

TRAUMA AND RURAL VOLUNTEER FIREFIGHTERS

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Abstract

Purpose: By the nature of their jobs, firefighters are exposed to trauma on a regular basis; they are, therefore, ideal candidates for the study of trauma and Post Traumatic Stress Disorder (PTSD). Since very little has been written on volunteer firefighters (Bryant & Harvey, 1995; 1996), the purpose of this research project is to add to the body of knowledge on such workers by exploring the work experiences of a group of rural volunteer firefighters to better understand how they cope and identify the positive aspects of their work.

Data sources: Qualitative methods were chosen for this study. Data sources consisted of a demographic questionnaire, individual in-depth interviews with nine northeastern Ontario rural volunteer firefighters, and a follow-up telephone interview to discuss revisions/additions to their transcripts. Data was analyzed using thematic analysis, specifically, Tutty's (1996) six-point framework of thematic analysis.

Conclusion: This research project has helped to identify mediating factors in volunteer firefighters' experiences that offset the effects of trauma exposure, which is a component of their work. The study also identified some positive aspects of volunteer firefighting and enabled us to better understand the experiences of volunteer firefighters, particularly within a rural/northern context.

Implications for practice: Social Workers may be the first-line mental health/trauma workers who meet and treat volunteer firefighters in rural communities; they can play an important role in recognizing and treating PTSD symptoms in volunteer firefighters following exposure to repetitive trauma.

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I acknowledge Laurentian University for its pursuit and promotion of wellness and health within the northern rural context. This has allowed a forum for healthcare professionals to expand our body of knowledge through research and practicum and assists in improving the health of northern rural populations.

Finally, my love and thanks to my wife Terri, who provided wonderful support not only during my undergraduate degree but also during my pursuit of research and graduate work.

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Chapter One - Introduction

Because of the nature of their jobs, firefighters are exposed to trauma on a regular basis and have, therefore, become ideal candidates for the study of trauma and Post Traumatic Stress Disorder (PTSD). Although studies have been carried out on PTSD and trauma, very little research has been done with volunteer firefighters in these areas (Del Ben, 2006; Regehr, 2003; Murphy, 2004). Only two articles on trauma or posttraumatic stress disorder and rural volunteer firefighters were found by this researcher; both of these studies were situated in New Zealand and both involved rural volunteer firefighters. Bryant and Harvey (1995) found that proximity to death, perceived severity of the trauma, fear of the traumatic event, and stress (such as unemployment or loss of a loved one) after the trauma were related to posttraumatic stress. Bryant (1996) found that PTSD is not linearly related to specific traumatic events; rather, the severity of the threat and the threat itself are more important predictors of posttraumatic stress than the type of stressor. The hypothesis that volunteer firefighters exposed to multiple traumas would report higher levels of posttraumatic stress was supported by the research. Additionally, Bryant and Harvey (1996) recommended the need for appropriate interventions with the rural volunteer firefighter population.

Purpose of the Study

The purpose of this study is to add to the body of knowledge on volunteer firefighters by exploring the work experiences of a group of Canadian rural volunteer firefighters, specifically to better understand how they cope and to identify the positive aspects of the work they do.

As will be seen in the Literature Review in the next chapter, although there is a growing body of literature concerning full-time fire-fighters (Del Ben, Scotti, Chen & Fortson, 2006; Regehr, Hill, Knott & Sault, 2003; Murphy, Johnson & Beacon, 2004), very little has been written on Canadian volunteer firefighters (Bryant & Harvey, 1995, 1996). Many of these studies on full-time firefighters have utilized quantitative methods in the form of surveys and identify mediating variables that help protect urban firefighters from acquiring PTSD. In order to better understand the impact of trauma on volunteer firefighters, qualitative research methods have been chosen for this study and will explore this phenomenon in more depth using the firefighters' own experiences.

The next chapter will begin with a discussion of the relevant literature on trauma, firefighters, volunteer firefighters and Post Traumatic Stress and Post Traumatic Growth.

Chapter Two - Review of Literature

The purpose of this literature review is to discuss the academic literature and current theoretical and empirical research describing the experiences of volunteer firefighters and trauma and/or PTSD and posttraumatic growth (PTG). Although much literature has been written on PTSD and trauma, very little research has been done on volunteer firefighters (Del Ben, 2006; Regehr, 2003; Murphy, 2004). As a result, there is a scarcity of academic literature on volunteer firefighters available on multidisciplinary search engines such as EBSCO, Ontario Scholars Portal, PsychINFO, and Social Service Abstracts. While collecting documents to be used in the literature review, the literature base for retrieving the data had to be broadened beyond *trauma, firefighter* and *volunteer* to include *full-time firefighters*. In the literature reviewed, the majority of articles were written from the ontological framework of psychiatry, with a medical perspective on trauma and posttraumatic stress disorder. This chapter will discuss Trauma and Posttraumatic Stress Disorder, its history and the attempt to identify a working definition; describe volunteer firefighters; discuss firefighters and trauma; present the risk of Posttraumatic Stress Disorder to firefighters; review how firefighters cope with their work experiences; and discuss Posttraumatic Growth.

Trauma and Posttraumatic Stress Disorder

The concept of trauma has been constructed socially over the last century and a half. Its symptomology has remained consistent over time; however, the context of the eras it has been studied in has resulted in the phenomenon being given different labels and treatment modalities. Trauma was originally given the label of 'hysteria' and was promoted by French neurologist Jean-Martin Charcot, who worked from the Paris

Asylum Salpetriere in the 1880's. Hysteria was then thought of as a women's disorder. The phenomenon of hysteria disappeared from history and then reappeared again in World War I, when it resurfaced as shell shock. In World War II the shell shock condition again appeared and was relabelled 'combat neuroses.' After the Vietnam War the returning soldiers showed symptoms of being afflicted with combat neurosis, and with active political lobbying on their part, this cluster of symptomatology became enshrined in the Diagnostic and Statistical Manual of Mental Disorders (4th Ed: American Psychiatric Association, 2005) as Posttraumatic Stress Disorder, building on a definition that describes trauma as a condition where there is a risk of serious bodily harm or death to oneself or a loved one, or the person witnessing such an event.

In tandem with the Vietnam veterans' experiences over this period, the feminist movement was bringing women together to discuss the trauma of domestic violence, sexual and physical assaults, and the resultant symptoms of PTSD (Herman, 1997). In both these views, Posttraumatic Stress Disorder has three dimensions: hyperarousal, where a person is always expectant of danger; intrusion, where there is an indelible imprint of the traumatic moment; and constriction, which is the numbing response of surrender (Herman, 1977). Similarly, the posttraumatic growth inventory (PTGI) model defines trauma as being a stressful event or a crisis as interpreted by the person experiencing the trauma (Aldwin & Levenson, 2004).

No agreement exists among authors on a standard definition of trauma and PTSD, whether on perspectives or modalities to employ, or on the scales and tools to be used to measure these constructs (Bryant, 1996; Del Ben, 2006; Harris, 2002). This lack of agreement is highlighted by one group of researchers who noted that recent debate

surrounding development of the revised diagnostic and statistical manual of mental disorders (DSMV-IV, APA, 1994) has focused on the definition of stressors of PTSD.

What constitutes a precipitating event for PTSD remains poorly defined (Bryant, 1996)

The definition of trauma that has been used in preparing this paper and filtering the data is this one: an extremely distressing experience that can cause severe emotional shock and may have long-lasting psychological effects (Encarta Dictionary, 2009). The feminist and the psychiatric perspectives both list PTSD symptoms as being hyperarousal, numbing and intrusion. The literature about PTSD was interpreted with this symptomology in mind (Heinrichs, Wagner, Schoch, Soravia, Hellhammer & Ehler, 2005).

Volunteer Firefighters

The EBSCO Search engine of academic papers listed only two articles on volunteer firefighters and trauma or posttraumatic stress disorder in its archives as of December 11th, 2009, both written by the same authors. Both studies are on volunteer firefighters and not on full-time firefighters and both look at populations in rural as opposed to urban settings. The literature was based in New South Wales in Australia, and the study populations were from a rural fire department.

Bryant and Harvey (1995) examined posttraumatic stress in 751 volunteer firefighters and found that proximity to death, perceived severity of the trauma, fear of the traumatic event, and stress (such as unemployment or loss of a loved one) after the trauma were related to posttraumatic stress.

Bryant (1996) investigated the relative levels of posttraumatic stress in volunteer firefighters following involvement in different stressors and the degree to which

posttraumatic stress was influenced by previous trauma experience. Building on a study by McFarlane (1988), who reported that full-time firefighters with chronic PTSD had experienced more negative life events prior to the fires, Bryant (1996) wanted to see if the same was true with volunteer firefighters and used survey methods to allow volunteer firefighters to fill out the research document anonymously. The study found that PTSD is not linearly related to specific traumatic events (Davidson & Foa, 1991). Rather, the severity of the threat is a more important predictor of posttraumatic stress than the type of stressor. The hypothesis that volunteer firefighters exposed to multiple traumas would report higher levels of posttraumatic stress was supported by the research. Bryant (1996) also discusses posttraumatic stress and the need for appropriate interventions with the rural volunteer firefighter population, as well as the need for standardized measuring tools.

There is also a small but growing body of literature in the United States which addresses the occupational health and safety of volunteer firefighters. The topics range from job protection litigation introduced to protect workers from being fired when they leave their place of employment to respond to a fire call (Bello, Claussen, Greene & Morrison, 2007) to providing volunteer firefighters coverage under the Federal Occupational Safety and Health Act (Bentivoglio, 1996). Libvo (1986) of the *New York Times* covered the story of volunteer firefighters in Connecticut asking for pensions for work they previously did without pay. The nature of this volunteer labour is a precursor to later problems, including the rising attrition rates in volunteer fire departments.

Hye and Franke (2009) discuss indicators of a trend toward considering the physical fitness of volunteer firefighters. Both Yoo and Franke (2009) and Gaetano et al. (2007)

discuss the prevalence of cardiovascular disease risk factors in volunteer firefighters, arguing that coronary heart disease risk screening is an effective intervention in this population. Similarly, the U.S. Fire Administration and the National Volunteer Fire Council (2009) have partnered to improve the health and wellness of the volunteer fire service with the production of a Health and Wellness Guide that addresses such health issues as fitness, flexibility, strength training, diet, and smoking cessation.

In a dissertation designed to explore the occupational stress of rural volunteer firefighters in New Mexico, McCarthy (2008) contends that work-family conflict is not a significant problem or concern, and that family support is important for the firefighter's role.

Firefighters and Trauma

Since the September 11th incident in the United States, much new research has been undertaken to study full-time firefighters and trauma and PTSD. Research that is attempting to identify coping mechanisms or variables is a broad theme found across the literature (Fullerton, McCarroll, Ursano & Wright, 1992; Harris, Bagoglu & Stacks, 2002; Menendez, Molloy & Magaldi, 2006; Regehr, Hill, Knott & Sault, 2003). It is a characteristic of their jobs that firefighters are exposed to trauma on a regular basis and have therefore become ideal candidates for use in studying trauma and PTSD. The National Commission on Fire Prevention and Control in the United States has suggested that firefighting is the most hazardous and dangerous civilian occupation within the country (Fullerton, 1992). In a Canadian context, fire fighting has been related to high levels of traumatic stress (Regehr, 2003).

The literature on volunteer firefighters and PTSD suggests that stress variables, including the severity of the trauma, the person's perception of the trauma as a threat, and the degree to which the firefighter feels helpless, will be the best predictors of whether a volunteer firefighter will develop PTSD following a traumatic event (Bryant & Harvey, 1996). Murphy (1996) has suggested that the greater exposure to a threat when coupled with less training is the most likely cause of moderate to high stress. There is little agreement on either the perspectives or modalities to employ or use with PTSD, or the scales and tools to be used to measure the trauma (Bryant, 1996; Del Ben, Scotti, Chen & Fortson, 2006; Harris, 2002).

Firefighters and PTSD Risk

The first broad theme to appear in the literature involved attempts by researchers to predict who is at risk of acquiring PTSD after being exposed to trauma and attempting to identify the risk factors (Bryant, 2005, Heinrichs, 2005; Murphy, Johnson & Beacon, 2004). These predictive studies predominantly employed quantitative measures focused on biological factors to find a variable or combination of variables that would predict who is most at risk of developing trauma. One example is an attempt to measure auditory startle responses in firefighters before and after their exposure to trauma. Bryant (2005) found that pre-trauma skin conductance responses to startle stimuli were a positive predictor of posttraumatic stress symptoms in the acute trauma phase as measured by the Impact of Events Scale (IES).

Fullerton (1992), Harris (2002), Menendez (2006) and Regehr (2003) assumed that a person had already been exposed to trauma; these authors wanted to know what mechanisms allowed a person to lessen symptoms or mediate the symptoms entirely.

These articles make the logical progression from predicting who may be at risk of acquiring PTSD to how to cope once exposure to trauma has taken place.

The severity of the trauma and the perception of threat, as well as the degree to which the firefighter felt helpless, were the best predictors of whether a firefighter would develop PTSD after a traumatic event (Bryant, 1996). Fullerton (1992) quotes one firefighter to highlight the feeling of helplessness:

...In fire fighting its critical how long it takes you to find somebody and sometimes it's just too late to save them. We try to make it easier on each other. We tell each other; hey you did all you could. They were dead before the bells went off and there is nothing you could have done to help them. One person had 80% third degree burns, was coherent, and died the following day. You feel helpless.
(p. 374)

The authors themselves disagreed on which variables or combinations of variables were the most important in developing problems related to dealing with traumatic events. Murphy (1996) suggested that greater exposure led to a greater threat, and that this, when coupled with less training, were the best predictors of moderate to high stress. On the other hand, Fullerton (1992) suggested that the firefighters' identification with the victim, their feelings of helplessness, feelings of guilt that more could have been done, and a fear of the unknown were the best predictors of who would acquire PTSD.

How Firefighters Cope

The literature notes some variables unique to firefighters for coping with exposure to ongoing trauma. These include social networks, mental health, debriefing and training, organizational leadership, length of service, use of rituals, attrition, and family support.

Fullerton (1992) began with the identified variables of fear, hatred, anger, and resentment as the causes of interference with functioning. The study was looking for

corresponding mediating factors to offset the negative variables by using content analysis to discover coping themes. The author was able to identify four mediating factors: the fire fighter's social network; the type of leadership provided in the station; the level of training provided prior to the incidents; and the use of rituals among the firefighters.

Social Networks

Very frequently in the literature, firefighters' unique networks were mentioned as a mediating factor (Del Ben, 2006; Fullerton, 1992; Regehr, 2003; Murphy, 2004). Full-time firefighters tend to work shifts and often live with their co-workers in a very close manner. This social support system has been suggested as offering support within and outside, serving a protective role between the firefighters and their exposure to trauma (Hagh-Shenas, Goodarzi, Dehbozorgi & Farashbandi, 2005). Fullerton (1992) describes one firefighter as saying, "The only one that can really understand your attitudes and feelings is the guy next to you" (p.374), and later in the same study, "If he can take it, I can take it" (p.374).

Examining fire service personnel, Hagh-Shenas (2005) noted that "...they were at risk for developing some symptoms of PTSD; however, most did not experience severe enough symptoms for PTSD to be diagnosed" (p.478). The authors suggested that high levels of social support available within and without the service may play a role in buffering firefighters from developing PTSD.

A paradox within the literature concerning firefighters is that their outside social networks actually shrink over time, possibly due to shift work. However, these more experienced firefighters do not report higher trauma or PTSD rates than new recruits,

which suggests that they may have developed another way to deal with being exposed to trauma on a daily basis that researchers have not yet identified.

