The Sources of Stress and Support: A Perspective by Rural Emergency Response Workers

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The Sources of Stress and Support: A Perspective by Rural Emergency Response Workers

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MSW Clinical Research Paper

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University /University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings. This project is neither a Master’s thesis nor a dissertation.

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Abstract

Intense, gruesome and dangerous work situations are frequent for the emergency response worker (ERW’s). Emergency response workers, including ambulance workers, paramedics, emergency medical technicians (EMT) and firefighters are regularly exposed to stressful situations. This exploratory and qualitative research offered an in-depth look, through the eyes of ERW’s, into their day to day lives. The study asked rural ERW’s to identify critical or stressful incidents, factors that contribute to their stress and their perspective on supports and coping mechanisms implemented to address these stressful events. Findings indicated that the ERW’s most often identified stressful incidents as those involving children and situations involving significant injury and potential danger for the ERW’s. Contributing factors of stress involved the reaction of the victim’s family, hearing victim’s personal stories and knowing the victim. Another significant contributing factor of stress is exposure to prior trauma, both work related and personal. ERW’s greatest support came from peers and critical incident stress debriefing. Based on these findings, the profession of social work has expanding opportunities to support ERW’s. Social workers must expand their education about the impact of trauma and stress on functioning as well as effective treatment modalities to address stress symptoms. Consideration should also be given to expanding their availability to emergency departments that provide fire and emergency medical services in order for these important members of our community to access supportive services.
Acknowledgments

I would like to thank my research committee members for their assistance in completing this research study. I want to particularly thank Dr. David J. Roseborough for serving as the Chair of the committee and for the encouragement, knowledge and support that he provided during the development of this study. I also very much appreciate the input and suggestions given by Ms. Barbara Pierson, MSW, LICSW based on her expertise as a therapist. Ms. Julie Glynn, MSW, CAPSW has also contributed a realistic perspective, humor and useful feedback based on her experience with this process several years ago.

I appreciate of my husband and family’s patience, support and understanding during this process. I also want to acknowledge the inspiration that brought me to this topic of study- my father who was a full time professional firefighter. I chose to learn more about what he experienced during his 25 years of service. I now have so much more appreciation for his contributions to the profession as well as those who presently serve our communities.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Literature Review</td>
<td>4</td>
</tr>
<tr>
<td>Conceptual Framework</td>
<td>17</td>
</tr>
<tr>
<td>Methodology</td>
<td>20</td>
</tr>
<tr>
<td>Findings</td>
<td>25</td>
</tr>
<tr>
<td>Discussion</td>
<td>39</td>
</tr>
<tr>
<td>Implications for Social Work Practice</td>
<td>47</td>
</tr>
<tr>
<td>Strengths and Limitations of the Study</td>
<td>49</td>
</tr>
<tr>
<td>Conclusion</td>
<td>50</td>
</tr>
<tr>
<td>References</td>
<td>51</td>
</tr>
<tr>
<td>Appendices</td>
<td>54</td>
</tr>
</tbody>
</table>
The impact of working conditions and the ability to manage work related stress is familiar to most workers. Workers face every day events within the work place that can be stressful, worrisome and anxiety producing; often resulting in compromised physical and mental health of the worker. Unlike the 9-5 worker however, intense, gruesome and dangerous work situations are frequent for the emergency response worker (ERW’s). These stressful events occur regularly and spontaneously, exposing these workers to situations frequently. Emergency response workers can include ambulance workers, paramedics, emergency medical technicians (EMT) and firefighters. Although the public may be more aware of the issues facing many of our public servants, particularly since the September 11th terrorism attack in New York City in 2001, research has revealed the impact of critical incidents and events on the emergency response worker. It is important for ERW’S, their families, communities and the public to have a better understanding of the impact of the work. Due to their regular exposure to these events, ERW’S often needs understanding, support and care so they can lead healthy lives in order to serve and provide for their families and communities.

ERW’s face challenges to their mental and physical health due to their continuous exposure to stressful events and efforts to cope with these situations. According to the National Volunteer Fire Council (NVFC), firefighters face significant stressors that deal with the issues of death, life and family as well as “shift work, demands of the job, running emergency calls, budget issues, employee issues, health issues, peer pressure and more. The list is endless” (NVFC, 2011). The NVFC also identifies multiple stress producing events facing firefighters that include the serious injury or death of individuals and fellow firefighters, disasters and major catastrophes.
A wide lens must therefore be used to determine the influencing factors on emergency workers’ responses and reactions to the critical and stressful events of their work. As Regehr and Bober (2005) noted,

“it is not one event alone that causes trauma…rather trauma is a result of the interplay between the event, the person encountering the event, the public and media response to the event, the organization in which responders work and the supports and life they have outside the workplace” (Regehr & Bober 2005, p. 5).

This exploratory and qualitative research offered an in-depth look, through the eyes of ERW’s, into their day to day lives as they regularly and spontaneously respond to traumatic and stressful events within our communities that are powerful, grisly and perilous. The study asked ERW’s to identify their sources of stress, factors that contribute to a stressful environment as well as their perspective on supports and coping mechanisms that they found effective as a means to address these traumatic events.

This study is of importance particularly to the profession of social work. Social work is in its infancy in its direct work with emergency response departments and personnel. A mission of social work can be met by working with ERW’s. The practice could potentially impact the micro and mezzo level and “seek to strengthen relationships among people… to promote, restore, maintain and enhance the well-being of individuals, families, social groups, organizations and communities” (National Association of Social Workers, 1999, p. 6). This research also serves as an avenue to further critique and evaluate the work in which the profession is currently addressing the needs of ERW’s. Further development of assessment tools and treatments that more effectively meet their needs may transpire due to these research efforts. At a mezzo level, the research is pertinent for further review of policies and program development to further support the
work, the impact and the recovery of these individuals who offer their assistance at a
moment’s notice. Theoretically the research is important as it further contributes to the
data which supports the ecological framework when considering the response of
emergency response workers as they are exposed to these dangerous and devastating
events.
Literature Review

Nearly every community has access to ambulance personnel, EMT’s, paramedics, firefighters and police. These emergency workers can range from highly trained professionals to trained volunteers coming from many walks of life, with varying demographics, experience and histories. These are very visible individuals, often taken for granted but respected for the intense work that they do for their communities. Despite having a respected position, the members of their community may rarely give a second thought to the actual situations, traumatic events and vulnerable situations in which these men and women are often exposed. What impact do these intense work events have on emergency workers? How and why do some cope better than others?

A majority of the reviewed studies researched the ERW’s population through quantitative methods. Themes throughout this literature focused on post-traumatic stress symptoms as well as their exposure to specific incidents identified as traumatic or critical incidents. Several studies sought out the contributing personal and work related factors which may intensify the symptoms of stress for the worker. The literature also determined effective and non-effective coping strategies implemented by the ERW’s population to address the everyday stressors experienced in the line of duty. The findings from these studies have been categorized below into the following subsections: stress symptomology, critical incident exposure, contributing factors risking stress, and coping mechanisms. Through an analysis of the literature further knowledge was gained concerning the impact of the work of ERW’s as well as the appropriate community and professional responses needed to support the mental health of this unique and important population.
**Stress Symptomology**

Most ERW’s have not obtained a clinical diagnosis for Post-Traumatic Stress Disorder (PTSD). An operational definition for stress was well established by Bryant and Harvey (1996) by assessing “levels of symptomology rather than incidence of diagnosed PTSD” (p. 52). Symptoms of PTSD include exposure to or experience of a threatening traumatic event, re-experiencing the traumatic event as well as numbing by avoidance or remembering the event. Other symptoms may include arousal symptoms that involve sleep disruption, irritability, hyper vigilance and exaggerated startle response (American Psychiatric Association, 2000).

When exposed to the trauma of others, secondary trauma can result. Regehr and Bober (2005) found that individuals exposed to tragedy, injury to self and others or death of others, “may experience great fear, helplessness or horror…it is not uncommon for this to result in post-traumatic stress reactions” (p. 68). Symptoms may include re-experiencing symptoms such as recurring thoughts, dreams or flashbacks which may be sensory (Regehr & Bober 2005). It may also be noted that van der Kolk (1996) recognized that stress symptomology may vary depending upon the stage of PTSD, at “varying times across the lifespan, or in response to other developmental markers or stressors” (p. 244).

According to Haarr (1999) critical incidents impact police and as a result, they sometimes experience stress induced physical and mental health symptoms. Firefighters are vulnerable to experience stress symptoms (Bryant & Harvey, 1996) as well as ambulance personnel as reported by Alexander and Klein (2001) due to exposure to traumatic events. Regehr and Bober (2005) also found significant health issues faced by
emergency workers, based on occupational health research. The health of ERW’s can be significantly impacted due to the demand for prompt and sound responses, their feeling a lack of control over critical events, and having limited resources.

Haarr and Morash (1999) researched the impact of stress on police officers and determined that the most stressed officers experienced feelings of anger, a symptom of PTSD. Findings by Alexander and Klein (2001) confirmed this theme as it was determined that the frequency and severity post-traumatic symptoms varied among ERW’s. Results indicate that of the emergency service workers studied, 60% experienced low to medium symptom severity of intrusive thoughts and avoidance within 6 months of a critical incident. Bryant and Harvey (1996) also reported that 25% of researched volunteer firefighters incurred significant levels of post-traumatic stress, often attributed to recent and multiple critical incidents, confirming the Alexander and Walker (2001) findings.

