collection Procedures

A 23 questions survey was administered using Qualtrics to 12 fire departments plus four individual responders. In the introduction email, fire chiefs were asked to forward the email with the link to firefighters and firefighters to forward to spouse or significant other.

The fire chiefs were made aware of the project and upcoming email. The original survey was distributed on February 24, 2014 with a deadline of three weeks. The reminder survey email was sent out on March 5, 2014 with the survey to close on March 14, 2014.

Data Analysis

Data Analysis involved both quantitative and qualitative data. The results were first analyzed to determine if there were trends contributing to the demographics collected. Then the quantitative data was analyzed to assess the knowledge base and exposure to critical incident stress before this survey. Quantitative data was then analyzed to determine the level of interest in critical incident stress training, style of training and type of training platform to utilize when creating/implementing critical incident stress training program for firefighters spouses and significant others. The qualitative data analysis was used from open ended questions to determine common experiences, impact and understanding of the firefighter's spouses and significant others. At the end of the survey there was a link to another survey for participants to share their name and contact information if they were interested in future trainings. A separate linked was used so that none of the participants' answers could be linked back to them. A mailing database was created with the information provided by participants for future surveys or training opportunities on critical incident stress.

Limitations

One limitation to the administration of the Qualtrics survey was the researcher did not have no direct access to the subjects. The researcher had to rely on other individuals forwarding the email until it reached the subject. This needed to be timely and if respondents did not check email timely, the request sat in that inbox before moving onto the final destination. If a department was experiencing a high call volume or had a local initiative that took priority the email could have been in the fire chief's or firefighter email longer. Another limitation is not all fire departments keep current email addresses for active firefighters. This could have reduced the access to a number firefighters and spouses or significant others. Another limitation could also be the relationship between the firefighter and spouse or significant other. If the communication within the relationship and this type of information is not typically shared the subject may not receive the survey link from the firefighter. In addition, if the firefighter does not understand or support critical incident stress training; the survey link may not have been forwarded.

Summary

Chapter 3 included the description of subject selection process, methodology of the survey, procedures for data collection, data analysis process and the limitations to the survey.

Chapter 4 will be an overview of the study results and Chapter 5 will recommendation from this research.

Chapter IV: Results

The purpose of this research was to conduct a needs assessment and identify the critical incident stress management knowledge base and training platform that can provide a foundation to create an educational opportunity for firefighter spouses or SOs to recognize, support and deal with their hero after critical incident(s). An email with a survey link was distributed to fire chiefs, who in turn forwarded the email to firefighters whom forwarded it to their spouses/significant others. The survey included 18 multiple choice questions and 5 open ended questions.

The Qualtrics survey was distributed to 10 volunteer fire departments in Clark County, two career fire departments in Wood County, three individual responders and one DNR firefighter. Participation level in the survey was unclear because there was not a direction link to the participants. In Qualtrics 40 surveys were started but only 28 completed. Therefore, the research will be based on the 28 completed surveys.

Per personal conversation with a few career firefighters, they needed clarification on the instructions to forward the email to spouse or significant other and admitted to opening the survey link to read the questions. One firefighter commented that his wife felt the survey was more like a test because it caused her to have to think real hard and dig deep into herself. He continued to explain, they talked about a critical incident that had impacted him and their family. And he could now look at critical incident through her eyes and realized the profound impact critical incident stress had on their family.

Quantitative Data

Quantitative data was collected to determine participants' demographics, level critical incident stress knowledge, level of impact critical incident stress had on families and relationships, interest level in critical incident stress training and how would participants want training delivered.

Survey demographics. The first six questions of the survey were demographics questions. This allowed for the participant to respond to easy questions and for the research to understand who exactly participated in the survey. Tables 4-10 list profile the demographics of the participants.

Table 4

Question 2- Gender

Answer	Response	Percentage
Female	24	86%
Male	4	14%
Total	28	100%

The gender of the participant is needed to determine the target audience of the survey and to understand who may be receiving the training. As pointed out in Chapter 2 adult learners learn differently and if the majority of our training modules were directed at female participants as indicated in this study at 86% (n=24) then the training modules will be designed to meet the specific target audience.

Table 5

Question 3- Gender of Your firefighter

Answer	Response	Percentage
Female	3	11%
Male	25	89%
Total	28	100%

The gender of the firefighter is needed to determine the type of relationships in our survey group. To be inclusive in our training modules we will need to address heterosexual and homosexual relationships, nontraditional roles of female and dynamics in each type of couple/family structure in the training modules. In cross tabulation with Table 4 one homosexual couple is included in our survey. With a response rate of 89% (n=25) male firefighters and 11% (n=3) female firefighters we will need to not be gender bias when creating the training modules; especially in addressing firefighter as a “he”.

Table 6

Question 4- Marital Status

Answer	Response	Percentage
Married to a firefighter	24	86%
In a relationship with a firefighter	4	14%
Total	28	100%

This question was used to find out the time participants are in relationships. From this question participants were referred to Question 7 and 8 in Tables 7 and 8 depending on their response.

Table 7

Question 5- How Long Have You Been Married to Your Firefighter?

Answer	Response	Frequency %	Statistic	Value
0-5 years	3	13%	Min Value	1
6-10 years	3	13%	Max Value	6
11-15 years	1	4%	Mean	3.83
15-20 years	5	22%	Variance	2.42
25-50 years	10	43%	Standard Deviation	1.56
50+ years	1	4%		
Total Responses(n)	23	100%		

This quantitative question was to determine the length of time the firefighter and spouse were married to provide a background and foundation for the training modules. Spouses married to a firefighter for a longer length of time would have been exposed to more critical incidents and may have developed strategies for identifying and dealing with critical incident stress. They would theoretically have more experiences to share with a group of peers. However, the survey failed to ask how long the firefighter has been in the fire service. Therefore, we cannot presume couples married for more than 15 years the majority of the survey this would include 69% (n=16) of the participants had greater exposure to critical incident stress or more training opportunities because we do not know how long the firefighter was in the fire service.

Table 8

Question 6- How long have you been in a relationship with your firefighter?

Answer	Response	Frequency %	Statistic	Value
0-6 months	0	0%	Min Value	3
6 months – 2 years	0	0%	Max Value	6
3-5 years	2	67%	Mean	4.00
6-10 years	0	0%	Variance	3.00
11-20 years	0	0%	Standard Deviation	1.73
21+ years	1	33%		
Total Responses(n)	3	100%		

The basis for this question was the same as Question 7 (see Table 7) and to be inclusive of significant others in training modules.