Mental Health

Firefighters have consistently scored better than other first responders in relation to their dispositional mental health (Hagh-Shenas, 2005; Harris, 2002). Researchers have suggested that further studies into firefighters' social networks, their level of training, and feelings of self-efficacy are required to better understand this phenomenon. Some of the authors were surprised at the low levels of psychological impairment within the groups they were working with, having on average 14 years' experience and having experienced multiple exposures to traumatic events (Del Ben, 2006; Harris, 2002; Murphy, 2004). As Del Ben (2006) has noted,

...most importantly a majority of the sample was not reporting significant psychological impairment, despite working on average 14 years and encountering multiple traumatic events. (p.47)

Debriefing

Some modalities such as group debriefings, specifically CISD methodology, are hotly debated as to whether they are effective or not effective (Harris, 2002). On the one hand, Fullerton (1992) has suggested the effectiveness of debriefings while Harris (1992) has suggested that the debriefings are not mediating factors in the lessening or avoidance of PTSD.

Training

The level of training the firefighter had received was also noted in many of the studies as being a key mediating factor of acquiring or not acquiring PTSD following a

traumatic event (Del Ben, 2006). Hagh-Shenas (2005) suggested that effective interactions (trained behaviours) were strengthened in the presence of an experienced supervisor. Fullerton (1992) discusses a case in Sioux City where firefighters walked past people yelling for help to assist other people in greater danger and how the firefighters, who may have wanted to stop, kept going as they were trained to do: "To maximize the number of lives saved, it's important to stay on task" (p.375).

Organizational Leadership

Harris (1992) noted that organizational leadership was vital in preparing and training for trauma. Hagh-Shenas (2005) suggested that experienced supervision coupled with formal training would be a protective factor against developing PTSD. Fullerton (1992) suggested that the type of leadership displayed in the organization can contribute to the firefighters' not developing PTSD; debriefing techniques and modeling by senior staff were noted as mediating factors in avoiding PTSD.

Length of Service

Harris (1992) has recommended that screening tests be used with recruits to choose candidates who already have many of the identified coping variables within their personality. Regehr (2003) dealt with coping and self-efficacy by following new recruits and veteran firefighters over a ten-week period. The firefighters were tested just prior to the recruits' beginning employment and again after a ten-week interval with the use of the Impact of Events Scale (IES), Beck Depression Inventory, the Self-Efficacy Scale, Social Support Scale, and a Social Provision Scale. The hypothesis was that new recruits would have higher stress and trauma ratings, but they did not. It was found that the longer

one served with the fire department, the fewer social supports one actually had and a person's PTSD symptomology reflected this.

Rituals

Fullerton (1992) suggested that "beliefs are an aspect of social support and aid in the cognitive integration of the present experience with one's past views of life" (p.376). Firefighters as a group use rituals to organize their experiences and to attribute meanings. The Sioux City Fire Department has a ritual where even if they are fatigued and should have left the scene of an accident, the bodies of victims have to be removed and transported to the mortuary before they stand down. As Fullerton (1992) has noted,

...the remaining bodies were left on the runway and adjacent grass and were covered with blankets. Several firefighters were angry about this, and one in particular was angry enough to speak out loudly during the debriefing group. (p.375)

Attrition

In recent years there has been a high attrition rate among volunteer firefighters. It may be that people exposed to trauma, but with less training or access to resources, begin to develop PTSD and leave the volunteer service before being identified. The attrition may also be due to financial constraints; in a trying economy, firefighters may use their extra time to find additional employment to help support their family and this leaves less time for volunteering. As towns have grown, and with more services being provided beyond firefighting, the ratio of calls being received by rural departments is increasing the volunteer time required of the firefighters. This increase in the frequency of calls may also be linked to the reduction in volunteer members. To address this shortfall some municipalities are now opting for mixed departments with volunteer and full-time firefighters and are trying to create training schedules that apply to both (Carlson, 2006).

Family

The literature acknowledges the risk of the firefighter's family being affected by vicarious trauma (Menendez, 2006). However, instead of formal counselling arrangements being employed as in the armed forces (Hamilton, 2009), the spouses of the firefighters appear to be expected to provide informal support to each other in what they call a "friend and befriend" manner.

Posttraumatic Growth

So much emphasis has been put on studying PTSD since the September 11th incident in the United States that many clinicians and researchers have neglected looking at the concept of Posttraumatic Growth (PTG). The concept of PTG has emerged as a new modality to shift the perception that all traumatic events lead to negative results to one that leaves room for the idea that trauma can also lead to growth and development. PTG, like PTSD, suffers from a lack of agreement about definitions and conceptual questions (Butler, 2007; Baker, 2008). Posttraumatic growth (PTG) has been described as a group of positive changes involving the self, interpersonal relationships, and philosophy of life in response to traumatic experiences.

Some people experience significant personal growth following traumatic experiences (Vonk, 2002). PTG implies some form of growth (outcome) and a struggle (process) in response to a traumatic event (Anderson & Lopez-Baez, 2008). In the literature, PTG has also been called "benefit-finding" or "psychosocial resource gains" (Butler, 2007).

While PTG is fairly new in the literature (only the last ten years), two scales have been created to measure these experiences. One of the scales is the Posttraumatic Growth Inventory (PTGI); the second is the Stress Related Growth Scale (SRGS) (Baker, Kelly, Calhoun, Cann & Tedeschi, 2008). The PTGI includes five domains: personal strength, new possibilities, appreciation of life, relating to others, and spiritual change. Neither scale allows the reporting of negative experiences (Baker, 2008). That a person must instigate some form of action to effect positive growth is noted in the literature (Butler, 2007). As mentioned at the beginning of this paper there are differences in the literature about how trauma is defined. The definition the PTGI uses for trauma is not the same definition used in the Diagnostic and Statistical Manual of Mental Disorders (4th Ed: American Psychiatric Association, 2005), which describes conditions where there is a risk of serious bodily harm or death to oneself or a loved one, or a person witnessing such an event. Trauma in the PTGI is described as a stressful event or a crisis as perceived by the individual (Aldwin & Levenson, 2004). Attempts are ongoing to reach a consensus on operational definitions in the PTSD and PTG research fields to allow for transferability of data between the two groups.

For instance, the attempt to define PTG has spurred debate between two groups of theorists. One group believes that growth is discontinuous and requires events to spur change. The research is therefore dealing with a particular phenomenon in a particular context and is best measured by qualitative methodology. The other group believes change is a continuous process and can be measured empirically; therefore PTG should be measured by quantitative methodology. The argument when deconstructed really breaks down to the speed of change: is it sudden or is it gradual, since both assume the

changes occur regardless of how it is measured. PTG as a result of PTSD may be more rapid than stress-related growth, but there appears to be no evidence that both do not arrive at the same outcome (Aldwin, 2004). Both groups concur that PTG requires some cognitive processing of the experience to allow assimilation and adaption for growth (Aldwin, 2004; Butler, 2007). Since many clinicians use different definitions of PTG and a crisis, evaluation is difficult (Calhoun, 2004).

Many variables listed in the literature were termed as mediating variables in relation to trauma and firefighters (Bryant, 1996, Menendez, 2006; Harris, 2002; Fullerton, 1992; Hagh-Shenas, 2005; Del Ben, 2006), and are also listed as variables that can spur PTG (Butler, 2007). Those who view themselves as being in charge, who feel they have meaningful goals, and who view stress as something that can be managed or overcome showed the best outcomes (Almedom, 2005). Whether the coping variable should be described as a process or as an outcome is currently being debated in the literature (Butler, 2007).

The two main scales, the PTGI and the SRGS, allow only positive items to be scored. This has been criticized by some researchers who propose having both positive and negative scaling items included in a measurement tool as events can be perceived as both negative and positive (Calhoun, 2004; Baker, 2008). PTSD measurement tools share a self-efficacy component with the PTG tools (Almedom, 2005).

Conclusion

The review of the literature shows that there has been a good deal of research done on trauma and PTSD as it concerns predicting PTSD, coping with PTSD, and measuring PTSD. The gap in the literature occurs with the sub-group of volunteer

firefighters. A broad depth of studies with the population of full-time firefighters and the topic of trauma and PTSD has now begun. The literature provides a number of definitions and measurement tools but no agreement on which tools to use and what the cut-off scores should be (Bryant & Harvey, 1996).

The volunteer firefighters, as a group, are exposed to the same dangers and trauma as full-time firefighters, but the literature has not explored whether they have the same level of social supports, access to employee assistance plans and services, or access to monetary supplements.

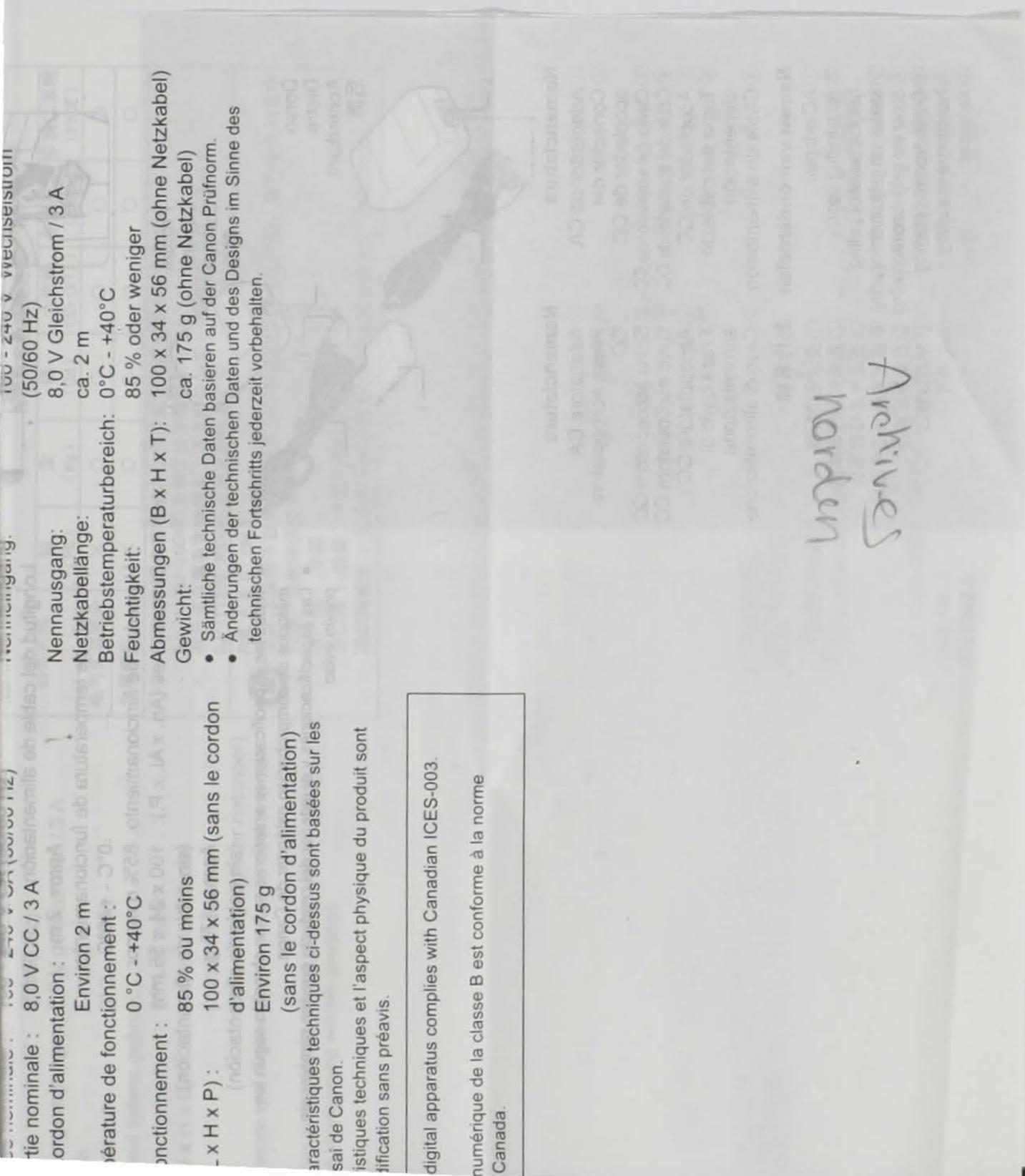
The articles used in the literature review included quantitative studies, qualitative studies and mixed method studies. Overall, at the present time, there appears to be no consensus on which theoretical perspective is best suited for use when studying trauma and PTSD.

Since there are estimated 127,000 volunteer firefighters serving in Canada today, they are a readily available population for researchers to study (Patton, 2010). As a group, they have a higher score in dispositional health than other first responders (Hagh-Shenas, 2005; Harris, 2002), which may be due to their social formation as a group who live together and support each other. It might also be that people with higher scores in dispositional mental health are attracted to firefighting as a profession.

While there is a growing body of literature concerning full-time firefighters, using the academic multidisciplinary search engine EBSCO, I was able to find only two articles that included both volunteer firefighters and PTSD (Bryant & Harvey, 1995, 1996). This highlights the need for more research on this topic.

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The socialization variable that so many articles cite as a mediating factor with full-time firefighters against developing PTSD (Del Ben, 2006; Fullerton, 1992; Regehr, 2003; Murphy, 2004) may not be applicable to volunteer firefighters, as they typically live in their own homes and respond to incidents when alerted by pager. These deficiencies in the literature provide support for an expansion of research, including exploring the socialization and dispositional health of firefighters from a volunteer perspective. In general, the lack of academic literature in regard to trauma in volunteer fire departments shows that there is a need for further research.



Chapter Three – Methodology

This chapter will begin with an overview of qualitative research, followed by a discussion of how qualitative methods were used in the present study. I chose qualitative methods in order to explore the experiences of volunteer firefighters, how their work affects them, and any suggestions they might have for mitigating the trauma experience.

Qualitative Research

Qualitative research seeks to understand human experiences from the perspective of those who experience them, relying on inductive logic rather than deduction (Yegidis et al., 1991). As a process, it is dictated by the researcher's philosophical assumptions and implies that a particular worldview and a particular theoretical lens are being used (Creswell, 2007). Creswell (2009) has suggested that qualitative research is

... a means for exploring and understanding the meaning individuals or groups ascribed to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participants' setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. (p. 232)

The purpose of qualitative research is to discover, not test, explanatory theories (Padgett, 1998); such theories explain or interpret a social situation; and involve "the study of people in their natural environments as they go about their daily lives" (Tutty, Rothery and Grinnel, 1996, p. 4).

People are not neutral in their interests; thus in qualitative research multiple theoretical perspectives can be employed that guide the process: naturalism, social constructionist, feminist, and postmodernism, among others (Esterberg, 2002). The data in this study were viewed through a constructionist worldview as this has been linked

historically to qualitative research. The constructionist view assumes that people construct their realities and attribute meanings to them based on their interactions with others (social meanings) or through shared historical meanings or through a common culture (Creswell, 2009). An interview as a tool is interpreted as a behavioural event, allowing for the most direct access to an interviewee's experience (Schwandt, 2007), and the researcher uses open-ended questions to draw participants into sharing their views.

Qualitative researchers are not indifferent to the people they interact with and interaction is encouraged. The experiences of the researcher may also be included as data for analysis (Tutty, Rothery, Grinnel, 1996). For instance, as I am a former volunteer firefighter, I shared a common knowledge and professional language with the participants. This shared language and experience influenced the questions asked and assisted the interviewees in expressing their thoughts and possibly broadening the scope of the data collection. Qualitative methods were chosen for this study because they encourage an in-depth focus on the experience of the participants from their perspective. In this study, qualitative methods focused on the participants' experiences of volunteer firefighting as well as their thoughts on how they cope and the positive aspects of the work that they do. A discussion and analysis related to reflexivity and how my own experiences have shaped the project are included after the section presenting the results of the data analysis.

Research Questions

Based on my own personal experience of volunteer firefighting and the available information found for the literature review, the research questions used to guide this

study became: What are the work experiences of a group of rural volunteer firefighters? How do they cope? What are the positive aspects of the work that they do?