In a study of an oil platform disaster (Hull, Alexander & Klein, 2002), survivors experienced persistent guilt. The findings indicated that survivors of the oil crew, experienced “severe acute symptoms of PTSD and enduring PTSD” (p. 436). The Oklahoma City Federal building was bombed in 1996 and the Oklahoma City Fire Department responded. These firefighters experienced stress symptoms related to PTSD as noted by a respondent:

“I still have dreams about the incident or related events…I have been unable to physically, mentally or emotionally close it but I am ready to do so…tears come easily…feelings of sadness and grief constantly pervade my thoughts. I am angry…I feel lost and don’t believe I really have a
reason to hang around much longer” (Schorr and Boudreaux, 2005, p. 583).

**Critical Incident Exposure**

Emergency response personnel, on a regular basis, are exposed to a variety of situations in which they must respond to injuries and death of individuals, suicide, multiple casualties, fatal car accidents, dangerous fires and incidents in which their own safety is at risk. Similar experiences to those in the Hull et al., (2002) study of oil disaster survivors, ERW’s are exposed to extreme stressors that involve exposure to life threatening events, witness to injury and death, “toxic fumes and fire, being trapped… delayed rescue and medical care” (p. 433). Grill and Zygowicz (2011) confirm the impact on the first responder when on the scene of a suicide, for instance, as “each one…leaves a small mark on your soul” (page 2).

In a study by Bryant and Harvey (1996), over half of the sample volunteer firefighters reported that they had been exposed to critical incidents in which their safety was jeopardized. This sample also indicated that the most stressful situation, as a firefighter, was one in which they felt “helpless over conditions, exhausted or had inadequate equipment or training” (Bryant & Harvey, 1996, p. 55). Similar results were found by Alexander and Klein (2001) when surveyed ambulance personnel who reported that one of the most significant, stressful incidents were those in which they experienced feelings of helplessness and lacked control of the situation. Studies conducted by Regehr and Bober (2005) and Hull et al., (2002) both identified and defined critical incidents that are the most pertinent and stressful events for ERW’s while on duty. These significantly stressful and traumatic events include:
“death of a patient in the workers care, death of a child, exposure to mass casualties, witnessing violence perpetrated against a member of the public, being personally assaulted by a member of the public, feeling his or her life was threatened while on duty and having a coworker dies in the line of duty” (Regehr & Bober 2005, p. 13).

The findings in the Alexander and Klein (2001) study also indicated that other significantly difficult situations included those involving child victims or events in which there were significant injuries. Further evidence of ERW’s experiencing dismay at the gross injuries incurred by others is illustrated by the Oklahoma firefighter’s exposure to bomb victims when he stated:

“As a firefighter, I knew I would see the worst kind of situations, but this was the absolute worst. I cut people apart to extricate them. I gathered body parts when there was no body around it. The smell was terrible” (Schorr & Boudreaux, 2005, p. 580).

Schorr and Boudreaux (2005), Alexander and Klein (2001) and Regehr and Bober (2005) confirmed that emergency workers experienced varied levels of trauma when exposed to different events. Incidents in their research identified and defined stress as those events in which victims experience serious injury; there are multiple victims and child victims, and deceased individuals. Critical incidents are incidents that are “sufficiently disturbing to overwhelm the individual’s usual method of coping” (Alexander & Klein, 2001, p. 76). Alexander and Klein (2001) and Regehr and Bober (2003) reported that exceptionally difficult critical incidents for ERW’s are those in which the victims were known to the emergency worker. Although the emergency worker may not have had an actual personal relationship with the individual, Regehr explains
that there may be an ‘emotional connection’ with the victim such as an “individual who died alone…a child who did not live in a loving, caring environment” (p. 77).

Casey and Leger (1996) report the “terrible ten” (P. 31) critical incidents (as cited in Mitchell and Everly, 1994). They identified stressful and critical situations for the emergency worker to include in the line of duty deaths, emergency worker suicide, multi-casualty incidents as well as events involving children. Incidents in which the victim was a relative or known to the helper were also significantly difficult. Additional “terrible ten” events involved injury or death due to operational procedures, a failed mission despite extensive effort, and excessive media interest.

The literature indicates that some specific traumatic events or critical incidents may be more bothersome and impact ERW’s more than others. Alexander and Klein (2001) indicate that exposure to certain types of incidents “may be more psychonoxious than others, and regular exposure …may compromise the emotional wellbeing of staff” (Alexander & Klein, 2001, p. 79). Similarly, Hull et al., (2002) found that individual’s response to traumatic events may vary as it is dependent upon their experience and exposure to prior stressful events.

**Contributing Factors Risking Stress**

ERW’s are of various ages, sex, years of experience and training. These workers present with varied familial, relational, socioeconomic and cultural backgrounds. Depending upon their background, ERW’s may be more susceptible to stress symptoms than others as noted in previous research. The literature indicates that an individual’s exposure and experience with previous traumatic events, both personal and work related may impact their vulnerability to varying levels of stress. Factors within the work
environment and organization may impact also the risk of stress for these community workers.

A study by Herman (1992) and Bonanno, Galea, Bucciarell, and Vlahov (2007) indicated that some individuals may be more prone to PTSD symptoms based on prior and repeated trauma and life stressor exposure. According to Bonanno et al., (2007), despite being exposed to the traumatic events of the September 11 terrorist attack in New York City in 2001, many New York area individuals weathered this event and reported few traumatic stress symptoms; having regained their pre-traumatic event functioning within six months. Bonanno et al., (2007), found that following a critical incident, individuals who were least resilient or more likely to experience traumatic stress symptoms after a critical incident were women, Hispanics, younger people, those with less than a college education, those who lacked social support and experienced additional life stressors. This study indicated that resilience was more prevalent for individuals who had no prior traumatic incidents, no recent life stressors and no further traumatic events since the September 11 incident.

In comparison, Herman (1992) focused on the prevalence of repeated exposure to trauma and its impact on PTSD symptomology. This study found significant evidence that individuals exposed to prolonged and multiple trauma, can experience intensified PTSD symptoms as well as meet the criteria for other clinical diagnosis. These past traumas can impact the individual’s day to day functioning in the area of emotional, physical and behavioral health as well as relational.

Similarly, Fritch, Mishkind, Regehr and Gahm (2010) found a relationship between survivors of child physical abuse and combat trauma with increased mental health symptoms. Like veterans, child abuse victims experienced PTSD, anxiety and
depression. “Exposure to multiple trauma types was associated with poorer mental health outcomes and increased vulnerability for PTSD and depression even beyond the expected” (Fritch, et al., p. 249). Researcher van der Kolk, McFarlane and Weisaeth (1996) also state that trauma experienced at various ages may impact the mental health of children but may also affect their emotional health as adults.

Exposure, therefore to a work related critical event may further impact the wellbeing of ERW’s if they experienced childhood trauma or combat trauma, according to the research. Such events could interfere with their self-regulation and reduce the individual’s coping skills (Fritch, 2001). This research also notes however that often individuals are resilient, despite their childhood victimization and exposure to traumatic events, resulting in no mental health symptomology.

Additional personal contributors to stress include the level of support experienced by those exposed to traumatic events. “Social support is often a protective factor in managing traumatic reactions” (Regehr, Hill, Knott and Sault, 2003, p. 192). They found that experienced firefighters reported having less family support and employer support which was associated with higher levels of depression and stress symptomology. Without additional supports, experienced firefighters were less able than new recruits to problem solve and readily face new work related situations. Varvel, He, Shannon, Bledman, Chaichanaskakul, Mendoza and Mallinckrodt (2007) also studied the associations between levels of support from supervisors and peers with levels of stress that was experienced by firefighters. Findings confirm the importance of supervisor support as it promotes perceived self-worth and low perceived stress in the firefighter. Emphasis on family, defined as a natural social support, provide needed support for those exposed to traumatic stressors as reported by van der Kolk, et al., (1996). Natural
supports impact the outcome and minimize the risk of and lower the intensity of mental health psychopathology. Cowman and Ferrari (2004) supports these findings in their study which determined that firefighters are less stressed when they experience support from their social support system which included family and peers.

The demands of the emergency worker profession may be a contributing factor of additional stress for ERW’s. The work of the ambulance worker, paramedic, emergency medical technician and firefighter involves intense, varied and at times an unpredictable work schedule, shiftwork, and disruption of routine. The work demands and limits the opportunities to be involved in a life outside of the job with family and friends and further complicates the world of ERW’S. Regehr et al., (2003) states that the firefighter’s shift work may not only hinder the needed social supports outside of the fire hall but can also cause sleep disturbances, fatigue, workplace accidents and health issues (Regehr et al., 2005). One firefighter interviewed by Regehr stated, “It’s difficult to have a normal life” (Regehr et al., 2005, p. 90). The inability to fully participate with family and friends can be an added stressor for ERW’s, limit supports, socializing and opportunities to relieve stress. An additional job related stressor is the limited and inadequate time to recover between traumatic incidents as determined by Alexander and Klein (2001) when researching ambulance personnel. It was also determined that they were more susceptible to experience PTSD symptoms due to the lack of recovery between critical situations.

The emergency response profession faces additional challenges and stress due to the waiting and anxiety of responding to unknown events. van der Kolk and McFarlane (1996) refer to this as the anticipatory stage of trauma exposure. During this stage there
may be varied physiological responses or levels of arousal responses, based on worker and job demands.