Table 9

Question 7- How many times has your firefighter been married?

Answer	Response	Frequency %	Statistic	Value
First marriage	20	83%	Min Value	1
Second marriage	4	17%	Max Value	2
Third marriage	0	0%	Mean	1.17
Fourth marriage	0	0%	Variance	0.14
Fifth marriage	0	0%	Standard Deviation	0.38
Total Response (n)	24	100%		

This quantitative question was to determine if there was a high rate of divorce within the fire service and if critical incident stress impacted that rate. With 83% (n=20) of firefighters on in their first marriage, this would conclude this particular group has a low divorce rate. The research is unable to determine the cause for the remaining 17% (n=4) participants because the questions did not query the reason for divorce. And if the survey had queried the reason for the divorce firefighters and ex-spouse may not have been honest to respond critical incident stress was a reason for the divorce. It may have been an under laying problem which manifested into larger problems.

Table 10

Question 8- Career or Volunteer Firefighter:

Answer	Response	Frequency %
Career firefighter (paid professional)	1	4%
Volunteer firefighter	14	54%
Volunteer firefighter (paid stipend)	11	42%
Total Responses (n)	26	100%

This quantitative question was to understand the background of the firefighters. There are different training levels for career verses volunteer firefighters. It will also be used to determine a potential training venue and way to contact spouses/significant others. The research does not demonstrate if there is a difference between career and volunteer firefighter spouses/significant others in critical incident stress training, communication between the couple and critical incident exposure of the firefighter.

Critical incident stress exposure and knowledge benchmark. Tables 11-17 gauge the level of exposure and benchmark participants' knowledge of CISM. These questions required participant to reflect on past experiences and trainings.

The question represented in Table 11 was used to determine if there is open communication between partners and if the participants have been exposed to critical incident stress conversation. The 19% (n=5) participants which responded “I do not know” means the training will have to define and use examples for spouses/significant others that include everyday life conversations and firefighter terminology. Perhaps role playing between the participants would help them understand underlying meaning and improve active listening skills. Training modules would enhance the skills of the 69% (n=18) that responded “Yes” to already having had these types of conversations.

Table 11

Question 9- Firefighter Participation in a Critical Incident Stress Defusing or Debriefing?

Answer	Response	Frequency %	Statistic	Value
I do not know	5	19%	Min Value	1
Yes	18	69%	Max Value	3
No	3	12%	Mean	1.92
			Variance	0.31
			Standard Deviation	0.56
Total Response (n)	26	100%		

The question summarized in Table 12 was used to determine the training levels for spouses/significant others knowledge of critical incident stress. The surprising response of 0% receiving handouts from firefighters was surprising because Critical Incident Stress Management teams share handouts at debriefings for firefighters to take home and share with their spouse/significant other to understand the process, symptoms and things to not do to heighten the impact of critical incident stress. The majority of participants at 88% (n=23) have not had any training verify the need to create and offer critical incident stress management to spouses/significant others.

Table 12

Question 10- Have You Received Any Critical Incident Stress Management Training?

Answer	Response	Frequency %
Handout or brochure from firefighter	0	0%
College course	1	4%
Fire service sponsored class	1	4%
Counselor or mental health professional	1	4%
Friend or family	1	4%
Information search on the internet	2	8%
No training	23	88%
Total Responses (n)	26	

As in Table 11 the question summarized in Table 13 is used to determine communication patterns between couples. Participants agreed 88% (n=23) they have discussed critical incident stress or a difficult call with their firefighter. The communication is there, if properly trained the possibilities of to provide support will reduce the symptoms of critical incident stress as discussed in Chapter 2 as it relates to PTSD.

Table 13

Question 24- Discussion of Critical Incident Stress/Difficult Call

Answer	Response	Frequency %	Statistic	Value
Not that I remember	1	4%	Min Value	1
Yes	23	88%	Max Value	3
No	2	8%	Mean	2.04
			Variance	0.12
			Standard Deviation	0.34
Total Response (n)	26	100%		

Table 14 indicates what the impact of CI stress had on their marriage/relationship. The majority of participants 52% (n=13) responded that critical incident stress had not impacted their marriage. However in this situation, 28% (n=7) agreed critical incident stress had impacted their marriage and a mean of 2.32 presents an opportunity to enhance training to reduce the number of families impacted.

Table 14

Question 12- Impact of Critical Incident Stress on the Marriage/Relationship

Answer	Response	Frequency %	Statistic	Value
Not that I remember	5	20%	Min Value	1
Yes	7	28%	Max Value	3
No	13	52%	Mean	2.32
			Variance	0.64
			Standard Deviation	0.80
Total Response (n)	25	100%		

The question summarized in Table 15 addresses the participants' level of identifying change in the firefighter and contributing it to a critical incident. Participants agree that 64% (n=16) have identified behavioral changes which conflicts with Table 14 that critical incident stress had no impact on their marriage 52% (n=13). The qualitative data supports building strategies for coping with critical incident stress, see page 50.

Table 15

Question 13- Firefighter's Behavior Change After a Difficult Call

Answer	Response	Frequency %	Statistic	Value
Not that I remember	3	12%	Min Value	1
Yes	16	64%	Max Value	3
No	6	24%	Mean	2.12
			Standard Deviation	0.60
Total Response (n)	25	100%		

Table 16 summarizes the results of the behavior changes the spouse/SO recognized. The purpose of this question was twofold, first too see if spouses/significant others noticed behavior changes and second to list off critical incident stress symptoms so the participants would begin to think about these symptoms and associate them with critical incident stress.

Table 16

Question 14- Behavior(s) Noticed After Your Firefighter Went on Difficult Call

Answer	Response	Frequency %
Mood swings	7	10%
Disrupted sleep patterns	9	13%
Nightmares	4	6%
Increased amount of alcohol usage	1	1%
Increased amount of nicotine usage	2	3%
Short tempered	7	10%
Wanting to be left alone	7	10%
Tired	8	12%
Chills	0	0%
Uncommon thirst	0	0%
Chest pains	0	0%
Headaches	1	1%
Change in appetite	3	5%
Guilt	3	5%
Apprehension and depression	4	6%
Fear	1	1%
Angry	3	5%
Not paying attention	4	6%
Poor decision making ability	1	1%
Poor concentration	3	5%
Total Responses (n)	68	100%

Critical incident stress management training. The next five questions of the survey were used to determine if participants were interested in CISM training, if so how and what type of training would they be interested in, and the type of platform to use for e-learning training modules. These questions allowed participant to create the best learning environment for themselves.