Setting, Participants, and Sampling

The volunteer firefighters who were interviewed for the study were all residents of an area in rural Northeastern Ontario, Canada, and were attached to one of four neighbouring township fire services. The four township areas cover approximately 1,100 square kilometres and have 25,000 full-time residents and a seasonal population of approximately 180,000.

A purposive sampling technique was used to recruit participants. Purposive sampling, which includes snowball sampling, had the researcher making initial contact with a small group of people who were relevant to the research topic and then using them to establish contact with others (Bryman, 2005). For example, in the case of one of the volunteer firefighters who had recently left the fire service due to exposure to traumatic events, serving volunteer firefighters identified and contacted the individual for inclusion in the study.

A presentation that consisted of reading a letter of introduction and answering questions about the study was delivered at four volunteer firefighter stations servicing one of the townships. The presentation letter stated what the research topic was and formally requested that the volunteer firefighters consider participating in the study. The Letter of Introduction was prepared and distributed to all the volunteer firefighters at all four of the townships fire stations (see Appendix 1).

The potential participants were asked to contact the researcher either by email or at his home phone number. Four volunteer firefighters from the township where the

original presentations were made chose to participate. Five other volunteer firefighters from two other townships, having heard of the study from volunteer firefighters living where the presentations took place, contacted the researcher and asked to be included. A minority of women serve in all three of the township's fire departments. Women volunteer firefighters in the township where the presentations occurred were asked specifically to consider volunteering to take part in the study, but they chose not to participate.

Instruments and Measures

The first instrument that was employed was a Letter of Introduction (see Appendix 1) to introduce myself and the research that I was hoping to conduct. The letter also invited the volunteer firefighters to participate in the study and provided contact information. The second instrument employed was a Consent Form (see Appendix 2) for those who chose to participate.

A Demographic Questionnaire (see Appendix 3) was filled out by the participants. The results of the demographic questionnaire were that all the volunteer firefighters who participated identified their gender as male. All but one of the volunteer firefighters noted that they were either married or had a partner. The volunteer firefighter's average age was forty-seven-and-a-half years. Their average time serving with the volunteer fire service was fifteen years, while the time engaged in any sort of volunteer activity averaged at seventeen years. The average number of hours spent volunteering at the fire hall in a typical week was cited as six hours. The last element, educational level achieved by the volunteer firefighters, covered a broad spectrum. Four had attained a secondary-school diploma, two had attended trade school, one had attended college, and two had

attended university. When asked if they had ever had to take time off because of their work, the majority, eight out of nine, said no. However, when asked if they knew of someone else in the department who had taken time off as a result of the work they did as volunteer firefighters, six of the participants said they did not know of any, while three of the volunteer firefighters said they did.

The main instrument that was used for conducting this research was an Interview Guide (see Appendix 4) containing thirteen broad questions that were used as a template for conducting the semi-structured interviews. A Telephone Interview Guide (see Appendix 5) was employed to help the participants and the researcher to identify the parts of the interview the person might want to omit, edit, or retract and to confirm the accuracy of the recorded/transcribed interviews.

Data collection

The participants were contacted by the researcher by telephone to establish a day, date, time, and place of their choosing (their home, the interviewer's home, or the local fire station) for the interview. At the time of the interview, each person was asked to sign a Letter of Consent (see Appendix 2). At the beginning of the interview, participants were asked to complete a Demographics Questionnaire (see Appendix 3). Individual in-depth interviews were conducted using a semi-structured interview guide (see Appendix 4). The questions were designed to assist the interviewer in creating a dialogue and to help guide the discussion; they are general and open-ended. The context of the answer offered by the participant determined which of the questions in the guide was to be used next. This method allowed the conversation to flow and provided for follow-up questions to the interviewee's responses. It also allowed exploration of the interviewee's feelings or

experience as everything was considered to be potentially relevant to the exploration (Scourfield, 2001).

Each of the interviews was tape-recorded and then transcribed. The transcripts were returned to the participants to be checked for accuracy. Each participant was contacted over the telephone (see Appendix 5) and asked for his revisions, additions, deletions, or edits to the transcript.

Researcher's Role and Reflexivity

The researcher's role is to be a reflexive participant in the research process. Reflexivity points to the fact that the researcher is part of the setting, context and social phenomenon (Schwandt, 2007), and it is necessary that he/she perform a self-reflection on biases, theoretical pre-dispositions, and preferences (Schwandt, 1997). We need to be aware of the ways in which we influence the direction of the research by deciding what to research, the research questions we ask, and how we probe answers (Barry et al., 1997).

My own experience as a volunteer firefighter in rural Northeastern Ontario has influenced my choice of broad questions to create a dialogue. My own experiences with trauma and my shared responses to trauma while engaged with other firefighters have also influenced the analysis of the data collected. Being aware of this has allowed for a more accurate critical analysis of the whole research project.

This project encountered some road blocks in the first few weeks. Originally, I intended to approach only one township in order to recruit the participants for this study; these participants were to come from the four fire stations within the township. This particular township was chosen because the researcher had served as a volunteer firefighter there and still had contacts in the volunteer firefighting community.

I had served with one of the district fire stations when the volunteer fire department was part of a separate township, this being prior to the amalgamation of many townships in northeastern Ontario. Since I had stayed on with the volunteer fire department through the amalgamation period, I was aware of what services and practices were available in both the old and the new townships.

Each Northeastern Ontario Township has attempted to come up with solutions that work for it concerning the volunteer fire services, so I did not ask questions of the participants, assuming that there was only one answer that could be given. I was also aware that not all the chiefs from the different townships viewed their role in the same way. Some were focused more on the volunteer firefighters and saw their role as a liaison between the volunteers and the municipality; others viewed themselves as being municipal employees and believed that the most important part of the job was ensuring the compliance of the volunteers with best practices.

I was injured during on a fire call while serving as a volunteer fire fighter and the municipality the volunteer fire station belonged to brought litigation against my full-time employer in an attempt to either shift the liability or lighten the burden by spreading it around. I came out of this process realizing that a lot of the support services that I thought we had as volunteer firefighters in regard to being injured were actually not available or were not accessible until the municipality and the primary employer were able to resolve their litigation . I left the volunteer fire services with the impression that the township was more concerned about the liability issue than about the state of my health as a volunteer firefighter or the provision of timely services.

The district fire chief of the township where the study was to take place was notified as a courtesy several months before the study that the researcher was going to be approaching people who volunteered with the community fire departments. The researcher asked the district fire chief's permission to attend each of the four district fire stations and read a letter of introduction to the volunteer firefighters asking them to participate in the study. Reading the letter in the halls would save the time and money involved in running a local newspaper advertisement to seek recruits. The district chief seemed supportive in allowing the researcher to read the letter at the stations.

At the time that the study was about to begin, however, my field notes indicate that the fire chief now required that certain liability measures be agreed to by the researcher before allowing me to read the letter of invitation.. Since we could not agree on these liability issues, the researcher handed over negotiations to his academic supervisors and prepared to run a newspaper article if there was no success. A tentative proposal was also begun, to be submitted to the university to notify them of the change in recruitment methods if a resolution could not be reached with the district chief. Fortunately, the supervisors were able to resolve the matter and obtain permission to read the letter in each station. I was notified that the original letter of invitation had been e-mailed to a number of volunteer firefighters who belonged to a municipal mailing list. I was given dates on which I could go to each fire station and read the letter and be available to answer questions. After reading the letters at each of the halls, I became aware that the area of study as presented by me, the researcher, and as presented by the fire chief, was not the same. Due to the difficulties mentioned above, it seems that the process of recruitment and the communication of the intent of the study were sometimes

confused or muddied, which (although I cannot be certain of this) may have affected the recruitment of participants.

However, through using a snowball procedure, where the three participants from the original district station were used to refer me to other volunteer firefighters from outside of the township, I was able to collect a much broader sample. Participants representing three other townships came forward and contacted me as they wanted to participate and to improve the fire services in their respective areas. Some of them were also high-ranking officers and wanted to share their expertise. Thus, while I was not able to get a representative view of one township, I was able to obtain a representative view from four townships which helped in discovering some structural problems that became apparent across the broader spectrum; these problems would not have become apparent if I had been restricted to only one township. My past role as a volunteer firefighter certainly helped me gain access to participants.

Strategies for Validating Findings

Triangulation and reflexivity are two strategies that have been employed for validating findings. As discussed previously, reflexivity emphasizes an awareness of the researcher's own presence in the research process and improves the quality of the research through our understanding of how we influence the quality of the research (Barry et al., 1999). Tutty (1996) explains that triangulation is

... a common method to establish the trustworthiness of qualitative data. There are several types of triangulation, but the essence of the term is that multiple perspectives are compared. This might involve having a colleague use your data collection rules to see if he or she makes the same decisions about meaning units, categories, and themes; or it may consist of collecting multiple sources of data in addition to your interviews. The hope is that different perspectives will confirm

each other, adding weight to the credibility of your analysis. (p. 113)

In the present study, different methods have been used at different stages of the interviews. Data triangulation included the demographic questionnaire, multiple individual interviews, a follow-up telephone interview, and the keeping of field notes. In addition, participants were asked to read their own transcriptions and identify their interpretations of their interviews. The use of these multiple techniques reflects an effort to identify an in-depth and multifaceted understanding of the work experiences of volunteer firefighters.

Data Analysis

The approach used to process the data collected was a thematic analysis. Tutty's (1996) six-point framework was employed as follows:

- 1) Preparing the data in transcript form: Each interview was tape-recorded and transcribed. Each interviewee was assigned a pseudonym.
- 2) To establish a plan for the data analysis, I read each interview thoroughly. Transcriptions were returned to participants for their checking and revision.
- 3) First level coding: I identified meaning units or experiences (the important ideas), to establish categorizing. The data was grouped into categories based on similarities and differences. Once a category was identified, it was named. All the data were reviewed one last time to make sure the analysis reflected what the participants said.
- 4) Second-level coding: Tutty et al. (1996) explain that the major task in second-level coding is to "identify similarities and differences between the categories in an attempt to detect relationships" (p. 107). The coded items were cut and pasted from the categories

and removed farther from the original interview. Coding then looked across the individuals as opposed to the contexts of the individuals for relationships between the categories.

5) Meaning and Interpretation: The categories were reviewed looking for meaning and interpreting the data. This requires having a conceptual classification system and presenting themes. The process continued as in step 4 above, but at a higher level of abstraction.

6) Trustworthiness/Triangulation: The final step was assessing the trustworthiness of the results. This included the researcher's stating his worldview and experiences that might have had an effect on how the data were interpreted. Next, the data were compared to the findings in the literature review and the participants reviewed the findings for accuracy.

The key idea that must be kept in mind while analyzing data is to ensure the voice of the participant is not distorted by the emotional response of the researcher who is analyzing the data (Camic, Rhodes & Yardley, 2004). The interviewer must also keep in mind that his/her own characteristics/biases/experiences will have some effect on the interview process. Participants have been shown to have a social desirability bias resulting in more politically correct answers being given when an interviewer is present than if the same question were asked in a questionnaire. The interviewer's response to an answer can often cue some subjects to give answers they think the researcher wants. Finally, there is a tendency to underreport activities that induce anxiety (Bryman & Teevan, 2005). It is possible that, with the topic of the research being trauma, there could be underreporting.

One tool that protects against distortion while engaged in the analyzing process is reflection/reflexivity. Reflexivity also points to the fact that the researcher is part of the setting, context and social phenomenon (Schwandt, 2007). My own experiences as a volunteer firefighter in rural Northeastern Ontario have influenced my choice of questions. Creating questions dealing with the firefighter's emotions as well as those of their comrades is a response to my experience in noting that firefighters are adept at perceiving trauma and distress in others that they may not see in themselves. My own experience of trauma and my shared response to trauma while engaged with other firefighters have influenced the shape of my data analysis. For instance, being aware of my own experiences propelled me to try and be conscious about how my experiences and viewpoints might have affected the critical analysis of the whole research project, including thinking about why participants reacted a certain way to a particular trauma. Because I have had experiences similar to those of the participants, I had to try to keep my own perspectives separate from the participants' experiences. One way I did this was to review the analysis repeatedly, looking from different contextual points to finally offering a particular interpretation of the data.

Indeed, reflection is encouraged at every step of the interviewing and analyzing process and often dictates our decisions about which question to ask next, or how to understand the context in which the interviewee gives an answer. Any and all of these reflections have been included in a notebook that I used as the analysis progressed. I used these notes to help me reflect upon my actions at each stage of the project (Tutty, 1996).

The next chapter begins the discussion of the findings.

Chapter 4 - Discussion

The nine volunteer firefighters who participated in the interviews have been assigned pseudonyms to protect their identities in the reported results of the study. Many of the volunteer firefighters gave similar answers to many questions; thus their identities were further protected in that it would be hard to discern one volunteer firefighter's story from another's. The nine participants represent four separate townships that are located in rural northeastern Ontario. This chapter discusses how this particular group of volunteer firefighters understood trauma, how they coped with their work, and their opinions about the positive aspects of their work.

Trauma and Posttraumatic Stress Disorder

Trauma Definitions

Before beginning a discussion of trauma I asked the volunteer firefighters for their definition of the term. It has been my experience that people will use the same word when describing a situation or a phenomenon, but attribute a different meaning to it depending on their field of work or past experiences. The context in which a word is used also has an effect on interpreting its meaning. Of the seven volunteer firefighters who contributed a definition for trauma, five defined it in relation to a physical injury, and two used broader definitions that included both the physical and/or mental effects that may be the result of ongoing exposure to trauma. For the remainder of the discussion about trauma in the study, the volunteer firefighters agreed to use the broader definition that included both the physical and mental effects.

Of the physical definitions proposed, Fred suggested that trauma be defined as when "...someone is hurt badly. A loss of life." Sam contributed, "...a distress of the

person that has had contact or a personal injury, due to an accident.” Allen noted that he related trauma to the physical only:

...I'm stuck with the idea of just the physical aspect of it right?
You know a fairly intense blow to the body. That's what I think about when I think of trauma.

Combining the physical and the mental, Frank suggested that

...an injured person is what I think about, but also a disconfiguration to either yourself mentally or when you go up to someone and they're injured. Seeing all the innards and stuff. You know, more than just a bandage wound.

Alex elaborates a little further on trauma as it can possibly affect the physical or the mental well being of an individual:

...the broadest definition would be any experience that has a negative impact on a person. Whether it is physical, emotional, or mental... I mean the obvious things like a major cut or fracture would be traumatic in some ways. I mean like that is one...a physical trauma. And there is emotional; trauma in the general experience of what you see...what you see and hear.

Traumatic Situations

While there were differing definitions of trauma, once we agreed upon using a broader definition that included the mental as well as the physical, everyone had stories of how trauma had touched him and how he or his department has handled the exposure to traumatic incidents, as well as suggestions for how trauma training may be incorporated into the volunteer fire services at the basic training level.

While being aware that their jobs involved a lot of exposure to trauma, very few of the volunteer firefighters felt that the exposure had any lasting effect on them mentally. Fred was typical when describing a scene he came upon that he had not originally been called out to:

...It didn't affect me then. I don't think it affected me at all. I got there and it was just after 6:30 am in the morning and I was driving by and just saw the lights. They came up to me and said "we need you here; we don't think we can handle it but come take a look". So I went and took a look and there was a guy with no face and another guy with no head. I said yeah I'm okay...and they said "good because we need someone to take the body out." So I grabbed the shoulders and pulled him out.

Barney also felt that being exposed to trauma on an ongoing basis as a volunteer firefighter had not had any negative affects on him personally: "...well I can say it never really bothered me, I mean I don't recall anything that has made me not go to the next one."

Many firefighters also talked casually of having physical reactions when attending some of the scenes that they worked on. Most described the physical reactions as occurring earlier in their volunteer firefighter careers. They did not, however, believe that the physical reactions were a negative result of exposure to trauma, calling them instead a natural reaction to a situation they had not encountered previously. They did not expect to have the same physical reaction the next time such a situation arose; and indeed, many reported that they did not.