Workers can also be further traumatized and stressed after critical incidents depending upon the organizational culture which impacts the management, and the expectation and support of its workers. Regehr and Bober (2005) report that additional stress can be experienced by emergency response workers due to organizational structure and management response to the traumatic events. Often ERW’s describes the stressors which originate from the organization as more significant than the traumatic or critical incident itself. Lack of support, unclear expectations and roles and limited resources can contribute and compound the pressures experienced by these workers. British ambulance workers identified “poor relationships with management, not being valued for their skills and shift work were the major job stressors they encountered” (Regehr & Bober, 2005, p. 87).

The importance of strong management within an emergency response organization is also emphasized by van der Kolk et al., (1996). Responsive leadership can readily address the physical and mental health needs of emergency workers to keep the stress to a minimum while maintaining a supportive position to address the critical incident. Regehr and Bober (2005) recognize the importance of organizational culture as it can be an additional contributing factor to stress for the ERW’s. Emergency service organizations establish not only procedures for its internal structure but also at times, written and unwritten expectations or mores to address their means of communication, support, distress, recognition and expression of thoughts and emotions. The organization will “influence how trauma will be perceived and managed” (Regehr and Bober, 2005, p. 132).
Coping mechanisms

When individuals face critical or traumatic incidents, they cope by using various behaviors to deal with the incidents. Various studies have found differentiating coping strategies implemented by ERW’s population. Haarr and Morash (1999) defined coping as the “overt and covert behavior used by individuals to manage stressful conditions (p. 307). In a study of urban fire fighters and paramedics, Beaton, Murphy, Johnson, Pike and Cornell (1999) determined that over half of the sample reported that they processed and appraised the critical incident, with the intent to find its meaning. This method was confirmed by Regehr and Bober (2005) when an emergency responder “identified the need to obtain information about the situation…to get a sense of closure” (p. 80). As a means to avoid emotional connections, Regehr and Bober (2005) determined, in sampling emergency workers, that often cognitive techniques were used. It is suggested that this strategy is implemented by ERW’s to “maintain their focus and enhance their ability to function” (Regehr & Bober, 2005, p. 79). Beaton et al., (1999) found fire service personnel often cope by a means of cognitive avoidance and numbing. Such a strategy is an effort to not recall the event or feeling associated with it. Distraction and withdrawal from others were additional and frequently implemented coping strategies. Although the numbing, avoiding and withdrawal were reported as frequent coping mechanisms this response may also be associated with increased post-traumatic stress symptoms rather than a means to eliminate the impact of critical incidents (Beaton et al., 1999). Regehr and Bober (2005) suggest that when ERW’s distance emotionally, workers were more able to focus and be task oriented in order to get through the next steps of response to the critical incident. One responder stated, “We’ve developed some sort of nice thick skin to a lot of the calls, as a protective mechanism” (Regehr & Bober, 2005, p. 80).
Humor, another form of distancing, was also found to be a strategy for coping, according to Regehr and Bober (2005). Jokes and stories, guided by the organizational culture, may be gruesome and intended only for in house comment.

Talking to peers about the incident, looking forward to time off, thinking about family, keeping ones thoughts and feelings to self and use of dark humor were the top five methods of coping found among emergency staff in the Alexander and Klein (2001) study sample of emergency service workers. Schorr and Boudreaux (2005) also determined that some firefighters want to discuss the stressful situation. A firefighter exposed to the trauma of terrorism at the Pentagon in 2001 stated, “I learned if you have trouble, don’t be afraid to talk about it because talking to co-workers, friends and families will make things a lot better” (p. 584). Another firefighter responding to the 2001 Pan Am flight emphasized the close affiliation with fellow firefighters when stating, “Use your fellow firefighters and any counselors necessary if any problems arise. Firefighters are a true brotherhood, use it” (Schorr and Boudreaux, 2005, p. 584). Working harder (77%) and “keeping things to themselves” (78%), are two coping methods used by the sample of police officers researched by Alexander and Walker (1994). Over 25% share their feelings and “vent...to the public or colleagues” (p. 133) as a coping strategy.

Similarly, Haarr and Morash (1999) found that often highly stressed police officers used escape which may be considered similar to keeping thoughts and feelings to oneself. These officers would express feelings of anger and hurt to their coworkers however and relied on support from their peers.

Another form of coping by escape may be the use of alcohol. Nearly half of respondents in the Schorr and Boudreaux (2005) study reported drinking more alcohol “sometimes” or “frequently” in response to work stress. Despite the use of these coping
mechanisms, the sample indicated that these overall efforts were slightly or not at all effective (63%) methods to address their stress. Haarr and Morash (1999) confirm this data.

Although firefighters in the Schorr (2005) research seemed to be open to seeking professional counseling, in contrast, only 5% of the sampled police officers reportedly talked with a professional and 3% reported using medications as a means of coping with work-related stress. The officers did, however, make use of family and peer support (67%) at times while 79% often kept things to themselves. The promotion of professional counseling, peer counseling programs and talking with others are suggested and recommended to ERW’s, especially since the impact of September 11 on this profession, according to Heightman and McCallion (2011).

This exploratory and qualitative research provides an insightful, first hand and in-depth look at the day to day traumatic and stressful events in which rural emergency workers, including ambulance workers, paramedics, emergency medical technicians (EMT) and firefighters are exposed. The study is unique as it veers from a majority of prior quantitative research of urban populations to qualitative research which provides a personal and intimate insight into the intense and often dangerous work of these community servants. The study asks ERW’s to identify the most frequent critical incidents of which they are exposed and the challenges they face and successes they have to address them. The research also sought the ERW’s view of the coping strategies that they implement to address these critical events as well as their perspective on their effectiveness in minimizing stressors.
Conceptual Framework

Previous research focusing on emergency workers indicates that the ERW’s identification of and response to critical incidents as well as the impact of stress are varied among this population. Additional research suggests that support from family and peers influence the response of the ERW’s to these events (Regehr and Bober, 2005). Organizational support also plays a key role in how the ERW’s are affected by critical events (van der Kolk et al., 1996). These responders are affected by past and present stressors experienced within their familial and peer relationships, workplace and community. Research indicates that emergency workers are at varied levels of risk for stress based upon their previous exposure to personal and work related critical or traumatic events (Herman, 1992 and Bonanno et al., 2007). Fritch et al., (2010) determined that survivors of childhood and adulthood trauma often experienced increase stress symptomology and emotional health issues.

When conducting research it is critical to identify a theoretical lens in which to approach the study. This framework impacts the development and interpretation of the data. It provides further insight by identifying key elements within the data which may or may not support the theoretical framework. This study is understood through the framework of the ecological perspective, found in the research of Regehr and Bober (2005) with emergency service workers. Originating in 1979, Bronfenbrenner developed this study of systems theory to explain the multiple systemic influences of the individual (Wikipedia, 2011). Ungar (2002) describes ecology as the “interdisciplinary scientific study of the living conditions of organisms in interaction with each other and with their surroundings” (Ungar, 2002, p. 481). Ecological theory emphasizes reciprocity or the interactions between the environment and the individual. As a result, the ecological
model does not explain human behavior as a simple cause and effect, but rather
influenced by the multilayered systems in which the individual has been exposed.
Regehr and Bober (2005) contend that “The individual responses are best understood
within the broad context of an individual’s life experiences” (p. 38). The foundation of
the ecological theory allows for a broad view of the individual, family, workplace,
community and societal systems that impact and influence the individual’s functioning.
The theory emphasizes the continuous and constant change of individuals throughout
their lifespan (Regehr & Bober, 2005) based upon the interaction with these systems.

By viewing the data through the ecological lens, this theoretical framework
assisted the researcher to better understand and interpret the data obtained from the
ERW’s, due to their exposure to multiple and varied ecological systems. “Settings such
as home life and work life are interconnected and continually influence each other”
(Regehr and Bober, 2005, p. 39). This study sought and obtained data through
qualitative methodology. It produced unrestricted comment and data which is indicative
of the multi-layered systemic interactions of the ecological theory. The interview format
allowed for more in-depth and intimate discussion with the ERW’s. It promoted an open
dialogue about their views concerning the environmental impact of stress, support and
their mode of coping. In this research, the ERW’s identified similar critical incidents,
stressors and coping strategies based on the commonalities of their work. The impact of
these incidents and stressors was not uniform but individually unique due to their
exposure to multiple but differentiating environmental systems.

Within the framework of the ecological theory, the data were therefore analyzed
with consideration to the impact of the interaction between the individual with family
and peers; also recognized as the microsystem. The interaction with community and
institutions such as church, schools and workplace or mezzo system were also included in this framework of analysis as well as the individual’s identified culture in which they live or macro system.
Methodology

Research Design

An exploratory and qualitative research design was used for this study. It examined the factors that influence and affect the ERW’s. The study, through interviews, asked the ERW’s to identify their sources of stress, factors that contribute to a stressful environment as well as their perspective on supports and coping mechanisms that they find effective as a means to address these traumatic events. Qualitative techniques were chosen as they “allow researchers to share in the understandings and perceptions of others…to explore how people structure and give meaning to their daily lives and surroundings” (Berg, 2007, p. 9). Face to face interviews were conducted as the “meanings or feelings…are better captured through narrative descriptions…interviews are better able to capture the critical subjective meanings that are an essential element of understanding human behavior” (Monette, Sullivan & Cornell, 2002, p. 91-92).