Table 17 identifies if participants wanted to receive critical incident stress training to identify and assist their spouses/significant others. The participants responded with no interest at 48% (n=12) in receiving training and the smallest interest of 12% (n=3). Participants wanting to learn more was 40% (n=10). It is unclear if training is wanted because when the role and responsibilities are clarified the participants wanting to learn more will decide yes or no and if the 12 participants responding negatively were subjected to more information they may change their mind. If participants responded "no" to this question, they immediately transitioned to the end of the survey for comments and thanked for their participation.

Table 17

Question 15- Interested in Training on How to Identify and Assist Your Firefighter?

Answer	Response	Frequency %	Statistic	Value
Unsure, want to learn more.	10	40%	Min Value	1
Yes	3	12%	Max Value	3
No	12	48%	Mean	2.08
			Variance	0.91
			Standard Deviation	0.95
Total Response (n)	25	100%		

The response to this question will set the venue for potential training. Table 18 summarizes the preferred training method. The participants agreed at 56% (n=9) the fire station with peer lead small group would be preferred. This matches the family environment mentality of the fire service as mentioned in Chapter 2 the brotherhood is strong and relies on each other. This may also demonstrate vulnerability and not wanting to share it with a large group outside of the people they know and their firefighters know.

Table 18

Question 16- Preferred Training Method.

Answer	Response	Frequency %
Face-to-face trainings in a classroom (not at fire station)	0	0%
Group learning with less individual focus (not at fire station)	4	25%
At your firefighter's fire station with peer lead small group	9	56%
E-learning (computer)	3	19%
Total Responses (n)	16	100%

Table 19 indicates the device preference if e-learning was delivered. The standard deviation of 1.11 is so close that it does not demonstration a preference of the participants to choose one device over the others. When tied to question 18, perhaps the solution is small group setting at the fire station with training modules and information the participants can access on different devices during and after the training as needed.

Table 19

Question 17- Which Device Would You Use for E-learning?

Answer	Response	Frequency %	Statistic	Value
Computer	4	31%	Min Value	1
Laptop	3	23%	Max Value	4
Tablet	4	31%	Mean	2.31
Smart phone	2	15%	Variance	1.23
			Standard deviation	1.11
Total Responses (n)	13	100%		

Question 18 asked the participants to indicate the operating system of their tablet or smart phone. None of the participants answered this question. By not answering this question, the only observation is that the participants do not have the technology understanding of operating systems on their smart devices.

Table 20 indicates whether participants would want handouts. Handouts are wanted by 42% (5) of the participants. However, these results are not conclusive enough on how to create the training module. Therefore, the training will include handouts, electronic documents (either on CD or thumb drive) and also available on a website to download. This can all be accomplished at a minimal cost.

Table 20

Question 19- Is It Important for You to Have Hard Copy of the Training Materials?

Answer	Response	Frequency %
Yes, I will print them off from my computer	3	25%
Yes, I want the instructor to provide handouts.	5	42%
No, I will save the material on my computer/laptop	4	33%
Total Responses (n)	12	100%

Qualitative Data

There were four qualitative questions in the survey. The first three qualitative questions were used for participants to describe in more detail their quantitative answers. The final qualitative question was for participants to comment on the survey. The qualitative answers were collected and used to determine any recurring themes.

Impact the discussion critical incident stress had on your relationship. The qualitative answers to describing the impact the discussion on critical incident stress or a difficult call the firefighter went on had on your relationship had three recurring themes. There were 12 responses with three recurring themes. The themes were: strengthen relationship, supportive of firefighter and appreciation of the discussions. One of the participants stated, it was "very helpful to understand the stress" which was then supported by another comment it "strengthened [the] relationship". The comments continued with "I don't know how he does it" and "it is usually just a hard emotional time and he knows I will listen when he is ready to talk". Other comment was simply, "strengthened relationship". Then another participant acknowledged, it is "just nice to have a safe place to unload emotions and feelings" which is reinforced by "he like[s] to drift away from us if it is a bad scene that he went on". One of the participants is a firefighter and was involved in a bad car accident that her fire department responded to, “I was in a major car accident where the members of our ambulance/fire crew helped; it has been so very stressful”.

Describe how the critical incident stress your firefighter was experiencing impacted your relationship. There were five qualitative answers to this question with no recurring themes. One participant felt the conversation “brought us closer”. While another commented, “he needs time to process and grieve”. Then the injured participant from the previous qualitative question deepened her response with, “my accident has impacted us personally where he had become a caregiver, he’s good at it but I’m getting better and he needs to just let me continue with recovery”. Another comment referencing injuries simply responded, “Injured on the job”. It is not clear if it is the firefighter that was injured on the job and now that affects the relationship. The last comment has huge relationship impact but not because of critical incident stress but perceived lack of daily involvement, “when someone dies on the scene he would spend time with the kids for a day or two and then he would go back to his normal way of not spending time with his family”.

Behavior changes you notice in your firefighter after a critical incident. This qualitative question had seven responses and one recurring theme with one additional comment. The recurring theme was the firefighter becomes quiet. There were various versions of common theme in responses: “quiet-anger”, “mostly quiet and to himself. Sometime difficult to express feelings”, “quieter, reflective”, “quiet maybe a little withdrawn” and “when calls involve kids my husband either gets very quiet or extremely talkative”. The comment that did not fit into the theme but is a symptom of critical incident stress was, “he gets very short tempered and needs time alone". The time alone could be perceived as quiet but it was not worded as "quiet" like the other responses. Therefore, it was noted separately.

Survey comments. At the end of the survey there was a place for qualitative answers. There were only four responses and as each has an important statement with no recurring themes, they are listed as follows:

- "My spouse is in his final years as a firefighter and at this point in not very active. He has enjoyed his years as a volunteer and feels it it time for a younger generation."
- "As a spouse, I don't want to hear the details of a call. I feel that I am invading the victim's privacy. When someone from the general public asks me what I know about a situation, I like to be able to truthfully say "nothing". If he needs to talk about things, I suggest he talk to other members of the department. I give him physical attention, hugging, back rubs. I support him in any way that I can, I just don't want to be the one he talks to about these things."
- "I feel with us being in such a small community that we the firefighters know the people effected in our way or another."
- "I am also a firefighter."