Alex was originally reluctant to participate in the study because he had wrongly assumed it was specifically looking for people who had been traumatized while serving with a volunteer fire department. Once he realized that I was trying to get representative views of all the volunteer firefighters across the four townships that provided participants, he changed his mind. As he explained

... I mean the reason I didn't jump at this study is I don't feel that I have been...traumatized let's say. Maybe not at all. I don't know. I don't think there is any incident that has been that stressful for me.

Larry provided a possible reason for the lack of trauma reactions reported by the participants. He suggested that there are firefighters who do have problems with the ongoing trauma exposure, but many of them leave early in their firefighting careers, leaving the impression that the people who do stay handle the trauma more effectively:

...It's a tough time just getting firefighters anymore. I tell you that you don't want to take firefighting lightly. If you get in and can't handle it you're best to walk away because some people don't even realize what real firefighting is about until they have done it.

Sam's experience backs up Larry's observation. Sam admits to being affected by only one call during his time with the fire service. That one call, however, was also his last: he left the fire services shortly afterwards:

...Over the years I have been to a number of calls where the victim has passed away. It's a very humbling moment when you realize that someone has lost their life. I had always considered myself fortunate...up until the last scene that I attended when death was involved. I had never known the person until then. It did not seem to bother me as being as bad before when I didn't know the person...but this time I went...I KNOW THIS GUY!!

Sam also discussed how, even before that call, while not affected by the trauma directly, he and the other volunteer firefighters became very highly charged emotionally shortly after receiving the page to attend a call:

...People are affected, because your emotions are kinda right there and they're showing them to you, it's almost like preparing for war. You know that when you enter the fire station and it's a medical call that you're putting your emotions on your sleeve and you may become emotionally involved and you don't know how bad it's actually going to be.

The volunteer firefighters as a group understood that their jobs entailed constant exposure to traumatic situations. While almost all the volunteer firefighters had heard the term Posttraumatic Stress Disorder (PTSD), almost none were aware specifically of what it is, what the symptoms are, and the best way to cope with it. The firefighters, while acknowledging that some of their members may have been affected by ongoing exposure to traumatic effects, did not think, in general, that it was an issue with them or their departments. Introducing and educating new volunteer firefighters on what PTSD is, what to look for, and where to go for help seemed to be the overall consensus for any future potential framework for dealing with trauma and posttraumatic stress disorder at the department and municipal levels.

Volunteer Firefighters

As a further insight into the rural volunteer firefighters from northeastern Ontario participating in this study, these are some of the reflections of the nine participants on their introduction to volunteer firefighting, why they joined, and what they did not know when they joined.

Why They Joined

Volunteer firefighting is a strenuous activity both physically and mentally. How does one decide to become a volunteer firefighter? Is it for social reasons where possibly many of the person's friends and relatives are already members? Is it a spur-of-the-moment decision? Was there a life event or a particular tragedy that touched the person so that he/she felt compelled to join in an attempt to prevent a similar tragedy from occurring?

Five of the nine volunteer firefighters interviewed mentioned that they had been invited to join by currently serving members. Frank joined after continuously hearing positive stories from a friend who had joined a neighbouring fire department:

...I rode in the fire truck...I'm spraying the hose...I went and saw car accidents...I mean if you're honest everyone wants to stop and look. So instead of going to look now you're going to help.

Peter and Alex were both invited to join after moving into rural communities from outside communities. Peter joined on the spur of the moment after a neighbour approached him: "...he was one of the first neighbours I met and he said we need guys on the fire department. We need guys...and I went down and sort of jumped in and that was it."

Alex, on the other hand, had spent a period of time doing research on joining a volunteer department while living in another community. After making the decision to join, he approached the local volunteer fire department in that community, but as he said, "I had asked about it but they didn't invite me." Upon relocating for work reasons to a new rural northern community, Alex was invited to join its local volunteer fire department shortly after settling in.

Other volunteer firefighters had families that had been long established in the communities in which they lived. They joined the volunteer firefighters because it was expected of them, as their relatives and friends already belonged. Both Alex and Larry shared this experience. Larry stated "...I had some relations and friends who were on the fire services so I thought I would give it a try and see if I liked it or not." Fred relocated to rural northern Ontario from a large metropolitan center for work reasons; he decided to join the volunteer fire department after being touched by a personal tragedy in his life.

Fred stated that he "felt helpless at the time of the tragedy." He did not have, in his opinion, the training required to deal with the incident, and so afterwards he found out where to learn the skills that he felt he had lacked. Fred's intent was to bring these skills back to his community so others would not have to endure the same emotional hardships that he and his family went through:

... I had a child die of crib death and I didn't know CPR, so...I decided to go to college and become an ambulance driver and they said that there was a ten-year wait to get hired...I couldn't wait that long...so I decided to become a firefighter.

Allen joined after finding himself requiring the services of the volunteer firefighters:

...we had a small fire at my place of employment and I called 911 and my neighbour showed up to help and ...I went, you know, if they're willing to help me I should be willing to help them. That's why I joined.

Sam joined when he began raising a family and decided he wanted to give back to the fire services which had touched his life as a youth:

... I joined to contribute back to the community I grew up in...I lived on this road until I was in my teens and my father and some of my uncles were killed in a car accident... the firefighters had responded to the incident. When I joined...well, overall the fire department I was with was very much a ...basically a family.

Of the volunteer firefighters who participated in the study, the majority were asked to join the fire services by people they knew who were currently serving on the volunteer fire services. A third of the volunteer firefighters said they had joined because of either a minor or a major tragedy that touched their lives, and that they saw the volunteer fire services as the best way to give back to and contribute to their communities.

The volunteer firefighters were asked what their overall experience had been like since joining and the majority stated that they had found it to be rewarding. Some of the volunteer firefighters viewed their volunteering as a vocation. Frank and Fred were the most vocal about their volunteer firefighting; in their opinion it is a vocation. They also alluded to experiencing an almost-mystical feeling that volunteer firefighting was what they were supposed to be doing with their lives. As Frank said,

... We had a medical call for (someone) who was not breathing. So getting on the scene on that one...and then they say it's not breathing...your emotional level is still going from the last call and you're carrying it right on into this one. But then the captain and I brought (the person) back to life. That was when I knew this is what I had to do.

Fred responded similarly:

...What's it like? I Love it. It's great, I enjoy helping people. And I think that's why I 'm here. I think I'm here to help people...

Larry summed up what a number of the volunteer firefighters felt when he said, "... if I had it to do all over again I would be a full-time firefighter." Another theme that appeared when the volunteer firefighters were asked why they joined was their common desire to give back to their communities.

Initial Lack of Knowledge

With any job there are certain peculiarities that are not apparent to the outsider. It is only when people are fully engaged in volunteer firefighting that they see the full scope of the job. With volunteer firefighting, and with paid firefighting, the mass media have portrayed them as a fairly specific endeavour of racing to and then putting out fires. All of the volunteer firefighters who were interviewed had a comment on some aspect of

firefighting that they did not see as part of the job before becoming actively engaged in volunteer firefighting.

Frank was unaware of the scope of services that he was expected to provide as a volunteer firefighter. As he noted,

...firefighters don't just do certain things but they do a whole bunch of other stuff. Its not the -let's go and put the fire out - or let's go to a car fire and put it out- it's let's go pick up body parts, let's go pick up bones...it was a big learning curve for me at the get-go but then as you got more exposure to it...it kinda sits with you, saying okay this is expected from the job.

Peter had a similar experience after joining the local volunteer fire department:

... I thought just fires and no one is hurt. And you play with water. That's cool. Bush fires aren't fun, they are a lot of work but as long as no one is hurt...say it's a building fire...nobody cares...because it's just a building. Then I realize how many seniors are around here and how many accidents and stuff...if we were just out fighting fires we would hardly be out. It's all the other stuff - I wasn't counting on but it's part of it. It's a big...and you know yourself, probably 80% other stuff and 20% fires. That's just the way it is.

Larry was unaware of the carnage that could be created by a multi-vehicle accident. He described his first one:

...it was the first one and you don't know what to expect. I just didn't get okay with it right away. After four or five years it just becomes... part of the job.it got that it didn't bother me after a while and it got so it was expected and so no surprises. But at the beginning that stuff was tough.

The majority of the volunteer firefighters mentioned that they were unaware how much of their time would be taken up by attending ambulance assistance calls, and how many of the calls would reflect the townships' changing demographics and involve seniors. All four of the townships represented in the study are located in rural areas where

many people from metropolitan areas have retired, or are retiring to, their cabin or cottage.

Knowing the Victim

Volunteer firefighters are from the general populations that they serve. For this study the volunteer firefighters were from four townships that were rural in character. The phenomenon of knowing the victim seems to be unique to volunteer fire departments in rural areas, but makes sense when the area being served and the populations that reside within it are considered.

Frank suggested that knowing the person makes it harder:

...I have been to multiple car accidents before with fatalities but this one hit me the most because I had a friend of 15 years killed in it and a friend of 5 years killed in it.

Alex had a similar story to tell and noted he has worked on a client and on a neighbour :

...a previous client of mine that I ended up doing CPR on at a motor vehicle accident...also there was my neighbour who died of a heart attack but we weren't that close.

Allen also admits that there is an effect when one knows the individual:

...I took a really close member of the family..... That really affected me...when people that close to you pass away and you can't help.

Knowing the victim appears to have a compounding effect on the trauma the volunteer firefighters experience, but only one of the participants, Sam, directly connected it to his feelings of being overwhelmed and his leaving the fire services.

Firefighters and Trauma

In the Canadian context, firefighting has been related to high levels of traumatic stress (Regehr, 2003), and all of the participants in the study have been exposed to traumatic stress. Of the nine participants interviewed, two admitted to being affected by ongoing stress exposure. One sought outside help and another left the fire services. The majority said they were not affected. However, many had stories of people they worked with who they felt might have been affected. The categories or types of trauma to which the participants were exposed were profound physical injuries, injuries to children, accidents resulting in death, the death of a friend, and the death of family members.

Firefighters and PTSD Risk

When the volunteer firefighters who said they were not affected by ongoing exposure to trauma were asked if they were aware of any volunteer firefighters at their station who had been affected, many answered "yes." Frank mentioned a situation with one of his colleagues at the hall:

...the guy obviously needed help and everyone goes he's not strong enough so we're not going to send him into this burning building because there may be a burnt body. If he can't handle a car accident where you could see the dead body...do we need to have him frozen on the hose line? In a hazardous situation you just don't know. Or maybe the guys will decide that this guy needs help and get him the help that he needs. It could go either way within the station.

Fred said that he had heard of a fellow who was still occasionally upset even though it was years after the incident that originally disturbed him.

However, Larry, the most senior of the volunteer firefighters interviewed, said, "I haven't run into many guys over the years that have been affected by the problem you're

talking about. Like any problems from being exposed to trauma.” He added, “How much exposure do we get...you got to remember one thing though that we do between 150 or 160 calls a year, whereas in the city they do how many a day? You have to look at that part too.” Larry also noted that volunteer firefighters would be at lower risk of acquiring PTSD as their exposure to the threat, in relation to full-time firefighters, is greatly reduced. A volunteer firefighter may attend five calls a week as opposed to five calls a day, thus reducing their exposure to the variable.

The second variable, the level of training, varied across departments and even within departments. Frank felt that he and his fellow volunteer firefighters were proficient at handling most calls but in some situations only a few of the firefighters had the specialized training that was required:

...I think they feel they can handle most instances. Our common ones definitely. This past summer, the one that already passed, we had a hazardous materials incident. I have training for it – so I had to tell the other guys what we had to do. So they were kinda unsure because we have never really had a hazardous material incident.

Sam, however, was uncomfortable with the level of training that he perceived was available at his fire station and as a result was apprehensive:

...When ...you get a bunch of the younger people in and you're the older more experienced guy. It really is a hard call that you're going to put your life on the line for somebody that has 8 to 10 weeks training.

Fred remembered a situation where a volunteer firefighter, a new trainee, was overcome by emotion when confronted with a traumatic situation. The volunteer firefighter left the service shortly thereafter.

Peter described a situation where he became frustrated, helpless and, in the end, frightened by his experience. This particular call and the feeling of helplessness it created eventually led him to seek counselling for PTSD symptoms.

The three risk factors of acquiring PTSD--feelings of helplessness, less training, and greater exposure to the threat (Murphy, 1996), according to the literature--were all represented to different extents across the townships and even within the departments of the participants' stations. Given their exposure to the three variables and the volunteer firefighters' feelings that they were not greatly affected by the trauma, it is clear that firefighters develop some necessary coping mechanisms, which can moderate the risks.

How Firefighters Cope

As discussed in the literature review, the literature, in regard to full-time firefighters and their coping with exposure to ongoing trauma exposure, lists a number of variables that may serve a preventative or protective function. These include social networks, training, organizational leadership, length of service, use of rituals and attrition. The participants were asked to discuss these possible coping variables to see if they were indeed present and served the same function within the volunteer fire services.

Social Networks

The two types of social networks that were discussed by the volunteer firefighters were family social networks and inter-departmental social networks consisting of relationships between firefighters serving in the same station or in the same township.

Family Social Network

One thing that most of the volunteer firefighters agreed upon was that they would be unable to perform their volunteer duties in the community without having a strong

social support network with their families. It was interesting to see that some firefighters had marriage break-ups as a result of the time they spent with the volunteer fire department, but continued on by substituting their parents for their family support role, a role that their wives had previously performed. Jim explained how this worked for him:

...I have always had family support. When I was with my wife...and now with my mother coming up and watching the kids so that I can go out on calls, it's really helped out. My mother says you have to do something and get out of the house. I'll watch the kids; go do what you like to do.

With this support, Jim feels that he can go to the calls and his family will cut him some slack with the chores and household duties because they know what time he was called out the night before:

...when you have those early morning calls at 3 or 4'o'clock in the morning you're pretty dog tired the next day, but that's when your family steps up and when you get home they let you lump around a little bit instead of okay it's your turn to cook tonight.

Frank suggests that his wife may not like it, but she understands that he has to do this type of volunteering:

...She understands what I do. In situations where I suddenly have to leave to a call I don't think she likes it but she knows I have to go. It's not like it's a buddy calling and saying let's go out for a coffee and I'm about to sit down for a big dinner. This is someone who has called 911 and is having the worst day of their life.

Allen is grateful for his wife and is quite aware that it is her role that allows him to be a volunteer firefighter:

...I'm very lucky. I have great family support and my wife really understands when the tones go off, I say I'm leaving and there's no questions asked. I couldn't do it without her.

Larry shares Jim's ideal vision of the type of family support he believes he has received, professing to having had solid family support even from former wives before they became ex-wives. Being a little older, he realizes today that his decision to be a volunteer firefighter may have been a contributing factor to some of his marital woes over the years:

...Well my wife now supports me. I have been through a couple of divorces prior to this one. It's probably affected my family life somewhat. They never said anything about it but I think looking back it probably did.

With the type of volunteering that volunteer firefighters do that often puts their lives at risk, and with the types of calls that they often respond too which in many cases involve some sort of trauma, social networks within the department and within their homes also seem to be an important factor in providing a balance to the extreme conditions that some volunteer firefighters encounter.

Departmental Social Networks

The social networks that the volunteer firefighters first spoke of were the social networks located at their fire halls and made up of other volunteer firefighters. One of the participants, Larry, has participated over the years in his local firefighters association. The associations are semi-professional organizations that can be found in most communities in rural northeastern Ontario that have volunteer fire departments. Many are structured similarly to the community's local Legion branches:

...we have a fire fighters association which is separate from the fire department. We have a president, a secretary and a treasurer. We took our insurance out for injuries and stuff. We pay for it on our own.