Population and Sample

The population for this qualitative study utilized a purposive sample of adults, age 18 or older, who were currently ERW’s that include paid volunteer ambulance workers, emergency medical technicians (EMT) and firefighters. The primary sources of the volunteer workers were located in a volunteer fire department in a rural Midwestern town. The desired sample size for this study was 8 to 10 participants. Eight participants were obtained for the research study. Purposive sampling was implemented and based on the participant’s specific knowledge and experience in the field as suggested by Berg
The ERW’s offer expertise in the field of emergency response services and a unique perspective based on their day to day work in this community based service.

The criteria for participation in the study were adults who were currently serving as ERW’s. During a regularly scheduled fire hall meeting, the research study was proposed to the ERW’s. The participants were selected from a purposive sample of those who voluntarily responded to a verbal and written request from the researcher. The research proposal was presented in the form of an in-person presentation and in a recruitment letter that was presented during a fire hall meeting. In addition to the purposive sample, the researcher was willing to accept participants obtained through a snowball sample of ERW’s if recruited by other ERW’s, however no participants were gained by these means.

**Protection of Human Participants**

In order to ensure the protection of the participants, the researcher provided a copy of the consent form (Appendix B) and requested all participants to sign it prior to participating in the interview. As noted previously, all participants were 18 years of age or older as a means to protect the vulnerability of individuals under the age of majority. The consent form was approved by the research committee and the University of St. Thomas Institutional Review Board. It addressed the purpose of the study, the expectations of the participants, confidentiality, the risks and benefits of participation, the voluntary nature of the study as well as contact information for the researcher. The St. Thomas IRB approved the research project (Appendix A) and reviewed and approved the overall research process. All participants were also verbally informed about the nature of the confidentiality of the study. The signed consents, interview audiotapes and
transcriptions were stored in a locked file in the researcher’s home and will be destroyed upon completion of the study. The information reported in the findings does not include information that would make it possible to identify the participants. Findings from the transcribed interview were shared for educational purposes only; and most identified information removed such as participant names and titles and specific age.

Participants were informed of the risk for participation due to the possible sensitive nature of the questions. The risks with each participant were discussed prior to the interview. The researcher continuously assessed the participant’s emotional state. This was determined by the researcher watching for nonverbal signs of the participant and being disregulated. Participants were also informed throughout the interview process that they could refuse to answer any or all questions asked by the researcher. A prepared list of resources was made available to the participant in the event that difficult emotions or memories arose as a result of the interview. Resources included the regional mental health clinic contact information as well as supportive resources available through the fire organization.

The researcher offered several options in regard to the location of the interviews. These included private meeting space within the fire hall, private meeting space at the local library or other location as agreed upon by the participant and researcher. All interviews were audio-recorded and secured by the researcher. Interviews were transcribed by the researcher or by a professional transcriber that had signed a confidentiality agreement.
Data Collection

The data for this study was collected through face-to-face interviews conducted by the researcher. A series of demographic questions were asked prior to proceeding with in-depth interview questions. The interviews were audiotaped and transcribed and the interview questions were semi-structured. The participants were asked 17 questions including demographics and questions pertaining to their experiences as ERW’s regarding identified sources of stress, factors that contribute to a stressful environment and their perspective on the supports and coping mechanisms employed as well as their effectiveness. The interview schedule (Appendix C) was predetermined and based on the conceptual framework and literature review. The schedule was reviewed by the research committee for clarity and validity to the study.

Data Analysis

Each interview was audiotaped and transcribed with demographics being de-identified when used as data. The demographic information was used for descriptive statistics to describe the participants interviewed. Content analysis was used to examine the data and to “identify patterns, themes, biases and meanings” (Berg, 2007, p. 304). The interview data were open coded, as suggested by Monette et al., (2008), as a means to determine common themes and relationships between the data without restriction. An interpretative analysis approach (Berg, 2007) was implemented, which allowed for organization of the data thematically to uncover patterns and meanings of human behavior. Themes were determined deductively through the ecological framework.
Strengths and Limitations

The strengths of this study include the use of qualitative methods to allow the participants an in-person opportunity to share their personal thoughts and experiences. Such allowed for an in-depth, intimate look at the work and its impact for the ERW’s. The sample was a knowledgeable source of data. The interview questions were derived from the literature which is also an asset. The research committee that participated in the project included seasoned social workers with research and clinical experience; also benefits to the study.

Limitations to the study include the inability for the results to be generalized due to the small and select group of participants which were involved in the study. The study is limited geographically in that the researcher only sought a select Mid-western, rural community of ERW’s. The researcher also created interview questions that were not tested for validity, thus this also limits the study. Another limitation may be that due to the sensitive topic of the study, there may be limited participation by ERW’s; resulting in limited results. Another consideration for the study’s limitation includes the involvement of only one researcher, which could decrease the study reliability.
Findings

As previously stated, this exploratory and qualitative research offers an in-depth look, into the day to day lives of ERW’s, as they regularly and spontaneously respond to traumatic and stressful events within communities that are potentially powerful, grisly and perilous. The study asked ERW’s specific questions to identify their sources of stress, factors that contribute to a stressful environment as well as their perspective on supports and coping mechanisms that they found effective as a means to address these traumatic events. The interview schedule was predetermined and based on the conceptual framework and literature review.

This research study utilized a purposive sample of adults, age 18 or older; who are currently ERW’s and included first responders, ambulance drivers, emergency medical technicians (EMT) and firefighters all located in a fire department in a rural Midwestern town. A total of eight participants were involved in this study, all obtained from recruitment efforts initiated by the researcher via an in-person presentation and recruitment letter offered during a regularly scheduled fire hall meeting. The eight participants were selected from a purposive sample of those who responded to a verbal and written request from the researcher. Interviews of the participants were held in places approved by the participant, such as restaurants or the fire hall. Interviews ranged from 60 minutes to 120 minutes, with an average of 90 minute interviews being conducted. In addition to these taped personal interviews, observational data were analyzed in order to discover and determine particular patterns and themes in the respondent’s answers to the interview questions.

The age of the eight ERW’s participants ranged from 29 to 63 with an average age of 45.8 years of age. There were seven males and 1 female, 2 paid full time ERW
participants and the remainder part-time paid volunteers. All were Caucasian. The years of experience in the emergency response field ranged from 7 to 32 years; with an average of nearly 15 years. Many of those interviewed held dual positions rather than exclusive roles. Of the 8 participants, 1 was a full time EMT, 1 exclusively a firefighter, 4 were dual firefighter, EMT and 1st Responder, and 2 were dual ambulance driver, firefighter and 1st responder. Education of those participating in the research project varied from a Bachelor’s degree in an unrelated field, an Associate degree in law enforcement, EMT state certification and 2 levels of state certification for firefighting.

The ERW’s which participated in the interviews for this study became interested and involved in the field for various reasons. They included exposure by a parent who was an ERW, recognition of a need in their community for more ERW’s, and associating with peers already involved. Several participants reported that they became motivated to become an ERW after a family member used the service.

Data were gathered through transcribed, audiotaped interviews. Content analysis was used to examine the data and to identify patterns and themes. An interpretative analysis approach (Berg, 2007) was implemented, which allowed for organization of the data thematically to uncover patterns and meanings of human behavior. Themes were determined deductively through the ecological framework. A “criteria of selection” (Berg, 2007, p. 306) was conducted in that all the data from the sample was considered for contribution to the developing themes.

The researcher assumed a “general interpretive orientation” (Berg, 2007, p. 304) in that the transcription of the audio taped interview data were reviewed three times and then analyzed through the dissection of comments into common statements, words and
meanings by which the data were organized to “uncover patterns of human activity, action and meaning” (Berg, 2007, p. 304) which resulted in a “thematic clustering technique” (Cousins, 2000). For example, in this research analysis, words like “alcoholism”, “alcohol”, “intoxicating” and “have a drink” were grouped together due to their similar definition and meaning. These words were categorized as suggested by Cousins (2000) to firm the validation of these themes. In this study, when the meaning of words or phrases was not clear, they were placed in a miscellaneous category.

**Research Themes**

A sample of 8 ERW’s were interviewed to identify their sources of stress, factors that contribute to a stressful environment as well as their perspective on supports and coping mechanisms that they found effective as a means to address these traumatic events. Based on the interviews conducted with the sample, three themes were identified to include critical incidents and stressful situations, contributing factors of stress and coping and supports. Quoted material from the transcribed interviews with the samples is printed in italics.

**Critical incidents and stressful situations**

Several situations in which the ERW’s are exposed were identified as critical and stressful. They included those events involving children, extensive injury of the victim and potential danger to the ERW’s. The first theme noted in the findings included that of critical incident exposure which involves the type and intensity of events in which the ERW is exposed. Findings indicated that due to the nature of the work, ERW’s in this sample are involved in a variety of traumatic incidents which have varying impact on the emergency crew. Over half of the participants identified the injury or death of children
as a significantly stressful event. This theme is exemplified by the following comment by an ERW:

_Death of kids. We had a recent one. That kid did not have a chance. It was not his fault; it was not anyone’s fault. ...when they are kids you think about what they missed out on in life... I was the first to pull him out for CPR...but when we lose kids, that is what makes it tough. You really think about that after the fact. The emotions of the whole situation can be tough for (family) and us._

Similarly another participant shared the following:

_There was a little boy we got out...I was holding up the backboard and they slid him out and his face was right here on my chest...when we released the pressure on him, he was gone. That will really get you wound up...those take the wind out of your sails._

In addition, a second theme or type of critical incident was noted through the interview of the ERW’s. The stress of situations in which the victims of accidents are experiencing a great deal of pain and physical and emotional trauma were considered to be critical and stressful situation. A situation was described by a one participant:

_It can be really intense when people are in a lot of pain or if you are attempting to reassure them that another person they are with is doing ok._

During a domestic violence situation the ERW identified the following as a memorable stressful situation in the line of duty:

_There was one call that hit me...this girl was beat up pretty bad by her so-called boyfriend and when we got there she was glazed over...staring into the distance...saying she had no other choice, he took control over her life, her family did not want her because of him and (she perceived herself as) a piece of crap. I really felt for that girl._

A third theme, experiencing compromised safety and potential injury to the ERW’s is also considered to be a stressful situation as identified by participants. When working on busy interstates highways or roads one ERW stated:
Nobody slows down. I don’t know that it is intentional but you always think they (drivers) are out to hurt you. You have to keep your head and watch your butt. That is stressful.