Summary

This chapter analyzed the quantitative and qualitative data collected in the online Qualtrics survey provided to firefighters' spouses/significant others. The quantitative data was analyzed including cross tabulation. The four qualitative questions were analyzed for recurring themes. Chapter 5 will discuss the limitations, conclusion, and recommendations from this study.

Chapter V: Discussion

The purpose of the study was to conduct a needs assessment, identify the critical incident stress management knowledge base and training platform that can provide an educational opportunity for firefighter spouses or SOs to recognize, support and deal with their hero after critical incident(s). As part of the study, the literature review consisted of understanding critical incident, Mitchell's Model of Critical Incident Stress Management, benefits of martial relationship in coping with critical incident stress, focus groups verses online data collection and understanding adult learning. An online survey was created and distributed to 10 volunteer fire department's chiefs in Clark County, two career fire department's chiefs in Wood County, three individual responders and one DNR firefighter. A reminder email was distributed approximately one week later. A total of 40 surveys were started with only 28 surveys completed. For the purpose of the study, only the 28 completed surveys were used for analysis. Both quantitative and qualitative data was collected and analyzed for common themes and future recommendations

Limitations

At no time, should the training of a spouse or SO for CISM be equated to that of professionally trained and licensed mental health personnel.

There were limitations due to the indirect way the Qualtrics survey had to be distributed and only Mitchell's model of Critical Incident Stress Management was used with the understanding that crisis intervention/critical incident stress debriefing/disaster psychological intervention is useful. The research had to rely on other individuals, fire chiefs then firefighters, forwarding the email with survey link to the participant. If a department was experiencing a high call volume or had a local initiative that took priority the email could have been in the fire chief's or firefighter email longer. Another limitation is not all fire departments keep current email addresses for active firefighters. The limitation could also be the relationship between the firefighter and spouse or significant other. Also, the firefighter does not understand or support critical incident stress training; the survey link may not have been forwarded. Also, the technology level of fire chiefs, firefighters, spouses or significant others are an unknown and therefore another limitation. An email from a fire chief was received and stated that a firefighter and his wife could not open the survey link from two different computers (wife on work computer and firefighter on home computer). Further instructions were provided to mitigate the problem but it was unknown if other firefighter's spouses and significant others experience this problem also. The final limitation to the study was the limited participation in the study. The 28 completed surveys provided data for analysis but a larger sample size could alter the results.

Conclusions

The needs assessment, level of critical incident stress knowledge of spouses/significant others and platform for future trainings were determined in the study. The majority of participants, 88% (n=23) had no training in critical incident stress management. Even though 66% (n= 16) of participants could identify critical incident stress symptoms from a provided list, the list came from Mitchell (2006). However, 88% (n=23) participants had discussed with their firefighter critical incident stress and impact on the relationship. The qualitative results had a recurring theme that discussing critical incident stress improved and strengthened the relationship which is supported by Buchanan et al (2011). The surprising part of the data analysis was that 48% (n=12) indicated they did not want future CISM training. However, this is inconclusive because 40% (n=10) wanted more information before they decided yes or no to future trainings and 12% (n=3) responded they would like training. If future trainings are created, they should be held at the fire stations with 56% (n=9) participants agreeing which is support by the research (Kirshman, 2007; Monson, 2009; Regehr et al, 2005). Only 19% (n=3) participants interested in e-learning. The lack of interest in e-learning was supported when none of the participants responded to a question to identify the current operating system on tablet or smart device.

Recommendations

Fire service should track the impact of critical incident stress on firefighters. This would be difficult to do it; however, if done, it could potentially change the critical incident stress management practices within the fire services. Firefighters may not answer tracking questions accurately so the data collected may not be useful. But with accurate data, the fire service could potentially launch trainings that would retain firefighters and see an increase in length of service awards.

Survey sent to firefighters to research CISM knowledge, impact of critical incident stress, and how do they want their spouses/significant others to provide support after a critical incident. The purpose of such of a survey would be to use quantitative and qualitative questions to determine the benchmark of CISM knowledge, is CISM used in their station, what type of policies and procedures would be beneficial within the fire service, how is/does critical incident stress impact the firefighter, could even include advancement within or volunteer demotions with the fire service because of critical incident, and what do they expect/need from their spouse, significant other and family after a critical incident.

In additional survey, the fire station could send out surveys to members that have retired or left the fire service to determine if critical incident stress had impacted their decision to leave the fire service and if CISM could have assisted with retention.

Recommendations are made for CISM orientation training for spouses and significant others. Invitations would be sent out via mail and electronically through the fire service. The location would be at the fire station and combine several fire stations to have a larger population at one location. Timing should be determined with local fire chiefs and have buy in from fire chiefs/firefighters. Training facilitators may need to consider offering day care services if using a meeting night that is the same as volunteer fire department training night. Also, be considerate of couples that are firefighters, EMS or law enforcement; both people may want to attend the training. The training should include: defining critical incident, critical incident stress, critical incident stress management, and clarifying roles and responsibilities of spouses/significant others in CISM. This training would best be done with two or three facilitators. The facilitator would need to be careful because this is not a therapy session. The training should include a section on confidentially and dealing with the community. There will be a section on the generic process used in the local fire station for CISM. As the agenda and curriculum is created for this first meeting, it is important to remember this meeting should be less than an hour and should be welcoming. This is not CISM 101, the training is a welcoming opportunity for spouses and significant others to have an overview. At the conclusion of the training, an evaluation should be completed by participants to determine interest level in future trainings, topics of future trainings, location, and type (classroom or e-learning). Grow the program according to the data collected from the evaluations. Family Crisis Plan templates should also be available to participants.

Create a data base of firefighter spouse and significant other contact information and redo the survey. The sampling of this study was small, it would be interesting to see if a direct distribution of the survey link to the participants would result in a larger sampling and if so, would the result have the same recurring themes.

Summary

Chapter 5 discussed the purpose and scope of the study, methodology of the survey, participation level, compared the literature review with the research analysis. The three main limitations revealed during the study:

1. Only the Mitchell model of CISM with presumption that critical incident debriefing is useful.
2. The researcher did not have direct access to participants.
3. There was a limited sampling, only rural fire department.

The conclusion of the study leads to four recommendations:

1. It would be critical for the fire service to track impact of critical incident stress on firefighters; it would help identify the need and scope for training spouses/SOs.
2. The actual firefighters should be surveyed to determine their interest/knowledge of CISM and what the level of support they expect or desire from their spouses/SOs after a critical incident.
3. Develop and pilot test a CISM orientation training for spouses/SOs.
4. Re-survey spouses/significant others after developing a list of emails rather than relying on the fire chiefs.