Larry told us that contributing to the association's insurance fund has allowed him to have peace of mind when he goes out of the hall to fight a fire. Over the years the local association has been able to give \$300 to \$400 to different firefighters at different times when the association felt they were in need. These were firefighters who were hurt and were off for short periods of time. Larry is also proud that the association has been able to play a supportive role politically to get their municipality to enrol the firefighters in the provincial Workers Safety and Insurance Board (WSIB). All three of the townships represented by the participants in this study have included the volunteer firefighters under their municipal WSIB umbrella.

While social networks, professional or not, were generally seen as being beneficial by almost all of the participants in the study, Sam has described how belonging to a social network actually increased the levels of stress that he was already feeling:

... You're at work and the tones go off and it's telling you there is an accident and you're required at the fire hall. The tones create a stressful situation where I should be going but because of my work situation I can't. Attending the call is being a member of the team and when you don't go, you have a feeling that you're letting the team down because you're leaving them to deal with it. Maybe there won't be enough people on hand - but you don't know that then.

Jim has had a different experience with social networks. The local fire hall is not only the place that he goes to volunteer, but is also the social hub for him and many of the younger volunteer firefighters. In small rural communities there is a good chance that one's friends and neighbours, one's other social networks, also belong to the same volunteer fire department: "If I see a guy at the fire hall that's down or appears overwhelmed, I always invite them to go fishing. Then when we're out on the lake I try

to bump him back up again.” Jim’s department has a greater number of younger volunteer firefighters than the surrounding communities; thus the group members have noticed that they socialize with each other outside of the fire hall as well as within. Jim says that if he

...sees a fellow heading down the wrong path, he will go down there with them and grab their hand and drag them back. I think everyone on the department is like that.

Jim is very active in his social network and always goes there first for advice:

...My first avenue is to go to the guys I’m closest with. Talk to them first and get their opinion. When you’re dealing with a problem inside the circle and everyone else is looking around- they may say “dude-you should go and see someone and talk this thing out, or I’m hear to listen to you buddy”. We use the buddy/buddy system to help each other out.

Frank, who also belongs to the younger department, describes his experience of having his social network from high school reappearing in his new social network at the fire department:

...since we are a young department I know most of the firefighters and went to school with them. We hung around beforehand and then grew apart. Now we have similar interests again so we hang around a little bit more.

Allen’s department has a similar set up to Jim’s, where the firefighters socialize with other people belonging to the department but the firefighters tend to hang around in groups within the department, with the different groups separated more by age and by having similar interests:

...There are always people in the department who are closer to each other than others, so you have networks within departments. Those have always been helpful. You have your close friends and you can talk to them about things.

Alex has not had the same experience of having a consistent social network available to him over his time at the fire hall:

...the social network has been inconsistent. There was a time that I considered some of the firefighter's good friends but one moved and one relationship just changed; but there are some newer guys that I am hanging around with a little bit more now.

Sam began to feel that the rituals of the volunteer fire department that he belonged to were changing at the expense of some of the department's social networks as the business end of volunteer firefighting seemed to be displacing some of the social aspects. In the past, the volunteer firefighters would get together for dinners or dances as a group about three times a year:

...the social functions were slowly taken over by the senior management and the functions became fundraisers so it really wasn't a social network or event anymore but a fund raising event to make the extra dollar to purchase that extra piece of equipment or whatever else was coming up.

Larry had a similar lament about the department's social networks appearing to be changing or eroding away. He felt that the social networks today were moving away from being a tight-knit group of volunteer firefighters to a loose network of individuals who just come in to do the particular job and then leave right after:

...when I first started with the fire services, for the first 10 to 15 years, everybody was like a brother. We protected each other. It's not that way today. It's a whole different ballgame. It's a whole different type of person and a different ballgame.

Larry points to the recent loss of some of the volunteer firefighters' social networks and estimates that he noticed them starting to erode when communities started losing their

yearly ritual of hosting a Fireman's Ball. "There used to be a fireman's ball every year," noted Larry, but "there hasn't been one for years and years now."

It may be that the younger volunteer firefighters are more skilled at using and interacting with other social network formats like Facebook and Twitter instead of developing the social skills to maintain a face-to-face social network within their fire halls.

Debriefing

Some modalities such as group debriefings, specifically CISD methodology, are hotly debated on the basis of their effectiveness (Harris, 2002). On the one hand, Fullerton (1992) suggested the effectiveness of debriefings while Harris (1992) suggested that the debriefings were not mediating factors that lessened or helped to avoid the acquiring of PTSD.

The use of debriefing within the fire halls was the most commonly-cited technique employed by the participants. Of the three townships represented, all of the volunteer firefighters who were interviewed had participated in some form of debriefing group at some point in their volunteer firefighting career. All were also familiar with using debriefing as an educational technique. Debriefing, however, was often separated into two separate categories. The first category and the most commonly cited was technical debriefings; the second was debriefings that were in response to some sort of trauma which could possibly affect the broader group.

In this study, it was learned that debriefing has been employed mainly internally in a technical sense to review hose and ladder placements following service calls. The firefighters saw the technical debriefings as being internal and any debriefing sessions

that included counsellors from outside the department as being external, even though they took place within the same fire hall and often in the same location. Even when dealing with death, the debriefings tended to be specific to the physical aspects. Sam explained,

...we had more technical debriefing even when death was involved. It is more how we could have handled it faster. Where we could have saved the life, possibly, rather than losing the life.

Since volunteer firefighters are accustomed to employing and participating in debriefing sessions; this may be the best technique to use for education at some later date if it is decided to include a trauma component in the basic training modules.

In a discussion with Frank, it became apparent that the volunteer firefighters might understand CISD differently from how it is understood in the research literature:

...we had a critical incident stress team come in. It was made up of the local minister/chaplain. It was a big de-stressor for us and saying-this is what is what happened and this is what we did. There was nothing else we could do. The minister/chaplain then gave everyone his number and said he would be available to us if we needed him.

Frank considered that this process helped to create team cohesion. When discussing internal debriefing sessions without an outside minister/chaplain attending, he noted that "everyone talks and gets their concerns and problems out. And we walk away and everyone is relieved. So far as the mental side goes we are pretty good that way".

The decision to hold a debriefing session is usually made by one of the more senior members of the volunteer fire department, either a captain or a chief. When Frank was asked who instigated these debriefings he mentioned that

...in their department the chief did. He was on the scene of a tragic accident where most of the volunteer firefighters knew the victims. He saw that the people were getting upset. He even got the Ontario Provincial Police (OPP) who attended the scene

and the Emergency Medical Services (EMS) to attend. In the meeting rank didn't mean anything and that was good because some of us told the chief we didn't like the way he handled the situation. We also weren't fearful of repercussions from the police by telling the cop that you didn't appreciate his attitude.

Allen said that at his fire hall "...we debrief after major calls. When things are out of the ordinary. The routine calls we don't." Allen also felt that his fire department had a balance between the physical and mental components of trauma when providing debriefing sessions:

...I think everyone feels it's beneficial, right. I think everyone wants to debrief after a call because there will be things they want to talk about, things they noticed...either a way they think they can improve or sometimes they just want to talk about how they messed up, and have somebody else say its okay, don't feel bad because we've all done it.

Larry also wanted the researcher to know that at his fire hall, "We have always done a lot of debriefing." Larry felt that the onus was on the younger members to request debriefing sessions:

...they knew the help was there because we have had the sessions a couple of times already in the past. Maybe they figured out how to cope on their own which may not be a bad thing...but the guy or gal has to talk to you and tell you, otherwise how do you know?

While some of the departments have instigated debriefings to deal with both the technical and the emotional aspects of volunteer firefighting, the feeling is that the individual has as much responsibility as the organization to be responsible and come forward with any problems. Jim, following along the lines suggested by Larry, emphasised that

...everyone handles situations differently and everyone has a different

opinion when it comes to any sort of trauma. The onus is on the individual to be there. Throw it over your shoulder, or talk to someone, or go hit the bag, or go work out, or go fishing, or whatever it is that makes you feel better...

There is, however, a peculiarity in the debriefing structure in rural northeastern Ontario volunteer fire departments. The debriefing is either done in-house by the officers in the case of technical debriefings or done by the clergy if it deals with trauma or loss of life. When interviewed, all of the participants believed that there were services available to them in case they required it--as may be true of a negative reaction to on-going trauma exposure. When asked, however, few knew how to access the services or locate and identify them.

Locating Services

The majority of the volunteer firefighters interviewed told the researcher that they knew there were mental health services available to them if they needed them. However, they were uncertain of what the services were and who would be providing them.

Alex said that at one time "...I think we had a 1-800 number that was posted for a while. I don't know under what exactly...what the auspices were...maybe crisis intervention? I don't remember." He went on to say:

...I don't think a mental health number is posted today. I think it's fairly common, or at least to the chiefs and I would think and the captains that have been around for a while would know. Basically we go to one of the local ministers. Or if not him maybe the district chief or one of the other chiefs could handle it.

When Alex was queried further he responded that

...the critical incident stress management stuff or procedures that have been put in place have helped. I mean there is a mechanism so that if something traumatic happened, then it would be fairly quickly recognized. By other people in the

department, within each of the districts, and by extension to the whole department.

Larry remembered some sort of counsellor or mental health worker coming to the station in the past:

...well I forget where they came from but they used to come in and talk to us a few times. I think maybe it was the mental health people. We had some training in that. A couple of times or maybe three times. That was way back when I started with the department and then it kind of just seemed to fade away.

Frank felt that if he needed help he would probably call the Red Cross, as they have offices across Ontario:

...if you go to the Red Cross website you can pull up a list of the local branches and the name of a local person you can call. That person could maybe give you the number of your local municipality or somewhere in your area where you go for help. If you're in this area I think you would go to the hospital. I think they must have a stress unit.

Allen said that his department encourages people to come forward if they are having any problems and they will refer them to a person who has experience with that type of problem:

...I don't know where to send them but I am confident that we could find it. Even if I don't know who, I can make a call to someone to help me. For the most part our firefighters manage to deal with it well and I think that certainly the upper management of the place is well aware and knows this could be an issue. I'm just not sure the firefighters know.

For the rural northeastern Ontario volunteer firefighters who participated, the number one resource that they were all aware of for dealing with any mental health problems was to approach their local or regional minister/chaplain. They may not have

known the chaplain's or the minister's name, but from discussions with other volunteer firefighters they knew this help was available.

Peter told the researcher that he had tried to deal with a particular traumatic event that had occurred on a medical call two months earlier. He said he finally reached a point where he went into his Chief's office and said "this one is killing me; it's bugging me so bad I don't know what to do." The chief then referred him to another firefighter who is also a minister:

...so this firefighter is a sensitive guy and he's telling me his own stories and is crying. And then we're both bawling. He's a neat guy who sort of just seemed able to understand.

Peter said the firefighter/minister helped him realize that the call bothered him so much because it reminded him of himself when he used to travel the area to the cottage before moving up permanently several years ago.

...I know why it bothers me now. I never wanted to be a doctor or an ambulance driver. I hate medical calls... I'm still terrified of them. I'm not good with that kind of stuff. I can see blood but not dead people. I hope I'm not the first guy there. I'm comfortable now just helping the ambulance guys with their gear. I've taken tons of first aid but I'm afraid of it.

Alex also mentioned that it is common knowledge among the district chiefs that there is one of the volunteer firefighters who is also a minister. The minister/chaplain is believed to be available to serve in either capacity.

Jim, in a different volunteer fire department, also mentioned using a minister/chaplain, not the one volunteering with the other fire department, but one who was attached to a local church. On reflecting, Jim said:

... Since I've been with the department we haven't had the minister/chaplain come around. But I have heard that this

minister/chaplain used to come around in the past. For a couple of the gorier calls where the guys seemed to need some help.

Sam also made mention of one of the local minister/chaplains from the area who would attend their department if there was a problem:

...He was a local guy. I believe that if we have a problem we're supposed to call this particular minister/chaplain. Now I have never had to call the number. Basically it's private so I have no idea if other members of the fire department have taken advantage of the number or not during stressful situations.

Frank mentioned that he was aware that one of the other municipalities has a minister/chaplain in their fire department and that he knows of another minister/chaplain who is involved with volunteer firefighters. Frank mentioned that he considers this minister /chaplain to be the critical stress management team:

...anyone can call the critical stress management team phone line. And the number is usually to a chief or a senior guy who then relays it on. So the chief will call some other members and then decide whether to call in the minister/chaplain or not.

Allen suggested that volunteer firefighters may not access these services because they are not required. He suggested that maybe within urban fire departments a culture has been created which promotes sharing of feelings which is not present in rural volunteer departments. The amount of time urban firefighters spend together is considerably more than that spent by their rural counter-parts:

...there are no stress counsellors. We get through it okay. I thought that was interesting in the sense that it becomes a cultural thing and maybe that's something like the full-time firefighters. Altogether, they're sharing these things together, and it's a little different for volunteer firefighters, because you're not. You go from whatever is causing you stress to going off on your own. Because we don't have that (culture) of working together thing.

Only two of the participants in the study mentioned being affected negatively by a traumatic event. However, that is still two out of nine persons. One of them dealt with the trauma by seeking help from the minister/chaplain, the other by quitting the fire services. The majority felt they had not been affected and therefore did not require the services. It could be that since the volunteer firefighters seem to mirror their full-time counterparts by having, or reporting having, lower instances of being affected by on-going trauma exposure, it is lack of use that has allowed the services to fall by the wayside. It is also possible that more important matters, in a profession where everything is an emergency and triaged, can push mental health best practices aside even though the intent is to return to them in short order.

The choice to use clergy as opposed to mental health professionals for debriefing or mental health care in rural northeastern Ontario has slowly evolved over time for two reasons. In many small rural communities there is often no access to mental health practitioners and the clergy has stepped forward and assumed that role. Secondly, with the type of structure used by the WSIB (the most often-used insurer of volunteer fire departments), the provision of mental health services is often framed in an adversarial framework (seen as a negative consequence – something only a “weak” person would need, or as a service that needs to be justified) rather than a supportive role.

However, not all clergy are trained in trauma counselling, nor do all mental health professionals have this training. In the conclusion section some recommendations will be made that may make access to services easier for the volunteer firefighters.

The level of training the firefighters had received was also noted in many studies reviewed previously in the Literature Review as being key mediating factors in acquiring/not acquiring PTSD from a traumatic event (Del Ben, 2006). In addition, Hagh-Shenas (2005) has suggested that effective interactions (trained behaviours) were strengthened in the presence of an experienced supervisor.

The Provision of Trauma Training

The volunteer firefighters, with the majority having reported having no personal problems as a result of being repeatedly exposed to trauma, were asked if they felt trauma training at the basic level would be of any benefit to new recruits. Even though most of the participants reported not being affected by their work, most of them thought that some form of trauma training or identification would be a benefit to their fire departments. Jim suggested adding it to the training regime:

...I think touching base on it in training and the mouth to mouth stuff where the guys talk about things is important. If you're not comfortable and you're not happy then you're not going to perform to the best of your ability.

Allen agreed:

...I think we probably should do it; it would be good for our leadership, to have the training so as to have an understanding of what we should be keeping an eye out for. In terms of the people's reactions to that. And how the trauma is affecting them. If there are any signs we should be looking for.

When asked about introducing trauma training to the basic training, Alex said,

...absolutely, yes. Yes. And I mean if I had any recommendations it would be that...in addition to any other crisis intervention policy and procedures or as part of that, an EAP would probably be a good idea.

Larry mentioned that he had never come across this type of training in the Training

Manuals:

...when you get your books from the Fire Marshall's office, and they do change from time to time, and I have never seen it in any of them yet. There are many chapters in it and you just keep repeating through it.

The Provision of Volunteer Firefighter Training

The largest organizational shake-up in volunteer firefighting services prior to the downloading of services in the 1990's was the development of a standard volunteer firefighting training manual in the early 1970's. At that time, a committee was formed in the United States to develop a volunteer firefighting standards manual that was to be distributed internationally. This manual, the *National Fire Protection Association (NFPA) Standard 1001*, has become widely accepted as the standard of measurement for all firefighters in North America (Oklahoma State University, 1995).