As a firefighter, another stressful situation identified was dealing with the potential danger to the firefighter as they entered a burning home:

We made entry, the entire room is orange with flames...it was dark and the fire didn’t want us in there...I heard the Chief, we could barely see him. He screamed in the door to get out of there, so I grabbed (my partner) by the shoulder. We needed to get out of there. The floors were on fire. We hit the fire again and looked around and backed out.

**Contributing factors of stress**

There were multiple factors identified by the ERW’s that contribute to the stress of their work. It was reported by ERW’s that they often face situations which are emotionally intense and physically dangerous. Consistent words and theme were noted within the interviews. Reactions of a victim’s family, personal stories, knowing the victim, internal organizational issues, relationship issues, past trauma and the unknown were identified as compounding and contributing factors of stress for the ERW’s.

A stressor frequently noted by participants is the reaction of the victim’s family, particularly in accidents in which there is significant injury or death. This identified theme among participants is dependent upon how the family responds to the emergency situation and can often add to the stress of dealing with the emergency situation for the ERW as exemplified in this comment concerning an accident scene:

The family was watching and there was a lot of emotion...anger, concern, worry, and sadness and guilt. The parent was asking if he killed his kid, is he gone? Sometimes they look at you like you are not trying, but I am doing the best I can. They (the family) get really pissed off.

One ERW concurred and contributed by stating:
The grandpa was there and got really mad at us, starting to fight us because we did not save his grandson. And then you have to get the cops involved.

Another ERW could hear the emotion coming from the victim’s family over the radio and described this:

The dad was screaming from the emotional pain and loss as his child had died in a fire. I could hear it over the radio.

Learning of and hearing the personal stories of the victims can also add additional stress for the ERW’s, as it related to contributing factors of stress. Several ERW’s stated that they were able to focus on their job of fighting fires or dealing with injuries, but when learning of the victim’s personal story, it added a dimension of stress to their work.

One ERW reflected on a drowning of a young child and adult:

The two had been traveling and trucking. The truck landed in the water. I will never forget seeing the door fly open in the river, toys falling out and the shoe floating and the wedding ring too.

Another situation that was personalized and complicated the stress of the situation is told by an ERW participant:

A gentleman was taking his wife’s ashes to a different state to spread them and his RV vehicle caught on fire. She had passed away a week or two earlier from cancer. Well this fire happened and I was looking for the ashes and in dealing with him. I tore the RV apart looking for the ashes, and I never found them. It was like I can’t find them and you know he was obviously very upset. I thought about it- his wife passed away earlier and dealing with the whole cancer thing.

Living in a small rural community, often times the victims of fires or accidents are known to ERW’s. A third subtheme noted by participants was the difficulty of working as an emergency response worker in a rural community and often knowing the victim of a fire or a patient facing a medical emergency. They indicate that the ERW’s could likely be familiar with the victim of injury, accident or death. These victims could
be co-workers, family or known to them in the community as described by one research
study participant:

> It’s stressful being in a small community, we know people and the likelihood that you will come across something, someone you know or family is very high. It has happened many, many times when we’re a part of family members or one of our own firefighters or EMT’s.

Another ERW agrees that responding to an accident scene can be intense when the victim
is known. In this case, his parent’s best friend was the victim and later died. The ERW states:

> The victim, my dad’s best friend, was struck by a car driven by somebody I worked with at the hospital. He was badly injured. We did everything we could. After we got to the hospital I realized I would have to tell dad and mom. I had known him (the victim) since I was a kid. I would say that one thing really stuck in my mind especially when you know people.

Several ERW’s also recognized the stress of the loss of a friend and fellow ERW in the line of duty. One ERW shared his experience in the attempt to rescue a canoeist in rushing spring waters:

> The most stressful for me would be the incident in (year). That was the attempted but unsuccessful recovery of a body… I lost a firefighter and friend as well as the near loss of two more of us. The three of us were all hooked together in the rushing water thinking that if one of went down, we would all go together. It still haunts me every day… it never really left me.

Internal issues that involve the organization such as staff and management conflicts were identified as additional contributors of stress by half the interviewed participants. Staff turnover was an attributing factor of stress. One ERW stated:

> It is stressful, realizing we are losing some experienced people. It is hard to know too if you work well with somebody or not or how much they know or level of experience. You’re supposed to trust ‘em with your life.

Another ERW voiced concern about staff response time to the calls:
When we have a driver we can’t leave because we are required to have two EMT’s on the rig at all times so now you’re sitting waiting. Did they oversleep; do I have to page them again to get somebody here? You need to be out of the gate in five minutes and an additional 3 to 4 minutes means a lot. That is real frustrating to me…It makes me very anxious…even agitated before you even leave.

Additionally, participants recognized that a change in supervisory personnel and the process in which they are chosen and supported causes internal stressors within the organization. One ERW explained:

We just had a recent mixing of colored helmets. Your chief has a white helmet and got three assistants chiefs with red and then there are yellow for captains and the rest of the runts, like me, are black helmets. To get there, there had to be quite a bit of shuffling around, some of the people didn’t take it very well. Big time hardship.

An additional contributing stress factor was identified by over half of the participants. ERW’s commented on the impact which the work of the ERW can have on the relationships they attempt to maintain with family, friends and significant others.

One ERW stated:

Probably the biggest stressor though with the family would be just not knowing when I ’m done working and …trying to balance family and work, it’s tough…you know I’m sorry I can’t always work 20 hours a day.

Another ERW concurred by stating:

It takes away from the family time, that’s the worst thing…I take 10-12 shifts a month 6:00 at night until 6:00 in the morning. Sometimes they come visit me though but they get real tired of me being gone and on-call so much.

Other ERW’s confirm the stress of being away from family and friends can have on a relationship. One ERW shared:

With my past girlfriend, she put a lot of pressure and guilt on me for responding to the calls. It was always on my mind when I was on the call…even now, the stress of that old relationship filters into this new
relationship… I anticipate it could happen again and she will leave me on a moment’s notice.

Past trauma experienced by the ERW’s is an additional factor and theme noted which contributes to the stress of these workers. The impact of prior trauma affecting their current work stress was identified by two participants. This ERW reflects on their upbringing and lack of support:

*It’s a case of my life experience... I worked in a family business... I tried to do a good job... until my dad died. And then it wound up where it didn’t make any difference if I did the job. I didn’t do it right, OK, according to my family. That bleeds over into this (ERW work) because it winds up where uh I worked at that, I tried for three years to do the right thing as far as after my dad died and I know that I don’t do the right thing all of the time, nobody does the right thing all the time. (I was told) You always screw up... my dad always had a saying, if you’re not doing anything you don’t screw up. So I did a lot of things so therefore I screwed some things up... I will say this- it happened on a (emergency) call today, very minor call and it winds up you go out there (on a call) and you’re doing the job and it’s a case of... I’m not wanting to screw up... it’s terribly, terribly intimidating to anybody. I was doing one thing and somebody that was in a higher position... the boss came along and said, no you don’t do it that way (just like my dad)... and I can remember being told that I was doing it wrong.*

Another ERW notes that when exposed to similar experiences that were traumatic from the past they create an additional stress on the job. They commented:

*Whenever we get a call that has anything to do with water, I find them very stressful because of losing my friend and comrade and almost losing my own life.*

An additional contributing factor of stress was anticipation of the unknown and mentioned by several ERW’s as noted in this reference:

*The anticipation of not knowing what the call will be like when we get there.*

Another ERW stated:
You just don’t know what your night will bring. You have some idea when the call comes in but you think through all the what if’s. You get ready with certain equipment but you try to get as prepared mentally as you can with what you know about it up to that point.

Additional factors noted by a few participants as they reflected on contributing stressors included facing multiple calls and shifts, external politics, economic and financial dilemmas for the department and lack of supervisory support.

Coping and Support

The respondents shared the ways in which they implement coping mechanisms when exposed to stressful or traumatic events in the line of duty as ERW’s. Coping mechanisms by the ERW’s are varied, according to the results of this research study. Consistent words and themes were noted to include the support which is received and promoted among the members of the emergency services department. This theme was consistently heard from all participants. Other modes for coping which were identified by the ERW’s included attending critical incident stress debriefing, feeling or detaching from the emotion of the situation and participation in exercise. In addition, other identified coping strategies included use of alcohol, recurring thoughts of the event, flashbacks or dreams, disruption of sleep and anger.

Overwhelmingly, nearly all respondents identified co-workers or peers as their main support after experiencing a critical or stressful event. One ERW commented:

A lot of the guys will take the time to hear what’s going on and sit down with you so there is that camaraderie there.