References

Assistance to firefighter grant program (AFG) staffing for adequate fire and emergency response.(2013). Retrieved from http://www.fema.gov/media-library-data2013

Avila, C. C. (2011). Webinar training: an acceptable, feasible and effective approach for multi-site medical record abstraction: BOWII experience. *BMC Research Notes*, 430-436.

Buchana, C., Kemppainen, J., Smith, S., MacKain, S., & Cox, C. (2011, July) Awareness of postrraumatic stress disorder in veterans: A female spouse/intimate partner perspective. *Journal of Military Medicine*, *176*, 743-751.

Brady, C. L. (2013, April). Understanding learning styles: Providing the optimal learning experience. *International Journal of Childbirth Education, 28*(2), 16-19.

Coker, C. A. (1996). Accommodating students' learning styles in physical education. *Journal of Physical Education, Recreation, and Dance, 67*(9), 66-68.

Derven, M. (2009, July 1). Social networking: A force for development? *Training and Developement*, 59-63.

Dagger, D., O'Connor, A., Lawles, S., Walsh, E., & Wade, V. (2007, May/June). Service – oriented e-Learning platforms; From monolithic systems to flexible services. *Institute of Electrical and Electronics Engineers*, 28-35.

Duffy, B., Smith, K., Terhanian, G., & Bremer, J. (2005). Comparing data from online and face-to-face surveys. *International Jorunal of Market Research, 47*(6), 615-639.

Everly, G. J. (2006). *Assisting individuals in crisis* (4th ed.). Ellicott City, MD: International Critical Stress Foundation, Inc.

Everly, G. S., Jr., & Langlieb, A. (2003). The evolving nature of disaster mental health services. *International Journal of Emergency Mental Health*, *5*(3), 113-119.

Everly, G.J., & Mitchell, J.T. (1999) *Critical incident stress management (CISM): A new era and standard of care in crisis intervention.* Ellicott City, MD: Chevron.

Federal Emergency Management Agency - staffing for adequate fire and emergency response (2014). Retrieved from http://www.fema.gov/staffing-adequate-fire-emergency-response-grants

Figley, C. (2007). *Combat stress injury: Theory, research, and management.* New York, NY: Routledge.

Johnson, S., & Williams- Keeler, L. (1998). Creating healing relationships for couples dealing with trauma; the use of emotionally focused marital therapy. *Journal of Marital and Family Therapy, 24*(1), 25-40.

Kirschman, E. (2007). *I love a cop: What police families need to know* (Rev. ed). New York, NY: Guildford Press.

Knowles, M. S. (1970). *The modern practive of adult education: Androgoy versus pedagogy.* New York, NY: Association Press.

Knowles, M. S. (1973). *The adult learner: A neglected species.* Madison, WI: Gulf Publishing Co.

Lieb, S. (1991). Principles of adult learning. *VISION journal* [electronic version]. Retrieved http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/adults-2.htm

Mitchell, J. T. (2006). *Critical incident stress management (CISM): group crisis intervention.* (4th ed.). Ellicott City, MD: International Critical Stress Foundation, Inc.

Mitchell, J. T. (1983). When disaster strikes. The critical incident stress debriefing process. *Journal of Emergency Medical Services, 8*(1), 36-39.

Monson, C., Taft, C., & Fredman, S. (2009). Military-related PTSD and intimate relationships: From description to thearoy-driven research and intervention development. *Clinical Pyschologist Review, 29*(8), 704-714.

Morgan, D. L. (1996). Focus Groups. *Annual Review of Socialolog.* 22, 120-152.

National Fire Incident Reporting System. (2008). Retrieved from http://www.nfirs.fema.gov

Nationial Institute of Mental Health. (n.d.). Retrieved from http://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml

Ness, J. E. (1995). *The paraprofessional: An introduction. Module one-Facilitatior's edition/Student edition. Strategies for pararprofessionals who support individuals with disabilities series.* Minneapolis, MN: University of Minnesota Minneapolis, The Institute on Community Integration.

Pryjmachuk, S., Gill, A., Wood, P., Olleveant, N., & Keeley, P. (2012) Evaluation of an online study skills course. *Active Learning in Higher Education, 13*(2), 155-167. doi: 10.1177/1469787412441298

Regehr, C., Dimitropoulos, G., Bright, E., George, S., & Henderson, J. (2005). Behind the brotherhood. *Family Relations, 54*, 423-435.

Santally, M., Rajabalee, Y., & Cooshna-Naik, D. (2012). Learning design implementation for distance e-learning: Blending rapids e-learning techniques with activity-based pedagogies to design and implement a socio-constructivist environment. *European Journal of Open, Disatnce and E-Learning, 2012*(1), 14.

Sivakumaran, T., & Lux, A. (2011). Overcoming computer anxiety: A three-step process for adult learners. *US-China Education Review, B*(1), 154-160.

Snyder, H. (1988, October). Rescuing the rescuers: First responders at risk. *Journal of Counseling and Development, 67*, 98.

Songhao, H., Saito, K., & Kubo, T. (2011, January). Evolution from collaborative learning to symbiotic e-learning: Creation of new e-learning enviormnet of knowledge society. *US-China Education Review, 8*(1), 46-53.

U.S Census Bureau. (2010). Household internet usage in and outside of the home by selected characeteristics. Retrieved http://www.census.gov/compendia/statab/2012/tables/12s1155.pdf

Van Emmerik, A. P., Kamphuis, J. H., Hulsboshch, A. M., & Emmelkampt P. M. (2002). Single session debriefing after psychological trauma; A meta-analysis. The Lancet, 360, 766-770.