Organizationally, many volunteer fire departments then restructured to follow the model teaching format used in the manual. The technical aspects of volunteer firefighting became more consistent across jurisdictions that adopted the manual and a minimum level of professionalism became expected.

Alex describes what training was like when he first joined the volunteer fire department:

...When I first started our fire department is nothing like it is now. The training involved, starting up the trucks, running down the road, maybe running some pumps, then go for a coffee and then back to the hall. I depended a lot on my previous training and experience that I had prior to joining the fire department. Now the training that goes on is far better suited, however, I don't think that any of the training speaks to traumatic events.

Alex notes convergences between his own experiences and viewpoints, and the changes in the minimum training levels for volunteer firefighters that have become more consistent across the region:

... That was the function of politics probably. I think it came with the amalgamation. When we got a full time professional fire chief, the training expectations increased and so the halls that were... well you know that out of the four district halls, one did a good job of training and the others had varying degrees. The Amalgamation pushed up everyone's expectations. So it may have been a matter of the timing coupled with the different political situation or just a coincidence.

Jim referred more directly to the use of the training manual and standard departmental operating guidelines to explain why the training levels are now where they are:

... There are procedures and operating guidelines and everything of that sort. So you have to make sure that you're conscious of what those are and make sure you're not going outside of those parameters because those rules and obligations are there for a reason, to protect yourself, as well as your fellow firefighters.

Allen suggested that their level of training is a result of the good relationship between the department and the local township:

... The Township is very good. We have a fairly good training budget leaving the discretion to the chief as to who will or won't attend certain training. He pretty much approves whatever a person is interested in with a few exceptions. We spend most of our time developing skills. We're currently trying to put together a training center where we will be able to simulate house fires and train from there. You still need the manuals because you're learning all the basics, its just putting it together in a way that makes sense.

Allen's department was later than others in the area in providing some services to its ratepayers. Many rural northeastern Ontario communities are still isolated and have

limited infrastructure. With infrastructure money being spent by the province and federal governments to improve the Trans-Canada highway, many isolated communities are now less isolated, and are being made more responsible for providing services along their sections of it:

... We have just recently taken over the highway. A neighbouring township used to be the one doing it within our township but now it's our responsibility. We can still call them if we need them. Because of this new responsibility we have had to step up our AUTO-EX training. We're feeling confident on that part of the training now.

While the training appears to becoming either more complex or just new to some of the volunteer departments, Larry voiced concerns that culturally the younger recruits are not paying attention to the older training methods:

...like the younger guys don't seem to pay attention anymore at training. They tend to talk about hockey or football all through the training session which is done as a lecture. It's a different type of person today. We used to get a new piece of equipment and go down at night and learn how to run it. You don't see that today. They want to be paid for everything they do or they aren't doing it. You can't get the proper training unless you are paying attention. Today they're not being made to pay attention.

Some of the younger firefighters may want to be taught using different methods as they appear to be going outside of the department for some training. Frank, who attends courses outside of his department, views the training manual as providing general basic reference training. Each rural northeastern community has specific things that are unique to it and this may require the development of local training:

...I have enough training. I go on my own and take courses where the fire department may or my not cover it. I want to be the best. If there is something like trench rescue which the fire department does not cover, I went on my own to take classes as

there is a lot of construction being done in the district right now.

To supplement their ice water rescue training, a number of the younger members have attained their scuba certificates in diving as their township has a number of inland lakes and is adjacent to a large body of water.

Frank also mentioned that a consistency of training across the townships has started to occur since he joined up:

... What has changed since I first joined is that we have a mutual Aide recruit program so that all of the other fire departments send their new firefighters for five Saturdays to group sessions where they talk together and go through recruit training together.

This consistency would be a benefit in situations where multiple fire departments were required to respond and act together; for instance in situations of natural disasters or man-made ones created by train derailments, toxic transport spills, or man-made fires that spread across multiple jurisdictions.

Larger full-time urban fire departments have tried to develop screening tools to choose new candidates for the fire department. The ideal is to choose candidates who already have many of the coping variables in their personality (Harris, 1992). A high efficacy rating would be one of the sought-after variables of personality. Common tools employed in urban departments for recruitment have been the Impact of Events Scale (IES), Becks Depression Inventory, the Self-Efficacy Scale, Social Support Scale, and a Social Provisions Scale (Regehr, 2003).

Higher levels of training also produced higher feelings of efficacy where the volunteer firefighters felt that they could handle any situation, that they had been trained to be able to handle most of what is presented to them. With efficacy came lower stress

levels and fewer feelings of helplessness, these being potential PTSD factors. While discussing efficacy as a coping variable with Alex, he commented:

...that makes sense. You go to a scene and your performance there is competent and technically sound and you're doing the right thing. So one of the stressors or one of the traumatic things that I can imagine a person coming up with is "I've done something wrong. If I had only done this then maybe the person may not have been killed". So yeah...that makes a lot of sense. The more competent you are the more confidence you have and at that point it is also easier to accept if something goes wrong.

Self-efficacy is a term that describes one's belief that he/she can attain a desired outcome. Often the volunteer firefighter attains this belief through mastering a number of different skills which then serve as the foundation for supporting this outlook. The level of training firefighters have will contribute to their confidence. Reghr (2003) found that a particular type of personality may be attracted to firefighting as the study she conducted found the same high levels of self-efficacy within veterans of the fire services as well as in fire services raw recruits. The study originally hypothesized that the veterans would have much higher levels of self-efficacy than the recruits. The organizational structure of the fire department and how the firefighters perceive the organization, positively or negatively, also contribute to whether or not the firefighters see themselves as accomplishing their tasks effectively.

Hagh-Shenas (2005) suggested that experienced supervision coupled with formal training would act as a protective factor against developing PTSD among firefighters. Fullerton (1992) suggests that the type of leadership displayed in an organization can contribute to a firefighter not developing PTSD; debriefing techniques and modeling by senior staff were also noted as being mediating factors against acquiring PSTD.

Thus, the type of training and its level, the firefighter's personality type, the social organizations that the firefighter has access to, the firefighting organization's internal structure, and the senior staff model can all contribute to how a firefighter perceives himself—and to his perception of his capability of performing the job.

Frank suggested that being a member of the volunteer fire department has prepared him to handle situations that he never would have been able to address if he had not received the training:

...I feel I can handle more situations than I would if I wasn't on the fire department. For example, everyone takes first-aid and CPR at some point in their life. Then at a particular moment—when someone is really injured—you have to go can I work on them? Before joining the department I knew how to do first aid but I don't know if I would have managed doing it in a real life situation.

Alex also mentioned that whether a volunteer or a full-time firefighter, there are certain expectations that come with the job. Maybe the volunteer will not be held to the line as stringently as the full-time firefighter, but they share the same standards, which have minimum expectations attached to them. All firefighters should be striving to feel competent operating at these levels. In fact, of the four municipalities that had members participating in the study, two have professional fire chiefs hired from large metropolitan centers.

Allen felt that his department is beginning to take the lead in trying to offer more training courses that volunteer firefighters want to attend. He noted that

...we have a very good training budget and with few exceptions whatever area of firefighting a volunteer is interested in, we can probably make the budget fit to allow them to attend training. We have increased our level of training in medical assistance so that we are all comfortable with any situation that we come across. We have even begun to put

together a training center so we can practice under conditions that would be similar to those you have at a real fire.

Organizational Leadership

This section will discuss both the historical background of the organizational changes of the volunteer fire services in Northeastern Ontario, as well as the current structure of the volunteer fire services.

Historical Background to Organizational/Structural Change

From 1966 until 1996 the Federal Government of Canada, in an effort to consolidate social assistance and other social security programs in Canada, developed and administered the Canada Assistance Plan (CAP). CAP gathered the cost-sharing formulas in the areas of income security, social services, education and healthcare into one system. It also designated to the provinces what the national standards would be. (Hick, 2004).

The Federal Government revisited the CAP program in 1996 as part of its deficit reduction program, and the CAP program was replaced by the Canadian Health and Social Transfer (CHST) which set the funding for social assistance, social services, healthcare and post-secondary education (Hick, 2004).

As a result of this policy change, federal transfers to the provinces were reduced by between \$6 and \$7 billion annually: The federal government basically eliminated its deficit by giving it to the provinces (Lightman, 2003). The Ontario provincial government, while arguing about the unfairness of downloading, and the sleight-of-hand manner used, then copied the behaviour of the federal government and downloaded their services and deficit to the local municipalities and townships.

The downloading of services in Ontario was a result of the provincial government's policy decision to implement supply-side economics. It was suggested that

the provincial economic model would allow the government to cut provincial programs and services, which would then free up space for private companies to come in and provide the programs in a more cost-effective manner. For every dollar in services reduced by the government there would be an equal tax reduction to industry. The size of the government would be reduced and tax money would be saved. Industry would benefit through the reduction or elimination of existing taxes. This tax reduction or benefit would then give private companies the needed capital to step in and provide the services which were now vacated by the government (Lightman, 2003). There was an underlying assumption that businesses would take the money they saved by the reduction or elimination of taxes and invest it in the services vacated by the government, and not just pass on these savings in the form of dividends to their shareholders. It was also assumed that businesses would want to provide the services. In order to pay for the services that were downloaded, the province encouraged many townships and rural communities to begin a process of amalgamation. While volunteer fire departments were never targeted directly by this policy decision, it did have effects on them.

It was hoped that by combining formerly separate municipalities, economies of scale could be created in order to pay for services. Volunteer firefighting was affected by the amalgamation as the formerly separate fire departments' capital equipment was often removed and shuffled around to other departments in order to provide a more equitable service across the new townships. In some townships, volunteer fire departments were formerly independent of the township and operated through associations; raised their own money to buy equipment, and offered expanded services. Many of the volunteer fire departments either belonged to or joined mutual aid associations, where resources across

the newly created townships and those that did not amalgamate would be shared in the case of a disaster.

Townships also began requiring all volunteer fire departments to have a minimal level of training. Of the four municipalities that are represented by the participants in this study, all have slight variants of organizational structure. How they deliver the fire services in each is a reflection of each municipality's own character, monies available, and programs or services that it feels it requires. All were affected by amalgamation even if they were not amalgamated directly. One of the townships was formerly four separate townships; each with its own volunteer fire department and training regime. It is now one township which is divided into districts or wards. Each district or ward is serviced by a volunteer fire station.

Volunteer firefighting is often still going through a process of change in rural Northeastern Ontario. Some municipalities feel they have completed this process while others are still engaged in it.

Amalgamation, like any change, is not always going to be welcomed by all those affected. Of the four townships represented, three out of the four went outside of the departments and hired full-time Fire Chiefs from larger municipal areas to come in and reorganize or restructure the volunteer departments at the time of the amalgamations. Today, two have chiefs hired from outside of the area, and two have hired internally. The process itself, for some of the volunteers, took an emotional toll. Alex describes the period directly after amalgamation:

...There was some internal politics. Trouble within the department that didn't help things. As you know...but as background for your study, I started as a firefighter, went to a captain, and then served as a chief for a while. I always saw

that as being promoted prematurely, but I understood at the time why it had to happen when it did. From those above me I had 100% support that was never an issue. It was the ones that thought they should have had the job that I didn't get support from. The whole scenario ground me down more than I expected and that was disappointing. I have never fully recovered from the process.

Jim felt that by bringing in outsiders to reorganize his department, the result was a benefit to the whole organization.

...It is very well organized. The guys in charge right now are top notch guys. They know what they are talking about.

Sam however was not happy with the re-organization of his department.

Structurally the department looked strong on paper but it was...

...not strong enough in my view. Not my department anyways. The structure was there in place but anything under the chief I wasn't impressed with. Many of the captains were just firefighters with a captain's hat. My idea of a captain is somebody that can educate me as a firefighter.

Allen stressed that his department and township have recently put a lot of time and money into the volunteer fire department to try to create a new organization that has an *esprit de corp*. Through the new organizational setup they are trying to create a level of professionalism and confidence that will translate into providing a better level of service to ratepayers and retaining the volunteer firefighters that they are able to recruit:

... We have put a lot of effort into uniforms and station ware so that people feel they are part of a team. And we have a new chief. He's actually a former full-time firefighter from the city. He brings a certain level of professionalism to it, a different experience where a lot of the calls are more routine for him... The rest of us get excited when things happen as it doesn't happen that often, he's helping to build people's confidence.

Allen further suggested that some other unexpected changes had happened when the fire department started becoming more affiliated with the township:

... The municipality's insurance company asked if they had an alcohol policy, so all eyes went to the fire hall because they knew there was a beer fridge there. And the question was how do we deal with this? So the position of our council at that time was you can't have a beer fridge.

Of the four municipalities that are represented by the participating firefighters, all have been affected by restructuring, and all four have restructured differently to provide their services. Two are based on variances of shift work, one is based on a pager to which all volunteer firefighters respond; the last is also a call-and-all-respond system, but with restricted areas of response. Boundaries are designated that dictate who is to respond where.

Allen explains how the fire department organization used to be: "... For the first ten years of my firefighting career, I went to almost every call. We all did. Thirteen or fourteen people arriving at a medical call. But you always felt that you had to go."

Allen's department is now setup in groups and each group is assigned a shift to cover:

... We have set up everybody in groups. Each group is made up of one officer and then the firefighters. And they always work together. We have everything broken down into primary and secondary shifts, so there are always eight firefighters available to respond to something within the township. During the day it is a little more difficult. So what we are hoping is that people get used to working the shifts. The nice thing with the shift system is that you're on primary for one week so you pretty much have to be in the township. And the second week you're on the secondary crew, which means you can travel to anywhere in the area.

Sam, who is from one of the smaller departments, feels that soon his fire department is going to have to adopt some sort of off-shift work model as well. Right now when the pager goes off in his municipality it is calling out all the volunteer

firefighters, much like Allen's department did previously. During the day when everyone is working, it is difficult sometimes to get a full complement out:

...I think it's getting to the point where there will be no choice. It going to be like the way our nearest local town operates. There is a certain amount of staff assigned to particular days or weekends. They are assigned one weekend a month where they have to be within 5 minutes of the fire hall. I think all of us volunteers in the area should be wrapping our heads around that.

Sam referred to the local town and its current organizational setup for volunteer firefighters. One of the benefits of the town system is that they are always covered with a minimum number of firefighters who can respond to any call. If a situation warrants it, additional firefighters can be called out. One of the drawbacks for implementing this structure is a smaller population base. A smaller locale with a smaller population base may not have the manpower available to cover the shifts. Also, the town is landlocked in the sense that they cover only incidents within its boundaries. The surrounding municipalities that abut the town line cover a much larger square-kilometre area with fewer resources in equipment and manpower.

Alex's township also uses the one-call/everyone responds format. The area is served by a number of smaller district fire halls spread across the municipality. The volunteer firefighters respond only to areas assigned to them and will help the other stations upon request or depending on the type of call. Alex is not sure if he supports the shift concept and would like to have a lot more discussion first:

... I wouldn't say no, but I would want to know what other people think. I mean it's a reasonable suggestion. It has some pros and cons. It would have to be hashed out. Up until this point with the fire department I have never not done something I wanted to because of the fire department. In this scenario, that would start.

In Alex's volunteer firefighting career, because of the call/response structure, he has been able to take weekends off and go to the family cabin or cottage. With the general page system everyone in the district is informed of an emergency. The number of volunteer members who remain in the district during the weekends would be the firefighters available to service the call.

The last three areas of how volunteer firefighters cope with on-going exposure to trauma concern the use of rituals, the participants' own suggestions, and the use of attrition to address problems or perceived problems.

Rituals

Fullerton (1992) has suggested that "beliefs are an aspect of social support and aid in the cognitive integration of the present experience with one's past views of life" (p. 376). Groups use rituals to organize their experiences and to attribute meanings. The number one ritual that most of the participants mentioned using is also one that has been phased out over the last few years in response to the increasing complexity and legality being applied to volunteer fire departments. That ritual involved having a beer from the beer fridge after a fire call.