Another ERW also states the importance of getting support from peers:

It really helps to talk it out right away. I talk to my firefighting or EMS friends, we hang out, go fishing have some food and a few beers.
It is also mentioned by the ERW’s that they rely on other professionals involved with the call from other organizations for peer support. One ERW mentions:

She (a nurse) can tell by the tone of my voice when I’m giving my report and the way my face looks when I walk- in she closes the door to talk...I’ve learned that you need to talk about it and get it out a little bit sooner. You can’t have that be bothering you and then it’s too late.

An additional means of support noted from the interviews of the ERW’s was the benefit of attending the critical incident stress debriefing after exposure to a traumatic or stressful event. Over half of the participants valued this process. An ERW voiced their approval by stating:

The critical stress debriefing is very helpful. It takes a lot of things from festering in your gut.

Other ERW’s agreed by adding:

I have attended a few critical incident debriefings- and they help. It’s a good time to let people talk and get it out.

One more ERW added:

Whether I think I need it or not, I will go(to critical stress debriefing) for myself and the crew members anyway...take care of it immediately because stress has a weird way of poking its ugly head at any given time and you don’t pick that time.

Other means of coping includes crying and feeling the emotion as reported by several participants. After responding to multiple calls in a row that involved the death of a child this ERW stated:

You’ve got to hang on to yourself sometimes... (when we were dealing with the child’s parents), I had to turn my head a few times and catch myself (crying). You are going to be emotional, if you’re not you’re not human. Later, I laid down for a while and you know, you’re just thinking about this...I lay in bed and I just balled for about 10 minutes.
Another ERW reflected:

_There are days I breakdown and cry, you know, for that little girl (death), you ball. You’re emotional but I can walk away from that and learn from that and move on._

Another means of coping noted by the ERW’s was to process the traumatic or stressful event and not be consumed by emotion as noted by one ERW:

_I was in the (war). For me, there will never be anything more than that. I think with my age, I might look just more at the cycle of life, its process, having seen this (war)-might help in these (emergency) situations._

Taking a more cognitive approach, one ERW states:

_With the stress of the codes (death), doing CPR, I guess the way I deal with it is I look at it clinically. If you look at it clinically, okay, this heart is worn out, his valves were bad… it couldn’t be saved…if you look at it that way, it takes the sting out._

One half of the participants noted that exercise was a useful means of dealing with the work related stress, another identified means to cope with stressful situations was noted by the following ERW:

_Some physical exercise like walking or riding bike… or just being outside to garden…that’s a stress reliever._

Another concurred by adding:

_I take time with my friends, do something fun, like yoga._

Some coping mechanisms by ERW’s were identified by respondents as not effective mechanisms means of addressing the stress of their work. These coping strategies included the use of alcohol and symptoms of PTSD such as recurring recollections and recurring thoughts of the event, flashbacks or dreams, sleep disturbance and anger.
Pertaining to the use of alcohol as a means of coping, the ERW’s suggest that less alcohol is used by most ERW departments in general than in past years. One ERW stated:

*The majority of rural fire departments have a refrigerator full of soda and another one full of beer and booze. They break out early from a meeting, based on my experience with some other departments. This department is more professional and it is not accepted. I have used and abused alcohol in dealing with stuff because it affected me. I am close to a teetotaler now.*

And,

*I finally learned that drinking too much is not a way to deal with the stuff you see. I talk to my friends at the station instead.*

Only a few ERW’s referenced how the reoccurring thoughts of a past significant critical incident can impact their ability to cope with their present work. One ERW stated:

*That (situation) haunts me every day when I go home. It haunts me when I come in the station- and the first thing I usually think about in the morning when I wake up- and a lot of times the last thing I think about at night. It’s weird. I think about it every day…it’s with me at least for the rest of my life.*

Another ERW added:

*Sometimes it (stressful event) will come across your head from a call and you have nightmares. Or sometimes if you’re watching a commercial and you just have that feeling of, I feel really crappy because I could not do anything for that call. I should have done this instead of that...and I feel guilt.*

One other ERW mentioned:

*I will honestly say that when you shut your eyes at night a lot of times you wind up where you see some cases…it’s not nightly but it winds you up...you have dreams and it was nothing like the situation.*

Several ERW’s identified the feeling of anger as another means of coping with critical events or work stressors. In reference to how they continue to respond after exposure to a traumatic situation the ERW said:
We have a memorial at the station (for those that were lost). If I get upset and angry with the young firefighters and tell them what to do, it is because I don’t want them to be in this same kind of situation. I don’t want their name on a piece of stone...like this ever.

Additionally, several ERW’s cope with humor, rely on religious beliefs and distance themselves from feeling the emotional aspects of the job. One ERW found that therapy and medication were not useful means of coping with the stressful situations. This ERW shared the following:

_Maybe I didn’t find the right person (therapist)... it was more or less this person was telling me to just toughen it up, move on...I’m like I am here for your help and you’re just telling me to suck it up and you’re getting some $100 an hour. I don’t like this! That turned me off...Medications made me feel...weird._

In conclusion, the eight ERW’s who participated in the semi-structured interview for this research, identified some common themes in regard to the types of situations in which they find stressful. The injury or death of children is particularly difficult for the ERW’s. Participants also suggested variables that contributed to their work related stressors, which varied from personal, situational and organizational factors. Only two participants suggested that traumas from their past contributed to the stress of their work as ERW’s. When discussing how the ERW’s cope and are supported after exposure to a critical or stressful situation, most ERW’s rely on the support of their peers or co-workers. Structured debriefing after critical incidents are also valued by most participants. Both effective and ineffective mechanisms for coping were identified as a means to face the stressors of exposure to critical or stressful work related situations.
Discussion

This current exploratory and qualitative research offered an in-depth look into the identified sources of stress, contributing factors of stress as well as coping strategies and supports for ERW’s. There have been numerous studies conducted on this population from urban settings which focus on their stress levels and exposure to traumatic events. This study followed similar themes found in the literature but is unique as it gained further insight through in-depth discussions with rural volunteer ERW’s.

A majority of the studies reviewed from the literature researched the ERW’s through quantitative means. Themes identified throughout the literature (Bryant, 1996 and Alexander & Klein, 2001) often focused on post-traumatic stress symptoms and exposure to specific incidents identified as traumatic or critical. Several studies by Herman (1992) and Bonanno et al., (2007) and van der Kolk et al., (1996) sought out the contributing personal and work related factors which may intensify the symptoms of stress for the worker. Effective and non-effective coping strategies implemented to address the everyday and in the line of duty stresses have been researched by Regehr and Bober (2005) and Beaton et al., (1999). The following discussion will include research findings, implications for social work practice, strengths and limitations of this study and implications for future research.

Critical Incidents and stressful situations

This study, conducted with paid volunteer rural ERW’s from a Midwestern fire department supported the literature by Regehr and Bober (2005) and Alexander and Klein (2001) as it pertained to the identification of critical incidents and stressful situations. The injury or death of a child was recognized by over half of the study participants as the most stressful situation in which the ERW is exposed. The helplessness of these young
victims hit an emotional chord with the participants. Sometimes, participants reflected on relating to these victims as a parent, having children themselves of the same age. Events that involved children were often identified by the participants immediately and without hesitation during the interview process. The ERW’s shared detailed and emotionally charged accounts of the child victim, their injuries and the reactions by their family. Many spoke as if they were in the moment and reliving it.

Significant physical and emotional traumas were noted to also be critical and stressful situations for the ERW’s, similar findings to that of Alexander and Klein (2001). When ERW’s faced victims that suffered multiple physical injuries or considerable pain, the emergency staff found these experiences to compound the stress of the situations. Schorr and Boudreaux (2005) also determined that emergency personnel have increased tension when facing gross injury and trauma.

Findings also revealed that the ERW’s believe their safety is often compromised during emergency responses situations. This result also coincided with the research conducted by Bryant and Harvey (1996). The ERW’s, both EMT’s and firefighters acknowledged their fears and stress when involved in emergencies in which they may be facing physically challenging and dangerous situations. These situations can range from the victims and families being physically aggressive toward the ERW or the ERW entering precarious structures which could impact their safety at any given moment.

Contributing factors of stress

Beyond the immediate tasks faced by the ERW’s, additional work and life stressors can contribute to an already significantly difficult and stressful profession. Participants in this study noted multiple stressors that contribute to the intensity of the job itself. The ERW’s reported that the reaction of victim’s family at the scene, learning of
the personal stories of the victims, knowing the victim, internal organizational issues, the strain on personal relationships and having experienced past trauma all contribute additional stress to their work.

The findings in this study referenced the lack of control of a situation in which the victim’s family is responding emotionally to a tragedy. This creates an emotional toll on the ERW. Such findings are consistent with the research conducted by Alexander and Klein (2001) and Grill and Zygowicz (2001). Because situations in which the ERW’s respond can be emotional for the victim, they often learn of the personal story of the victim. When an ERW learns more about the individual’s history, the person in which they are attempting to help or save is no longer just a body. They are a person with a name and a real life story. Sometimes, especially in situations of severe trauma, the personalizing adds an intimate meaning and dimension to their work but also reportedly, can be more difficult emotionally for the ERW’s; an additional stressful component to the work.