Appendix A: Sample of Firefighter Technical College Class Listing

CLASS LOCATION	DAYS	DATES	TIMES
CPR HCP #47-531-437 - .15 Credits - $25.00			
(BLS for Healthcare Providers – AHA 2010 Guidelines)			
Spencer #24592	Saturday	11/16/13	9:00 am-3:30 pm
Wausau #23883	T & R	12/3/13-12/5/13	6:00-9:00 pm
CPR HCP Refresher #47-531-438 - .10 Credits - $20.00			
(BLS for Healthcare Providers – AHA 2010 Guidelines)			
Wausau #23884	Tuesday	8/21/13	5:30-9:30 pm
Wausau #23885	Tuesday	9/17/13	5:30-9:30 pm
Medford #24798	Saturday	9/28/13	8:00 am-12:00 pm
Spencer #24593	Saturday	10/12/13	9:00 am-1:00 pm
Wausau #23886	Wednesday	10/16/13	5:30-9:30 pm
Wausau #23887	Tuesday	11/12/13	5:30-9:30 pm
Wausau #23888	Wednesday	12/4/13	5:30-9:30 pm
Spencer #24594	Saturday	12/7/13	9:00 am-1:00 pm
Medford #24799	Saturday	12/14/13	8:00 am-12:00 pm
Basic First Aid with CPR #42-531-416 - .15 Credits - $22.33			
Wausau #23891	M & W	10/29/13-10/31/13	6:00-9:30 pm

Upcoming Fire Classes -Spring 2013

CLASS LOCATION	DAYS	DATES	TIMES
Haz-Mat Operations – 24 Hours (47-503-780) – State Funded ($79.89)			
Merrill PS #64942	Friday	5/31/13-6/1/13	6:00-10:00 pm
	Saturday	and 6/7-8/13	8:00 am-4:00 pm

Fire Classes - Summer 2013

CLASS LOCATION	DAYS	DATES	TIMES
Certified Firefighter I – 96 Hours (47-503-720) – State Funded ($319.56)			
Merrill PS #12247 **(12248+)**	T-W-R	6/4/13-6/27/13	8:00 am-4:00 pm
Haz-Mat Operations – 24 Hours (47-503-780) – State Funded ($79.89)			
Merrill PS #12251 **(12252+)**	T-W-R	7/9/13-7/11/13	8:00 am-4:00 pm
Certified Firefighter II – 42 Hours (47-530-730) – State Funded ($139.81)			
Merrill PS #12249 **(12250+)**	T-W-R	7/16/13-7/25/13	8:00 am-4:00 pm
Firefighter I and II Skills Review – 8 Hours (47-503-402AA)-Self-Pay ($27.38)			
Merrill PS #12228	Saturday	7/20/13	8:00 am-4:00 pm
Firefighter I and II Practical Exam is scheduled for 7/27/13 in Merrill.			
Entry-Level D/O-Water Tender Operation – 6 Hours (47-503-748)-State Funded ($22.33)			
Medford FD #12961	Thursday	6/6/13	6:00-8:00 pm
	Saturday	6/8/13	8:00 am-12:00 pm
Entry-Level D/O-Tow Vehicle/Trailer Operations – 6 Hours (47-503-749)-State Funded ($22.33)			
Medford FD #12962	Thursday	6/6/13	8:00-10:00 pm
	Saturday	6/8/13	12:00-4:00 pm

Fire Classes - Fall 2013

CLASS LOCATION DAYS DATES TIMES

Emergency Service Instructor 1 – 40 Hours (47-503-485) – Self-Pay ($126.20)

Wausau #24747 Thursday 8/29/13-10/31/13 6:00-10:00 pm

Entry-Level Firefighter Part 1 – 30 Hours (47-503-711) –State Funded ($103.84)

Text: IFSTA Essentials of Fire Fighting and Fire Department Operations, 6th Edition (includes HazMat chapters)

Medford FD #24740 **(24742+)** Monday 8/26/13-10/7/13 6:00-10:00 pm
(No class on 9/2/13)

The Firefighter Part 1 schedule for the above class also includes one 6-hour Saturday class. Date and location to be announced.

Entry-Level Firefighter Part 2 – 30 Hours (47-503-712) –State Funded ($103.84)

Text: IFSTA Essentials of Fire Fighting and Fire Department Operations, 6th Edition (includes HazMat chapters)

Medford FD #24743 **(24744+)** Monday 10/14/13-11/4/13 6:00-10:00 pm

The Firefighter Part 2 schedule for the above class also includes two 7-hour Saturday classes. Date and location to be announced.

Firefighter I Certification Part 3–36 Hours (47-503-721)–State Funded ($124.61)

Text: IFSTA Essentials of Fire Fighting and Fire Department Operations, 6th Edition (includes HazMat chapters)

Medford FD #24745 **(24746+)** Monday 11/11/13-12/16/13 6:00-10:00 pm

The Firefighter 1 Certification schedule for the above class also includes two 6-hour Saturday classes. Date and location to be announced.

Certified Firefighter I – 96 Hours (47-503-720) – State Funded ($332.28)

Text: IFSTA Essentials of Fire Fighting and Fire Department Operations, 6th Edition (includes HazMat chapters)

Merrill PS #24748 **(24749+)** Monday 8/26/13-12/16/13 6:00-10:00 pm
Wittenberg #24750 **(24751+)** Tuesday 8/27/13-12/17/13 6:00-10:00 pm

The Firefighter 1 Certification schedule for the above class also includes two 8-hour Saturday classes and 16 hours of class to be announced.

Certified Firefighter II – 42 Hours (47-503-730) – State Funded ($145.37)
(6th Edition Essentials Haz-Mat Chapters)

Merrill PS #24752 **(24753+)** Wednesday 8/28/13-10/23/13 6:00-10:00 pm

The schedule for Certified Firefighter II also includes one 6-hour Saturday class to be announced as to the date and location.

Certified Driver/Operator–Part 1–33 Hours (47-503-744)–State Funded ($107.87)

Weston FD #24754 Wednesday 8/28/13-10/5/13 6:00-10:00 pm
Saturday 10/5/13 8:00 am-5:00 pm

Certified Driver/Operator–Part 2–33 Hours (47-503-745)–State Funded ($107.87)

Weston FD #24755 Wednesday 10/9/13-11/13/13 6:00-10:00 pm
Saturday 11/2/13 8:00 am-5:00 pm

Certified Driver/Operator–Aerial–36 Hours (47-503-747)–Grant Funded ($113.98)

Weston FD #24756 Wednesday 11/20/13-1/15/14 6:00-10:00 pm
Saturday 1/11/14 8:00 am-4:00 pm

Certified Fire Inspector – Part 1–30 Hours (47-503-751)–Grant Funded ($95.65)
(Fire Inspection & Code Enforcement, 7th Edition, IFSTA)

Wausau #24758 R, F, Sat 10/3/13-10/5/13 8:00 am-5:00 pm
(6 hours to be determined)

CLASS LOCATION	DAYS	DATES	TIMES
Certified Fire Inspector – Part 2–30 Hours (47-503-752)–Grant Funded ($95.65)			
(Fire Inspection & Code Enforcement, 7th Edition, IFSTA)			
Wausau #24759	R, F, Sat	10/17/13-10/19/13	8:00 am-5:00 pm
	(6 hours to be determined)		
Certified Fire Officer 1 – 60 Hours (47-503-763) – State Funded ($187.30)			
Wausau #24757	Monday	8/26/13-12/9/13	6:00-10:00 pm

Individuals in the class or their Fire Departments will be responsible for the cost of books.