Alex mentioned that he could only actually think of one ritual that was practiced at their hall consistently over time and that was the beer after the difficult call:

...the only one I can think of is the hanging out behind the fire trucks when I first started. I guess we also had the beer fridge and the room upstairs where we could have a chat and a beer or two. And, I remember that after some calls we would go up and talk. So that's continued just without the beer in the halls.

Allen's department also shared the same ritual, but as in Alex's department, also because of legalities and a change in societal values, the ritual has been removed:

...There was our insurance company which asked the municipality if it had an alcohol policy, so all eyes went to the fire hall because they knew we had a beer fridge there. The question was how we will deal with this. Council's position was that we could no longer have the beer fridge.

Neither department has replaced this ritual. Both departments have mantras that the firefighters share and use in common. A mantra is a saying or a phrase that is often repeated or used over and over in times of stress. At Alex's department the mantra is "I didn't make this problem. So as long as I don't do anything to make it worse I'm okay with that." At Jim's department it is, "We didn't cause the problem, we're just here to help." The use of rituals and mantras or sayings was not the only coping tool mentioned by the volunteer firefighters when they were asked if they could suggest different methods that have worked for them and could possibly be used by other volunteer firefighters.

Participants' Recommendations for Coping

Each of the participants spoke of his own individual ways of coping with the work he does as a volunteer firefighter. Frank believes that reviewing the department's protocols and feeling that he is in compliance helps him with coping:

...we all have protocols we are supposed to do and then check off. I did that one. I did everything with that one. I did this one. I review everything I did or could have done without going above my training.

Frank feels that coping is a process: "...after a few days of reviewing how you did the CPR, what the oxygen was at, etc..., you get to a place where you go there isn't anything else I could have done. Then you're left with acceptance." He also suggests that he calms his mind by driving or engaging in computer games:

...I may just jump in the car and drive. No where special, just drive to drive. Or I may play a computer game that requires no real thinking and just get lost in it. One of those shoot 'em up games. I also ride my bike to exhaust myself when my mind won't shut off sometimes.

Barney and Fred both suggested that to begin talking about an incident is often what helps them to begin the coping process. They both felt that talking was the most beneficial coping tool for them. Fred also believes that one's particular worldview helps the process:

...Once I go through it (the trauma) and we finish the job, we talk among ourselves. When I leave there I leave it there. And I really enjoy doing what I'm doing. I'm here to help people. Some people die but I know that there is nothing I can do about it. I know there is nothing else I could have done so I leave it there. I'm there to help.

Jim has what almost amounts to a grocery list of coping skills he either uses or is familiar with or suggests to volunteer firefighters around him. The first thing for him, he said, is being able to express his feelings and his emotions. We are all human and are going to be affected differently:

...Maybe some of the guys and I will go down and hit the bag for a while or go and work out. Then you could stop and have a smoke, or have a coffee, or go shoot the breeze with some other guys. Some guys use the debriefing as a way to maybe do some venting and get everything out.

Among the participants who took part in the study, debriefing as a technique for coping came up again and again. Jim not only recommended activities that could be done within the fire hall to help with coping but also suggested that volunteer firefighters should also be referred to outside professionals:

...I approach individuals myself you know. Try to get them to talk and see where their head is at from the trauma. I offer them suggestions like go talk to this individual or that one. At that

point the ball is basically back in their court, it's up to them to accept or not...now if they don't want to talk to someone internally and want to get counselling that's a great idea. I've never had to do it but the guys that have, said it was great. Just getting that stuff off their chests.

Although Jim has suggested that

...the fire department offers, if you go through a traumatic event and are going through a tough time- that you can go see a person. A psychologist for example, to get yourself in tune,

none of the other participants interviewed mentioned the services of a psychologist being available. It may be that Jim, who has shared that he has not availed himself of any counselling services personally, had heard about the counselling services offered by the minister/chaplains in the area and misunderstood who was delivering these services.

This may also be a misunderstanding in defining terms that appeared occasionally during the interviews. An earlier example was the firefighters' use of the term "critical incident debriefing team" when they were referring not to a team but to a local minister/chaplain who came in to assist in a group debriefing session. The discussion section will expand a little further on this use of language. For instance, I have heard some of the officers using the key popular language terms currently being promoted and bandied about in the firefighting trade magazines, and then trying to get their services to somehow fit these terms.

Allen did not think that his department currently had anyone with the proper training to deal with someone who was having problems that were a result of trauma exposure. He therefore encouraged the people in his department to come forward and to "...let us know you are having a problem and we will put them in touch with a professional outside of the service."

Larry mentioned that volunteer firefighters also have to be self-aware enough to realize that they are being affected by an incident, and then be able to ask for help:

... You can tell the ones that were upset from the incident, but like I said, we would talk about it, and then I would ask them if they wanted special help, or to bring someone in--for special help and they would say "no".

Larry also mentioned that some of his coping may be a result of becoming numbed to certain situations over time. This numbing may be from the sheer repetition of a type of call or may be just reaching a point of accepting that certain incidents are going to happen no matter how diligent a person is:

...it got to a point where it didn't bother me so much, like I didn't like to see that, and I hope it doesn't happen but it does. It came to a point where I had to accept it. It seemed at the time I could deal with it without any problems. It's sad but you deal with it.

Allen said that some of their volunteer firefighters on the department have trouble being able to accept the outcome of some calls. For those firefighters,

...once they have expressed to me that they had calls that affected them, and then they say "I can't do this again". And then you have to sit down and talk with them and reassure them that what they are feeling is normal.

Allen has a discussion with the person to see if there is another role that the person is comfortable with that will not put him into that type of situation again. The reality is that they probably will not be in the exact situation again, but it is important to find out what the person is comfortable with.

A few participants said they were finding it harder to cope the longer they stayed on with the service. Alex compares his coping skills with his earlier experience of the service:

...it's a greater demand on your family now. I thought that when they got older there would be less demands but there isn't. It's just different demands. Maybe I'm just tiring out or losing the drive. I haven't identified yet why my enthusiasm is waning lately. I have the coping skills required and can talk to other people. I have credibility within the department and I know that I could help someone if they were having a problem. Still I haven't identified why am I feeling this way...?

Alex decided early in his volunteer firefighting career that in order to function effectively as a firefighter he would also need to live a healthful other life for balance. He disclosed that "I'm not sure how the other firefighters feel about it but I take a lot of time off in the summer for myself."

Sam, when asked how he had coped, said "I like to keep things quiet and on the inside." Sam was the volunteer firefighter who admitted to being affected by ongoing trauma exposure and who left the fire services shortly thereafter.

Another method of coping which was brought forward during the interviews was the use of social networks which has been discussed in an earlier section. While the volunteer firefighters did not call these social groups "networks," they did mention groups of people who were supportive of them as individuals and who seemed to be consistent over time. A social network (Roberts & Greene, 2002) has been described as a structure that has a number of people and/or groups with whom one has contact, such as family, friends, neighbours, and other close acquaintances.

Attrition

Multiple reasons were offered by the participants as to why there is, or was, an attrition problem at their fire departments. Not being compensated fairly; an increase in the complexity of the training and more time required to train; internal political fighting among officers that had an effect on the rank and file; and poor training at the officer levels creating a situation where some volunteer firefighters were not comfortable putting their lives in that person's hands were all reasons discussed by the participants. In addition, participants said that the reality of volunteer firefighting often does not live up to Hollywood expectations and that having to move for work was another reason. Finally, volunteer firefighters are aging and may not be able to physically keep up with the physical demands asked of them. Some of the departments, in some of the townships, have taken steps to address these issues.

Compensation

Peter suggests that just being a volunteer firefighter costs one money. While one may be protected from being dismissed from his job because of responding to fire calls, it still...

...stresses out your pocketbook. Work, no matter how good your placement or how secure your job –there are times when the alarms and bells and whistles when they go off, it's just not convenient.

Sam notes that volunteer firefighter compensation, if compared hourly, is often less than minimum wage. If money was the main concern, a person might choose an outside job:

...If you accept the volunteer pay and compare it against the minimum paying job outside. The outside job would pay you more then going out and being at a bush fire for 14 hours. And a volunteer job like the fire department can't be planned for,

whereas a minimum an hour paying job, it's planned and you know what you're going to work.

Allen's township is the only township that has increased compensation to the volunteer firefighters as well as providing uniforms and station gear. This occurred shortly after a new fire chief was hired from a larger center. Allen explained why they had to respond this way:

... We started having people come in and say we can't make the time commitment anymore. So they had to get a part-time job. So what we have done is to try to make the volunteer fire department into a part-time job. We also increased the volunteer firefighter's compensation package which to a large degree is keeping people in.

Allen explains that in response to increased time demands being a negative factor, his department switched to the shift system. Volunteer firefighters would be able to do some planning of outside activities and not feel the pressure of being on call, all the time:

... we have now moved to a shift system. So for instance, right now there is a primary shift, which I am not on. So there would be four people that would respond to a medical call. Unless it was next door I wouldn't have to go and the shift would take care of it.

Not all firefighters feel that the volunteers are undercompensated, however. Larry feels that too much compensation destroys the volunteer component of firefighting. Larry feels that firefighters do less and less, with the training levels being affected as they (the volunteer firefighters) will not study on their own without receiving compensation:

... I took one firefighter aside and said it would not hurt you to do what I used to do and come down here at night and learn how to use the pump, and the valves and where everything is supposed to be set. Now you might not get paid for it but it will make you a better firefighter. That's what's wrong today, they're overpaid.

One school of thought is that volunteer firefighting is becoming a job and that volunteer firefighters should be compensated accordingly. The other school is that it is about volunteering and helping to serve one's community. The compensation of providing a minimum bursary to put toward buying an extra set of boots or toward contributing to gas for one's vehicle, which many use to respond to fire calls, is a token gesture only. Larry's department has not adjusted their compensation package to reflect a shift in perception by some of its volunteer firefighters that firefighting is a part-time job and not a civic duty.

Internal Politics

Internal politics have also affected the volunteer firefighters who participated in this study. As Alex explained, "There were some internal politics. Trouble within the department that didn't help things. As you know..." Both Allen and Alex, who are senior officers in different townships, have described feeling out of their depth from a training standpoint once they reached a certain level in the volunteer firefighter hierarchy. Both felt they were promoted prematurely for political reasons and their training suffered because of this. Both officers felt they had not been trained to know either what was expected of them or the protocols that they were required to meet. Fred felt that some people within the stations were promoted for political reasons and not for their ability to do the job. Sam agreed with Fred's assessment: "I didn't necessarily agree with the political decisions coming down."

Peter made an observation about some of the firefighters that he has seen join the department and then leave shortly afterwards:

...I think a lot of the guys picture it as fighting fires, the exciting romantic thing and you realize that, that's just part of

it. It's those medical calls and seniors and car accidents – and the other stuff that you think of as firefighting which isn't the reality...I think a lot of the younger guys especially think this when they come in, so I don't get close until I know they're staying around.

Other firefighters share similar stories of younger people fresh out of high school joining the department with similar idealized concepts of what the job entails and leaving shortly afterwards. Frank has noticed that the shift in people not staying as long is now changing at his hall:

...we have a lot more coming then leaving now. About five years ago I think, there was a big turnover. People come, people go, people come, and people go. We didn't know who we were going to run a call with because it changed from week to week.

Jim and Allen, who are in different departments, have attributed their station's attrition to employment opportunities becoming available in other communities. Jim notes:

... Our department has been very fortunate. The group that is there now has been pretty tight knit for about ten years, and you may get guys leaving every couple of years.

As well, Allen squarely attributes the attrition to employment opportunities becoming available elsewhere:

...most of our attrition has been to...people moving or relocating for their jobs. Or their jobs take on more responsibility. For the most part, the main reason is that people have moved out. Every once in a while the time demands that they have taken ...well people say they can't continue to give that amount of time.

Larry also sees there being more mobility today than there was twenty years ago:

...When I started and really for the first twenty years, guys would join and they were always there. Some people get on and then don't like it and they go. Some move some place else

or get a better job. We have a lot more turn over today then we have ever had.

The final area that one of the volunteer firefighters felt might be contributing to attrition in some of the fire halls is the aging demographic of the volunteer firefighters. Although Alex was the only one to note this, it is very apparent in the demographic information collected from the participants:

... I think it's more of an age thing. Most of the guys that resisted our increasing the minimum standards or training levels were old enough that their attrition was as due to age as anything else.

According to the participants, all of the departments and townships were aware of attrition concerns and were affected by it to different degrees. All were aware of the problems of keeping a group of volunteers together and each addressed this in different ways.

Frank reported that in the summer months his department has tried to vary the training to keep the volunteers interested:

... What we have done in the last five years of growth is to try in the summer months to have outdoor practices and hands on practices. I know some people don't like theory and while theory is important, if it's nice out and you have light till 9pm then that's good training time. Before all of our training was theory based.

Allen discussed increasing compensation, providing firefighting uniforms to its members and the restructuring of its on-call system from a one-page-to-all system to a shift-work model. The others are hybrids of the above.

The structure of the volunteer fire departments of the participants in the study has also been affected by policy decisions made by the federal government in the 1990's. The

hiring of senior officers, the services that are or are not provided, the call-and-response systems that each employs, and the providing of a minimum level of competency across all of the townships are results of those policy decisions. The organization/structure of rural northeastern volunteer firefighters is still being affected as new plans for amalgamation are being proposed and work on the highways continues on its northern march.

Posttraumatic Growth

Posttraumatic Growth (PTG) in the literature is a concept that has emerged as a new modality to shift the perception of all traumatic events from being only negative to also allowing for positive outcomes. PTG, like PTSD, suffers from an internal debate over definitions and conceptual questions (Butler, 2007; Baker, 2008). In the literature, PTG has also been called "benefit-finding" or "psychosocial resource gains" (Butler, 2007).

Two scales have been created to measure these experiences. One of them is the Posttraumatic Growth Inventory (PTGI), and the second is the Stress-related Growth Scale (SRGS) (Baker, Kelly, Calhoun, Cann, Tedeschi, 2008). The PTGI includes five domains: personal strength, new possibilities, appreciation of life, relating to others, and spiritual change. Neither scale allows the reporting of negative experiences (Baker, 2008). That a person must instigate some form of action to effect positive growth is noted in the literature (Butler, 2007). As mentioned at the beginning of this paper, there are differences in the literature in the definition of trauma.

The actual nature of the jobs they perform may help volunteer firefighters to become stronger and grow from their experience and on-going exposure to trauma. Their

experiences could support the new modality type and be called posttraumatic growth (PTG).

All of the volunteer firefighters who participated in the study were asked to respond to a statement about PTG: They were asked whether they felt they had experienced PTG or, if not themselves, if they had witnessed it in another individual. Some of the volunteer firefighter's stories seemed to illustrate that they had experienced some type of growth over their volunteer firefighting careers. The majority of volunteer firefighters, however, did not attribute this growth to being the result of PTG. Of the participants who responded, there was a "no," a qualified "maybe," and a number of others straddling the fence on the issue. Certainly, this emerging area in the research literature could be further explored with volunteer firefighters.

Summary

This chapter has discussed, in detail, the participants' experiences of volunteer firefighting, how they cope with the work they do, and the recommendations they made to mitigate the impact of trauma. Chapter 5 will conclude with a summary of the significant findings of this study and provide a discussion of the recommendations made by the participants throughout the interviews.