Knowing the victim, especially in a rural area, is a frequently occurring situation that can contribute to the stress of ERW’s. This finding is consistent with the work of Regehr and Bober (2003) and Alexander and Klein (2001). Probably the most poignant interview of this study referenced the death of a fellow ERW and friend in the line of duty. The long-lasting effect which this event has had on the ERW was quite obvious and impacted their daily functioning. When the ERW has faced previous trauma such as loss of a friend or comrade, this past trauma can impact the individual’s emotional and physical well-being. This study’s findings were consistent with the 1992 research of Herman wherein death of a close co-worker was recognized as one of the highest ranking stressors faced by this population.
Contributing factors of stress as they pertain to internal organizational issues involved ERW’s having the confidence in fellow co-workers’ knowledge of the work and their ability to protect their fellow ERW’s. Participants also spoke of others’ commitment and dedication to the job as additional stressors. Similarly, these internal agency stressors were also reported in the 2005 work of Regehr and Bober as an additional challenge to the work. A surprising finding from this study, which was not noted in the literature, was the stress and impact which staff turnover has on the ERW’s. Participants were concerned about the availability of co-workers with knowledge, experience and dedication. These changes often occur due to annual elections and assignment of personnel to new duties, some of which are reportedly political in nature.

Over half of the participants recognized how the sporadic and often unscheduled emergency response work affects their personal relationships. Leaving family and friends on a moment’s notice due to on call responses contribute to the stress of the job. Research by Regehr and Bober (2005) also found this to be true. The ERW’s shared that some family and friends were supportive and understood their commitment and dedication to the work. Some ERW’s questioned as to how this type of lifestyle may impact their personal relationships with significant others, children and friends on a long-term basis.

When ERW’s have experienced past trauma, they can respond to critical situations on the job with less resilience, according to Bonanno et al., (2007). This study interviewed several participants who had experienced prior trauma, both work related and personal. The findings from these interviews stand out for the researcher. They are examples of how their individualized and unique response and reaction to current critical incidents and intense work situations may be influenced by their previous trauma.
experience. According to the ecological or systems theory, of which this study was based, the individual is viewed broadly. Individuals are exposed to multilayered systems; resulting in multiple interactions and influences. This research supports the conceptual framework based on the individualized ERW responses to varied work related critical situations.

van der Kolk (1989) recognized that traumatized people expose themselves to situations that are similar to their original trauma. In the current study, a particular ERW experienced childhood rejection by a caregiver and was traumatized. When given a directive by a person of higher rank, the ERW had flighting thoughts of their childhood caregiver being critical. As a result, the ERW responded to this directive with thoughts and emotion similar to those experienced. van der Kolk (1989) suggests that often these individuals are reliving the earlier trauma and react with high arousal and “do not respond to stress in the same ways as their less traumatized peers” (p. 9). Based on this ERW’s response, this study supports the findings of van der Kolk (1989).

van der Kolk et al., (1996) also determined that emergency workers become additionally stressed when they must wait and anticipate events which are unknown. The respondents in this study also noted that their anxiety increases either when they are awaiting a call or when a call comes in. Even when they hear the details of a call, the ERW is unaware of the exact details of the victim and the scene, knowing that situations can intensify and change before they arrive.

**Coping and Support**

Various strategies for coping were identified in this study. Peer support, critical incident stress debriefing, expressing or withholding emotion as well as stress symptoms were means of dealing with the intense and difficult situations faced within their scope of
practice. The ERW’s most often seek out and provide support to other ERW’s as a means of dealing with traumatic and stressful situations. Many participants referred to the “brotherhood and sisterhood”, “family” and camaraderie of the organization. The participants count on each other for work related and personal support, to be heard and to spend time with each other. This finding was similar to the research conducted by Schorr and Boudreaux (2005). ERW’s revealed that they often socialize and associate with fellow ERW’s as they have a common bond and understanding particularly based on their experiences as emergency workers. Supervisory support and supervision seems to play an important role with the ERW. Most ERW’s participating in this study found the supervisor actively supporting them and responding to their needs, whether it involved needing additional support after a critical incident or managing multiple calls or shifts. van der Kolk et al., (1996) also determined the importance of strong and responsive leadership stance for emergency workers in providing a support.

This study of the rural ambulance workers, EMT’s and firefighters found that most respondents approved and applauded the availability of the critical incident stress debriefing (CISD) as a means of coping with stressful situations and traumatic exposure. Participants reported attending CISD not only to address their own stress issues related to the traumatic event but also as a means to support their fellow workers. The ERW’s interviewed reported that the CISD served as an avenue to cognitively process the situation and allowed them to feel more at ease. Participants in this study however did not reveal specific changes or improvements in stress symptoms due to their involvement in the debriefing process. The research of Regehr and Bober (2005) on CISD noted varied effectiveness of this strategy to address trauma symptomology, referencing a further need for more investigation and research.
Denying or allowing emotion were two polarized strategies implemented by some of the ERWs in this study. Some respondents allowed the emotion to freely flow, such as crying and feeling the emotion following exposure to a traumatic event. This finding was not addressed in the literature reviewed; therefore a somewhat surprising result in this study. In contrast, other ERW’s revealed that they often stuff emotions and do not allow them to be felt or expressed. Some of the ERW’s that reported holding back emotion had prior exposure to previous traumas that were either work related or war related. Alexander and Walker (1994) and Haar and Morash (1999) concurred with the current study in their research with police officers who were exposed to multiple traumas and coped through emotional blunting.

Of particular interest were the coping mechanisms implemented by several ERW’s in this study. Reported mechanisms included nightmares, dreams, anger, anxiety, guilt and recurring thoughts about the traumatic event as reported by several ERW’s in this study. Haar and Morash (1999), Alexander and Walker (2001) and Bryant and Harvey (1996) confirm these findings. Several of the ERW’s reporting and experiencing these mechanisms had prior traumatic events and were long term ERW’s. Other ERW’s coping in this manner however were new to the field of emergency work; their exposure to prior trauma unknown. When the ERW’s reported the use of these coping strategies, it was evident that they hoped to be in better control of these stress symptoms but realized it was a common side effect of the work. In question by this researcher is how to delineate and define whether these coping mechanisms are actually stress symptoms related to the critical and traumatic events of which these workers are exposed. Further understanding, training clarification through research are needed to more clearly define these terms for the ERW as well as the professional social worker.
One exceptional finding noted in this study was the participants’ genuine dedication and passion for the work which they revealed during these intimate conversations. They spoke of personal gratification in helping others and saving lives. Many spoke with enthusiasm, confidence and excitement when describing their role to make a difference in the lives of others. The literature review did not address this important and pertinent aspect of the profession of the ERW.

An unexpected finding in this research pertained to coping and support techniques implemented by the ERW’s. An ERW referenced reliance on religious beliefs to understand and accept the difficult situations often faced by these individuals. Several others mentioned their participation in exercise to address the stress. None of the literature reviewed noted these findings. Also, another ERW responded adamantly that neither therapy nor medication were viable coping options based on personal experience. This response did not align with the research of Schorr and Boudreaux (2005) as they found that firefighters were open to seeking professional counseling. None of the reviewed literature addressed the use of medications as a means of coping.

In comparison to research by Schorr and Boudreaux (2005), this study was not consistent with the finding that alcohol is used by ERW’s as a coping mechanism for stressful situations. Only several of the participants mentioned their limited use of alcohol. They reported a change in the culture of the department to not use alcohol as a tool for coping or socialization. The 2005 work of Schorr and Boudreaux reported alcohol was used by over half of those surveyed firefighters but also found it to be an ineffective method to address the stress.
Implications for Social Work Practice

ERW’s face challenges to their mental and physical health due to their continuous exposure to stressful events and efforts. These traumatic and critical events occur regularly and spontaneously, exposing these workers to frequent and difficult situations. It is important for rural ERW’s, their families, communities and the public to have a better understanding of the impact of the work. Due to the regular exposure or its anticipation, ERW’s often needs understanding, support and care so they can lead healthy lives in order to serve and provide for their families and communities. There are therefore pertinent implications at a micro, mezzo and macro level for the practice of social work.

Based on the findings from this study it is important for social workers to have the knowledge base about the impact of childhood and adulthood trauma. At least within the last decade, social workers have been exposed to education about the brain and trauma. More expansive and available training is needed however so that social work professionals practicing in all areas of care are prepared to meet the needs of clients exposed to trauma. The professional must be familiar with the impact of stress, individual’s responses as well as effective treatment options. In order for social workers to be prepared and supportive of trauma victims, a clinically based education inclusive of current trauma data also needs to be readily available.

Consideration should also be given to expanding the availability of social workers to emergency departments that provide fire and emergency medical services. One ethical principle of social work is to promote self-determination and “enhance client’s capacity and opportunity to change and to address their own needs” (NASW, 1999, p. 7). Through expansion of social work services to emergency departments, this professional
obligation could be met. The provision of psychoeducation to front line ERW’s as well as to managers, supervisors and to the family of ERW’s would promote awareness of the impact of trauma. It would suggest that ERW’s and those surrounding them could be more in tune to the needs of those that face ongoing difficult and critical situations. It may be important for the profession to educate emergency response staff and departments also about the impact of previous trauma and how it can affect individual’s current response to critical incidents, stressors and trauma. In addition, clinical therapeutic services could be a powerful addition to the ERW’s either within an emergency response department or within an independent clinical practice. The profession of ERW’s seems to rely heavily on their informal peer support. If the professional social worker was integrated into the department, clinical services would be more accessible and possibly perceived as a continuation of those informal supports already accepted and in place for the ERW’s. The profession of social work will also need to advocate for funding and education in order to expand their role. Advocacy for funding will need to be directed toward those that oversee and fund these emergency response organizations, namely the public, and city, state and federal governments.