NOTE: The NTC Bookstore will buy back books at 50% of purchase price on in stock books.

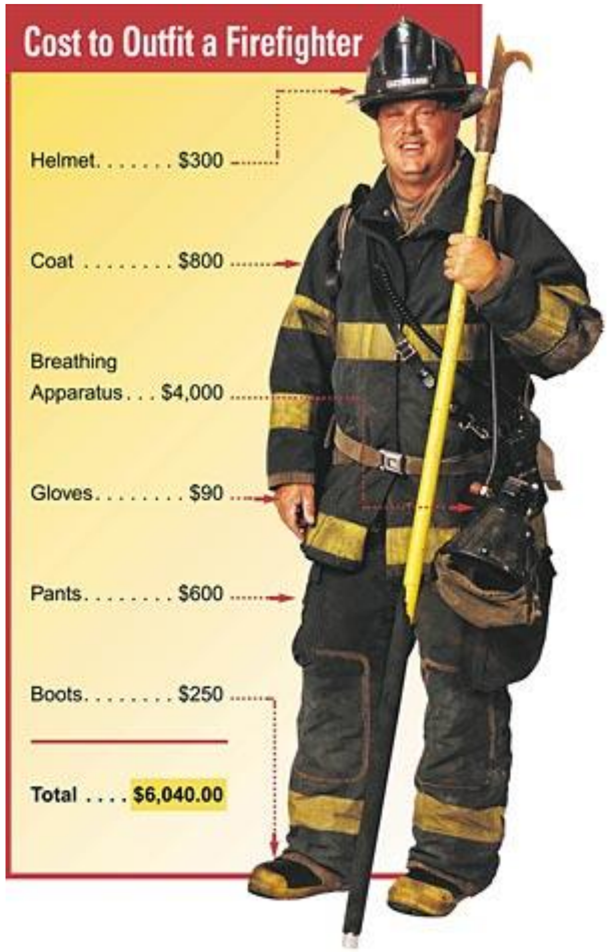
State Funded: No charge if you are working for a fire department and pass the course requirements. If you drop, fail or lose fire department affiliation at any time during this class, you will become responsible for all course fees which are listed in parenthesis.

+Self-Pay Section: Please enroll in this section if you are not affiliated with a fire department. You are responsible for the course fees.

The following courses are also available. Please contact Doug Jennings (715-803-1193 or jennings@ntc.edu) to schedule.

- Rapid Intervention Team (RIT) – Level 1
- Rapid Intervention Team (RIT) – Level 2
- Hybrid Vehicle Responder
- Vehicle Extrication (large or small vehicle)

Appendix B: Personal Protective Equipment (PPE) Purchased By Fire Department



Adapted from http://webpages.shepherd.edu/MDEMER01/escape/firegear.html

Appendix C: Critical Incident Stress Management (CISM): The Core Components

	Intervention	Timing	Activation	Goal	Format
1.	Pre-crisis preparation	Pre-crisis phase.	Crisis Anticipation.	Set expectations, Improve coping, stress management.	Groups/Organization.
2a.	Demobilizations & Staff consultation (rescuers).	Shift disengagement.	Event driven.	To inform and consult, allow psychological decompression. Stress management.	Large groups/Organizations .
2b.	Crisis Management Briefing (CMB) (Civilians, schools, business)	Anytime 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 to 10 days; 3 – 4 weeks mass disasters)	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.	Either symptom driven or event driven.	Foster support and communications.	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.

(This table was constructed from the material in Everly and Mitchell, 1999)

Appendix D: Qualtrics Survey

Critical Incident Stress Management knowledge survey

Q1 By completing the following survey you agree to participate in the project entitled, Supporting your hero; assessment of critical incident stress management knowledge of firefighters spouses and significant others. The information from this project will be used to create training opportunities on critical incident stress management for firefighters spouses and significant others. This research has been reviewed by the UW-Stout IRB as required by the Code of Federal Regulations Title 45 Part 46.

Q2 You are:

- ❍ Female (1)
- ❍ Male (2)

Q3 Your firefighter is:

- ❍ Female (1)
- ❍ Male (2)

Q4 Please select which apply:

- ❍ Married to a firefighter (1)
- ❍ In a relationship with a firefighter (2)

Answer If Please select which apply: a. Married to a firefighter Is Selected

Q5 How long have you been married to your firefighter?

- ❍ 0 – 5 years (1)
- ❍ 6 – 10 years (2)
- ❍ 11 – 15 years (3)
- ❍ 15 – 20 years (4)
- ❍ 25 – 50 years (5)
- ❍ 50 + years (6)

Answer If Please select which apply: b. In a relationship with a firefighter Is Selected

Q6 How long have you been in a relationship with your firefighter?

- ❍ 0 – 6 months (1)
- ❍ 6 months – 2 years (2)
- ❍ 3 – 5 years (3)
- ❍ 6 – 10 years (4)
- ❍ 11 – 20 years (5)
- ❍ 21 + years (6)

Q7 How many times has your firefighter been married?

- ❍ First marriage (1)
- ❍ Second marriage (2)
- ❍ Third marriage (3)
- ❍ Fourth marriage (4)
- ❍ Fifth marriage (5)

Q8 Is your firefighter a:

- ❍ Career firefighter (paid professional) (1)
- ❍ Volunteer firefighter (2)
- ❍ Volunteer firefighter (paid stipend) (3)

Q9 Has your firefighter ever participated in a critical incident stress defusing or debriefing?

- ❍ I do not know (1)
- ❍ Yes (2)
- ❍ No (3)

Q10 Have you received any critical incident stress management training? Please check all that apply.

- ❑ Handout or brochure from your firefighter (1)
- ❑ College course (2)
- ❑ Fire service sponsored class (3)
- ❑ Counselor or mental health professional (4)
- ❑ Friend or family (5)
- ❑ Information search on the Internet (6)
- ❑ No training (7)

Q24 Have you and your firefighter ever discussed critical incident stress or a difficult call they went on?