Chapter 5 – Conclusion

Because of the characteristics of their jobs, firefighters are exposed to trauma on a regular basis and have therefore become ideal candidates for the study of trauma and Post Traumatic Stress Disorder (PTSD). Although much literature has been written on PTSD and trauma, very little research has been done with volunteer firefighters (Del Ben, 2006; Regehr, 2003; Murphy, 2004): Only two articles on trauma or posttraumatic stress disorder and rural volunteer firefighters were found. Bryant and Harvey (1995) found that proximity to death, perceived severity of the trauma, fear of the traumatic event, and stress (such as unemployment or loss of a loved one) post- trauma were related to posttraumatic stress. Bryant (1996) found that PTSD is not linearly related to specific traumatic events; rather, the severity of the threat and the threat itself are more important predictors of posttraumatic stress. The hypothesis that volunteer firefighters exposed to multiple instances of trauma would report higher levels of posttraumatic stress was supported by the research. Additionally, Bryant and Harvey (1996) recommended the need for appropriate interventions with the rural volunteer firefighter population.

Many of the studies on full-time firefighters have utilized quantitative methods in the form of surveys and identify mediating variables that help protect urban firefighters from acquiring PTSD. "Trauma and Rural Volunteer Firefighters," for example, is a qualitative research study completed as part of the requirements for an M.S.W. degree. It was designed to explore the experiences of rural volunteer firefighters and contribute to an understanding of their firefighting work experiences in order to identify, through the volunteer firefighters' sharing of their personal experiences, the impact on them, how

they cope, and their suggestions for mediating the impact of the volunteer firefighting work.

Nine individual in-depth interviews were conducted with rural volunteer firefighters. The research questions that guided this study were: What are the work experiences of a group of rural volunteer firefighters, how do they cope, and what are the positive aspects of the work that they do? Data was analyzed using a qualitative approach suggested by Tutty, Rothery, and Grinnell (1996).

This chapter will present and discuss the significant findings of the study, the participant's recommendations, the study's limitations, implications for future research, and the implications for social work practice.

Significant Findings

As has been shown in the discussion chapter, the rural Canadian volunteer firefighters who volunteered to participate in this study do not have a universal definition of trauma or its domains. The volunteer firefighters interviewed joined their departments either through an invitation from a friend or family member or as the result of going through a traumatic event themselves. The number one component of volunteering firefighting that they were unaware of before joining the department was the number of ambulance assist calls that they would be attending as volunteer firefighters. That the volunteer firefighters would know the victims, while this would appear to be obvious in a small community, was often also a surprise. The categories or types of trauma that the participants mentioned being exposed to were profound physical injuries, injuries to children, accidents resulting in death, death of a friend, and the death of family members. Volunteer firefighting obviously carries with it exposure to trauma in the course of

carrying out one's duties. The majority of the volunteer firefighters who participated in the study did not feel that they were affected mentally by ongoing exposure to trauma.

Volunteer firefighters' coping tools included social networks, training, organizational leadership, length of service, and the use of rituals and attrition. Most volunteer firefighters knew that services were available to them if they required them because of on-going exposure to trauma, but were unaware of how to access these services. All of the participants believed that their municipalities knew about the attrition or perceived attrition problems within the volunteer fire services. The majority of volunteer firefighters, when questioned about Post Traumatic Growth, were unsure about the issue.

Participants' Recommendations

Participants in this study were asked for their suggestions for improving the provision of services to volunteer firefighters. Their suggestions included the effect of trauma exposure, training, trauma counselling, and recruitment.

Effect of Ongoing Exposure to Trauma

The majority of the volunteer firefighters did not self-report being affected by ongoing exposure to trauma which is consistent with the findings from urban full-time fire departments (Del Ben, K.S., et al, 2006). There were, however, two out of nine participants who did. If the same ratio held true when expanded to cover the larger group of volunteer firefighters, 20 out of every 90 volunteer firefighters felt affected. Whether the volunteer firefighters decided to access the support services or not, the numbers justify having those services available and the firefighters being made aware of them.

Training

Participants' suggestions for training bridged five categories. The first suggestion was to provide trauma training during basic training, and the second was to incorporate the use of the debriefing framework when dealing with the topic of trauma. The third suggestion was to agree upon a common language or terminology to use across the fire departments when addressing the phenomenon of trauma, while the fourth was to improve the efficacy levels of those serving so as to reduce their feelings of helplessness. Finally, it was suggested that the training programs for those serving above the rank of captain be reviewed and improved.

Volunteer Firefighter Training and Trauma

The consensus from the participants, across the departments and townships, was that trauma recognition, and tools to cope with exposure to it, should be included in the volunteer firefighters' basic training. This volunteer firefighters' recommendation parallels recommendations that were made in a study of large urban fire departments concerning the best time to introduce critical incident stress and self-care. That study also identified the optimum time as being during basic training (Regehr et al., 2003). The departments, individually or regionally, through the mutual aid program, should develop an operating definition of what trauma is and strive to include both the physical and mental domains. All of the volunteer firefighters would then have the same definition and frame of reference when talking about trauma. In choosing a definition the departments could look at full-time firefighter trauma literature or military trauma literature, and then choose the best definition to reflect the character of their region.

Debriefing

The best method for teaching the new volunteer firefighters about trauma and coping strategies might be to employ a debriefing framework. All of the townships represented in the study employed some form of debriefing session within their fire departments. Since the framework is already accepted, and the new volunteer firefighters are going to be experiencing it at some point in the future, introducing the framework at the basic training level, paired with the trauma training, could be beneficial.

Language

Language is important and trauma sessions framed as education sessions are better attended. Wives of full-time firefighters after the 9/11 tragedy noted that while counselling services were available to their husbands and encouraged at the station level, very few of the firefighters actually availed themselves of the services (Menendez, A.M., et al, 2006). A recommendation made at that time was that these group sessions should not have been presented as counselling sessions but rather as education sessions. When they were framed as education sessions, they were better attended and the information was more widely dispersed throughout the stations. Unfortunately, stigma is attached to events that may be perceived as counselling; thus, if administration wants to engage as many volunteer firefighters as possible after a traumatic event, they may want to frame the session under the educational umbrella rather than a therapeutic one.

Efficacy

Participants agreed that the more training firefighters had, the higher their level of efficacy. As well, the higher the firefighters' feelings of efficacy, the lower the firefighter's risk of acquiring PTSD (Fullerton, 1992). This belief in one's ability to be

able to handle situations that one may be faced with provides the positive effect of increasing a person's self-confidence. With emergency calls often becoming more complex as more services are being offered by volunteer fire departments, the time required to train for these types of calls is also extended. Participants suggested that procedures be reviewed with an eye to maximizing training time.

Training for the rank of captain and above

Some of the participants suggested that training for captains and above the rank of captain, as provided by the volunteer fire service, should be reviewed. It was suggested that what is being offered now is not meeting the needs of these officers.

The Provision of Trauma Counselling

Participants said that, currently, trauma counselling within the region is provided by two local ministers. It is a benefit to have someone available in case a volunteer firefighter is in distress. It was unclear in the interviews whether the ministers have received any trauma counselling training. As not all volunteer firefighters are Christian, and Northeastern Ontario has a number of volunteer fire departments located on First Nations territory, it may be a benefit to have non-denominational counselling available. Since accessing mental health services from the WSIB (the insurer of most volunteer fire departments) tends to be difficult, it was suggested that the townships allow the volunteer firefighters to access the mental health component of their township's Employee Assistance Plan (EAP). This would expedite access to services and be less stigmatizing as there is an anonymous (to the township) 1-800-number for applying for services.

Social Networks

The new social networking technologies should be embraced and adapted as an aspect of training and incorporated into the communication network among the volunteer firefighters. Younger volunteer firefighters should be asked about how they may see the technologies being employed across the fire department, whether for communication or training. Social networks (Fullerton, et al, 1992) have been shown to be one of the variables that help firefighters to cope with ongoing trauma exposure. In this study, participants described the importance to them of social networks and suggested a dance, volunteer firefighter games, or any activities designed as team-building exercises that would create a bond between the firefighters. However, the administration should be careful not to change the event from a strengthening of the department through social interaction to a fund-raising event. Several participants mentioned they no longer attended social network events because they feel it is not about them as firefighters but rather a need by the department for free labour dressed up as some sort of firefighter appreciation event. Although both have their place, the purpose of events should be clearly understood by all concerned.

Recruitment

With most being in their late forties, the participants suggested that it is imperative that departments start attracting younger members. As many of the participants were not initially made aware of all the services they would be expected to provide, they suggested that a recruitment kit that explains what volunteer firefighting is, what services the volunteer firefighters provide, and a brief history of the service in the region might assist in recruiting new members. There may be people in the community

with an interest in helping to provide EMS assistance who are not aware the volunteer fire departments provide this service.

Limitations of the Study

The limitations of this study included the small sample size, the time limit of the interview and the gender disparity of the participants.

One of the limitations to this study was the small sample size. The sample of nine rural volunteer firefighters was also one of convenience as the four townships represented by the participants were geographically located where the researcher once volunteered as a firefighter and still lives. Not being able to recruit all of the participants from one township was originally seen as a limitation. Later this view was overturned as it became apparent, when snowball sampling was employed, that having more townships participating with different organizational structures gave the study a more regional view and more depth, allowing the comparing and contrasting of the statements of the volunteer firefighters between the fire departments and townships.

The time limit available to conduct the interviews may have impeded some of the volunteer firefighters' giving a full account of their perceptions of coping tools and strategies or taking a deeper look into the positive aspects of the work they do.

While there are a number of women volunteer firefighters represented across the townships, none chose to participate in the study. Thus the study represents the views of white (100% of participants), males (100% of participants), who were predominantly middle aged (average age 47.55 years). The views of female volunteer firefighters or firefighters of other genders are therefore not represented by this study.

Implications for Future Research

One implication of this study for future research is that it now provides qualitative data on the experiences of a small group of rural volunteer firefighters. A future study may want to incorporate several more municipality fire departments to determine if they have similar experiences when compared with this sample of volunteer firefighters. It may be that other rural Northeaster Ontario fire departments have addressed some of the issues brought up in the recommendations and, therefore, the two bodies of knowledge can be combined to develop a best practice as it concerns trauma and volunteer firefighters.

Implications for Social Work Practice

Social workers may be the first-line mental health/trauma workers who meet and treat volunteer firefighters in rural communities and play an important role in recognizing and treating PTSD symptoms in volunteer firefighters following exposure to repetitive trauma. This study will, it is hoped, build on the knowledge acquired from prior full-time firefighter studies and allow the practitioner to become familiar with the risk factors and coping strategies that best suit volunteer firefighting populations.

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Appendices

Appendix 1

LETTER OF INTRODUCTION

(On letterhead)

My name is Brad Campbell and I am a Graduate Student in the School of Social Work at Laurentian University. I am interested in the experiences of rural volunteer firefighters, how they cope with exposure to trauma, and what positive aspects they may have experienced as a result of being exposed to trauma. I would like to invite you to participate in this study. The study could be helpful to you and the fire services in several ways. You may find it beneficial to be part of a study which is designed to be used in the education and ongoing training of volunteer firefighters. The study is also important as there have been only two other studies that I am aware of dealing with rural volunteer firefighters and the context of volunteer firefighters being exposed to on-going trauma. These previous studies took place with rural volunteer firefighters in New South Wales, Australia. This study could be useful in providing a foundation for developing a trauma training program for new volunteer firefighters or trauma education programs for veteran volunteers with the fire services.

If you decide to participate in this study, several things would be involved. First, I would ask you to take part in an individual interview that will take about one hour; this interview will be held at a location of your choice. I will then transcribe the interview and return a copy to you for any additions, corrections or revisions that you might wish to make. I will contact you by telephone to discuss this. As the results of this study will be helpful to other rural volunteer firefighters, I would like to publish the results in academic journals. I would also like to present the research findings at conferences.

Your confidentiality and anonymity will be protected at all times. I will not reveal who participates in this study or what they have said during individual interviews. I will not use your name at any time and when I share information about the project, I will do so in a manner that assures you could never be identified. If you are interested in participating in this study, you can contact me by phone at (705) 378-0374. You can also email me at bx_campbell@laurentian.ca. I look forward to working with you on this important research study.

Sincerely,

Brad Campbell, B.S.W., M.S.W. Student
School of Social Work, Laurentian University

Appendix 2

CONSENT FORM
(On letterhead)

Study Title: Trauma & Volunteer Firefighters
Investigator: Brad Campbell, B.S.W.

I am a Graduate Student in the School of Social Work at Laurentian University. I am interested in the experiences of rural volunteer firefighters, how they cope with the work that they do, and what the positive aspects are of their work. This study will provide information that would be of benefit to those interested in the occupational health of rural volunteer firefighters or mental health professionals who do trauma work.

Consent:

Your participation in this study is strictly voluntary. Your role in the study is to answer questions based on your personal experience, thoughts, feelings and opinions. Participating in this study will involve one individual interview and one phone interview. The first interview will take approximately 1 to 1-1/2 hours. This interview will then be transcribed and the transcription will be returned to you. In the second interview by telephone, we will discuss any revisions to this transcription: what you may or may not want included in any of the research reports. This interview will take less than 1 hour.

The first interview will be audio-taped and I will be taking handwritten notes of the second interview when we discuss revisions or corrections to your transcription. I will keep all the audiotapes and the handwritten notes in a locked cabinet in my office until the completion of the study. At that time, I will either destroy the tape of the individual interview and the handwritten notes of the second interview, or return them to you.

You have the right to withdraw from the study at any time, without penalty, and the fact of your withdrawal will not be conveyed to anyone else. You may find it stressful or upsetting to recall and recount some aspects of your experiences of working as a volunteer firefighter. You can refuse to answer any questions and/or ask me to take a break or stop the interview at any time. I would also like to remind you that you have been provided with contact information for the local mental health agency in case you find yourself in need of further counselling as a result of participating in this study.

Your fire department does not have the right to access any of the data. Your identity will not be revealed at any time and no views or opinions will be attributed to you. I intend that the findings of this study will also be published and/or presented at meetings of trauma workers, social workers or other mental health workers who are interested in the occupational health of volunteer firefighters but you will never be identified and information will never be shared in such a way that you could be identified. I will keep the tapes and the handwritten notes I take during the telephone interview in a locked cabinet. At that time, I will return the tape of the first interview and

Appendix 3

DEMOGRAPHICS QUESTIONNAIRE

Non Identifying Name/Number _____

1. Personal Information

- Age (in years) _____
- Relationship status (Single/Partnered) _____
- Gender _____

2. Work Related Demographics:

❖ **Education:**

Home School _____ Secondary school _____ College _____
University _____ Trade School _____

❖ **Experience**

- How many years have you been working as a firefighter? _____
- How many years have you been volunteering? _____
- In a typical week, in this job, what is the number of hours you spend volunteering at the fire department? _____
- Have you ever had to take time off because of the effect of your work? _____
- Do you think any of your colleagues have taken time off because of the effect of their work? _____

Appendix 4

INDIVIDUAL INTERVIEW GUIDE

- 1) What is your definition of trauma?
- 2) Why did you become a volunteer firefighter?
- 3) In your experience, what has it been like?
- 4) What was the most difficult or stressful incident you have been to?
- 5) How did the event affect you?
- 6) If you have not been affected by seeing traumatic events, are there people you have worked with who have?
- 7) How do you think it has affected them?
- 8) Were they affected in a negative way?
- 9) Did the exposure to trauma have a positive effect for the person?
- 10) How do you cope with being exposed to trauma?
- 11) What would you recommend that someone do who is having trouble with trauma?
- 12) There is a perception that volunteer fire departments have high attrition rates-- have you noticed this; and if so why do you think this is?
- 13) How would you summarize your overall overall experience with trauma?

Appendix 5

TELEPHONE INTERVIEW GUIDE

- 1.) You have had a chance to read the transcript of the first interview. Are there any changes you would like to make?
- 2.) Is there any part of the interview which you didn't understand?
- 3.) Are there any comments of yours in particular that you would like me to use when I'm writing this study?
- 4.) Are there any comments that you would not want me to use?
- 5.) When you were reading the transcript, did any patterns or themes come to mind?
- 6.) What are the most important parts of this interview for you?
- 7.) Is there anything else you would like me to include?