- Not that I remember (1)
- Yes (2)
- No (3)

Answer If Have you and your firefighter ever discussed critical incident stress or a difficult call they went on? Yes Is Selected

Q25 Please describe the impact the discussion had on your relationship.

Q12 Do you believe your firefighter experienced a critical incident that had an effect on your marriage/relationship?

- Not that I remember (1)
- Yes (2)
- No (3)

Answer If Do you believe your firefighter experienced a critical incident that had an effect on your marriage/relationship? Yes Is Selected

Q24 Please describe how the critical incident stress your firefighter was experiencing impacted your relationship.

Q13 Have you ever noticed a change in your firefighter's behavior after a difficult call?

- Not that I remember (1)
- Yes (2)
- No (3)

Answer If Have you ever noticed a change in your firefighter's behavior after a difficult call? Yes Is Selected

Q26 Please describe the behavior changes you noticed in your firefighter after a critical incident.

Answer If Have you ever noticed a change in your firefighter's behavior after a difficult call? Yes Is Selected

Q14 If so, please check all the behavior(s) you have noticed after your firefighter went on a difficult call.

- ❑ Mood swings (1)
- ❑ Disrupted sleep patterns (2)
- ❑ Nightmares (3)
- ❑ Increased amount of alcohol usage (4)
- ❑ Increased amount of nicotine usage (5)
- ❑ Short tempered (6)
- ❑ Wanting to be left along (7)
- ❑ Tired (8)
- ❑ Chills (9)
- ❑ Uncommon thirst (10)
- ❑ Chest pains (11)
- ❑ Headaches (12)
- ❑ Change in appetite (13)
- ❑ Guilt (14)
- ❑ Apprehension and depression (15)
- ❑ Fear (16)
- ❑ Angry (17)
- ❑ Not paying attention (18)
- ❑ Poor decision making ability (19)
- ❑ Poor concentration (20)

Q15 Would you be interested in receiving training on how to identify and assist your firefighter in coping with critical incident stress?

- ❍ Unsure, want to learn more. (1)
- ❍ Yes (2)
- ❍ No (3)

If No Is Selected, Then Skip To Comments:

Q16 How would you like to learn about critical incident stress?

- ❑ Face-to-face trainings in a classroom (not at fire station). (1)
- ❑ Group learning with less individual focus (not at fire station). (2)
- ❑ At your firefighters fire station with peer lead small group. (3)
- ❑ E learning (computer) (4)

Q17 If we create E-learning modules. Which device for e learning would you use?

- Computer (1)
- Laptop (2)
- Tablet (3)
- Smart phone (4)

Answer If we create E-learning modules. Which device for e learning would you use? c. Tablet Is Selected And If we create E-learning modules. Which device for e learning would you use? d. Smart phone Is Selected

Q18 Which operating system does your tablet or smart phone use?

- Android (1)
- iOS (2)
- RIM (3)
- Windows (4)
- I do not know. (5)

Q19 Is it important for you to have hard copy of the training materials?

- Yes, I will print them off from my computer. (1)
- Yes, I want the instructor to provide handouts. (2)
- No, I will save the material on my computer/laptop. (3)

Q20 Comments:

Q23 Please click on the " Submit" button below to record your responses.

Appendix E: Email Request(S) to Complete Survey

TO: 12 Fire Departments and 4 responders

FROM: Michelle Hartness-UW Stout Graduate student TRHRD

RE: Critical Incident Stress Training for Firefighter Spouses and Significant Others

DATE: February 24, 2014 @ 8:26 AM

Dear Fire Chief:

Please pass this email and the link onto your firefighters to share with their spouses or significant other.

Dear Firefighter: Please pass this email and the link onto your spouse or significant other to complete.

Dear Firefighter loved one:

This email is your invitation to participate in a survey for firefighter spouses and significant others. I am in search of your feedback to determine if there is need for critical incident stress training for firefighter spouses and significant others and the style or platform for the training.

Your time and consideration are greatly appreciated.

By completing the following survey you agree to participate in the project entitled, Supporting your hero; assessment of critical incident stress management knowledge of firefighters spouses and significant others.

Please click on the survey link below to get started:

Link to Survey
${l://SurveyLink?d=$%7Bl://SurveyLink?d=https://uwstout.qualtrics.com/SE/?SID=SV_bHj1koQAMSbqRpz%7D}
https://uwstout.qualtrics.com/SE/?SID=SV_bHj1koQAMSbqRpz

The survey will take approximately 10 minutes to complete and must be completed in its entirety when answering, please answer all 18 questions.

The survey needs to be completed by March 14, 2014.

Thank you in advance for sharing your experience and dedication to your firefighter. Your answers will support the evaluation of the need for future and style of critical incident stress training.

Best regards,

Michelle Hartness

UW Stout Graduate Student TRHRD

Reminder to take Survey

TO: 12 Fire Departments and 4 responders

FROM: Michelle Hartness-UW Stout Graduate student TRHRD

RE: Reminder- Critical Incident Stress Training for Firefighter Spouses and Significant Others

DATE: March 5, 2014 @ 7:51 AM

Dear Fire Chief:

Please forward this reminder onto your firefighters to share with their spouse or significant other. This is being sent to all members again because the survey is confidential and cannot determine who has or has not participated.

Dear Firefighter:

Please forward this reminder onto your spouse or significant other in case they have not had time to take the survey. This is being sent to all members again because the survey is confidential and cannot determine who has or has not participated.

Dear Firefighter loved one:

This is a reminder to please complete the critical incident stress training for firefighter spouses and significant others survey.

Last week you should have an email regarding critical incident stress training survey. If you have already completed the survey, please disregard this email

By completing the following survey you agree to participate in the project entitled, Supporting your hero; assessment of critical incident stress management knowledge of firefighters spouses and significant others.

Your participation is greatly appreciated. Please click on the survey link below to get started:

Link to Survey

${l://SurveyLink?d=$%7Bl://SurveyLink?d=https://uwstout.qualtrics.com/SE/?SID=SV_bHj1ko

QAMSbqRpz%7D}
https://uwstout.qualtrics.com/SE/?SID=SV_bHj1koQAMSbqRpz

The survey will take approximately 10 minutes to complete and must be completed in its entirety when answering, please answer all 18 questions.

Please complete the survey by March 14, 2014.

Best regards,

Michelle Hartness

UW Stout Graduate Student TRHRD