Further research is also needed in the area of identifying critical incidents, factors that contribute to stress as well as coping strategies and supports; particularly with rural ERW’s. In contrast to the more often researched urban ERW’s, as noted in this study, there are unique factors and characteristics of the rural ERW’s. Further investigation by the social work profession is needed in order to have a more complete understanding of their experience and modes of effective treatment. Alternatives to the controversial CISD may need further in-depth research conducted with rural ERW’s. An additional focus of
future research may include identifying where and how the profession can be of the most value to the ERW and their families.

**Strengths and Limitations of the Study**

There are several strengths to this study. It offers a contribution to the study of ambulance workers, EMT’s and firefighters serving in a rural setting. Secondly, this study gained in-depth and personal information from the ERW’s concerning their experiences in responding to emergency work. The qualitative method promoted personal, intimate and detailed conversations. Interview questions were semi-structured however meeting one on one in a casual setting allowed for more expansion and clarification of information shared.

This study interviewed 8 voluntary participants from one specific rural Midwestern fire department. Due to the small and exclusive sample there are limitations to generalizing the data. Despite the researcher not personally knowing the research participants, the researcher and some participants knew of each other due to their membership in the same small, rural community in which the study was conducted. Due to this familiarity, the findings and interpretation of data could be influenced.

Another consideration is the validity of the participant’s answers, particularly in the area of internal political issues and use of alcohol. Participants may have been hesitant or guarded to answer honestly as they may have had concern about confidentiality and possible repercussions based on their answers. The researcher was unfamiliar to most participants; resulting in limited trust in the researcher. The researcher’s gender was female while most participants were male. This may have had an impact, either positively or negatively, dependent upon the comfort level of the individual participants and the responses which they provided.
Conclusion

In conclusion the rural ERW’s are exposed to multiple stressful events in the line of duty. Despite similar exposure, individual ERW’s react and respond to these experiences based on their prior trauma experiences, their supports and implementation of coping mechanisms. Although they share many of the same characteristics with the urban ERW’s, the rural ambulance worker, EMT and firefighter are unique. It is important to acknowledge these differences as the field of social work seeks to further support this important group of dedicated and passionate workers.
References


Cowman, S., Ferrari, J. (2004). Mediating effects of social support on firefighter’s sense


Retrieved July 6, 2011 from


Appendices

Appendix A-IRB Approval

Institutional Review Board
University of St. Thomas

DATE: December 16, 2011
TO: Susan Schwab
FROM: University of St. Thomas Institutional Review Board
PROJECT TITLE: [284758-1] The Sources of Stress and Support: A Perspective by Emergency Response Workers
REFERENCE #: 
SUBMISSION TYPE: New Project
ACTION: APPROVED
APPROVAL DATE: December 6, 2011
EXPIRATION DATE: December 6, 2012
REVIEW TYPE: Full Committee Review
REVIEW CATEGORY: Expedited review category # [enter category, or delete line]

Thank you for your submission of New Project materials for this project. The University of St. Thomas Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Full Committee Review based on applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UIRISO) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of December 6, 2012.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Eleni Roulis at 651-962-5341 or e9roulis@stthomas.edu. Please include your project title and reference number in all correspondence with this committee.
**CONSENT FORM**

Please read this form and ask any questions you may have before agreeing to participate in the study. Please keep a copy of this form for your records.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>The Sources of Stress and Support: A Perspective by Emergency Response Workers</th>
<th>IRB Tracking Number</th>
<th>284758-1</th>
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General Information Statement about the study:
I am conducting a research study about the impact of the work of volunteer emergency response workers, to include ambulance workers, paramedics, emergency medical technicians and firefighters. I invite you to participate in this research.

You are invited to participate in this research.
You were selected as a possible participant because of your status as a person age 18 year of age or older and working within the rural emergency services field, and holding a position as a volunteer ambulance worker, paramedic, emergency medical technician and/or firefighter.

Study is being conducted by: Susan Schwab
Research Advisor (if applicable): David Roseborough
Department Affiliation: Department of Social Work

Background Information
The purpose of the study is:
The purpose of this study is to gain a better understanding and knowledge about the experience of emergency response workers, the impact of their work and the coping strategies and supports that they identify as helpful.
The study seeks to answer the question:
1. What are the source of stress for emergency response workers?
2. What factors contribute to their stressful environment?
3. What supports are effective when exposed to the stressors?
4. What coping mechanisms are effective to address the stressors?
In order to answer these questions, this study will use face-to-face individual interviews with the researcher. You will be asked about your experiences as an emergency response worker, what emergency response situations you identify as stressful and your thoughts and feelings about them. You will also be asked about factors that contribute to the stress of your emergency response work. Additionally, you will be asked about the support you receive and how you cope with these stressors.
The study may also offer ideas about how better to support you and others in your profession as well as to cope constructively.
Procedures
If you agree to be in the study, you will be asked to do the following:
State specifically what the subjects will be doing, including if they will be performing any tasks. Include any information about assignment to study groups, length of time for participation, frequency of procedures, audio taping, etc.
If you agree to be in this study, I will ask you to do the following things: Participate in one interview with the researcher. This interview will last approximately one hour in length and will be conducted by the researcher. The interviews will be conducted in an agreed upon location and time that will be convenient for you. I will ask you to answer a series of research questions about your experience as an emergency response worker. The interview will be audio-taped and your responses will be transcribed within one week of the interview.

Risks and Benefits of being in the study
The risks involved for participating in the study are:
Although the interview questions are not meant to cause harm, discussing stressful and traumatic situations can elicit emotions and memories which could possibly be a risk to your participation in the study. It may raise some difficult emotions but you will be in charge of what you discuss. You may skip questions and you may end the interview at any time. I will provide to you a list of resources if you should need to speak with a professional for additional support. Payment for such services must be provided by you or your health insurance. Resources include First Call for Help, Great Rivers 2-1-1, NAMI of LaCrosse, Family and Children’s Center, Garson Growth and Counseling Services, Gunderson Lutheran Behavioral Health and Krohn Clinic, Ltd. Another risk of your participation may be that others in your organization will know that you have chosen to participate in the study.

The direct benefits you will receive from participating in the study are:
No direct benefits exist as a result of your participation in the study.

Compensation
Details of compensation (if and when disbursement will occur and conditions of compensation) include:
Note: In the event that this research activity results in an injury, treatment will be available, including first aid, emergency treatment and follow-up care as needed. Payment for any such treatment must be provided by you or your third party payer if any (such as health insurance, Medicare, etc.)
There is no compensation for participation.

Confidentiality
The records of this study will be kept confidential. In any sort of report published, information will not be provided that will make it possible to identify you in any way. The types of records, who will have access to records and when they will be destroyed as a result of this study include:
The records of this study will be kept confidential. Only the researcher, the professional transcriptionist, and the research advisor will have access to the research records which identifies the research subjects. The type of records I will create include audio-recording, transcripts and hard written records. The audio-recording will be transcribed by either the researcher or a professional transcription who will be required to sign a confidentiality agreement. The consent forms, written notes and audio- recordings that will be completed for this study will be stored in a locked file in the researcher’s home and destroyed by 05/30/12. The information reported in the findings will not include information that
would make it possible to identify you, such as by name, title or age. Findings from the transcribed interview will be presented in one public forum where graduate students share results from their study. Audiences tend to range from 10-20 people.

Voluntary Nature of the Study
Your participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your current or future relations with any cooperating agencies or institutions or the University of St. Thomas. If you decide to participate, you are free to withdraw at any time up to and until the date/time specified in the study. You are also free to skip any questions that may be asked unless there is an exception(s) to this rule listed below with its rationale for the exception(s).

Not applicable

Should you decide to withdraw, data collected about you will be used in the study.

Contacts and Questions
You may contact any of the resources listed below with questions or concerns about the study.

<table>
<thead>
<tr>
<th>Researcher name</th>
<th>Susan Schwab</th>
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<tbody>
<tr>
<td>Researcher email</td>
<td><a href="mailto:schw9669@stthomas.edu">schw9669@stthomas.edu</a></td>
</tr>
<tr>
<td>Researcher phone</td>
<td></td>
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<tr>
<td>Research Advisor name</td>
<td>David Roseborough</td>
</tr>
<tr>
<td>Research Advisor email</td>
<td><a href="mailto:droseboroug@stthomas.edu">droseboroug@stthomas.edu</a></td>
</tr>
<tr>
<td>Research Advisor phone</td>
<td>651-962-5804</td>
</tr>
<tr>
<td>UST IRB Office</td>
<td>651-962-5341</td>
</tr>
</tbody>
</table>

Statement of Consent
I have read the above information. My questions have been answered to my satisfaction and I am at least 18 years old. I consent to participate in the study. By checking the electronic signature box, I am stating that I understand what is being asked of me and I give my full consent to participate in the study.

<table>
<thead>
<tr>
<th>Signature of Study Participant</th>
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<td>Print Name of Study Participant</td>
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<th>Signature of Researcher</th>
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<td>Print Name of Researcher</td>
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*Electronic signatures certify that:
  - The signature agrees that he or she is aware of the policies on research involving participants of the University of St. Thomas and will safeguard the rights, dignity and privacy of all participants.
  - The principal investigator will seek and obtain prior approval from the UST IRB office for any substantive modification in the proposal, including but not limited to changes in cooperating investigators/agencies as well as changes in procedures.
  - Unanticipated or otherwise significant adverse events in the course of this study which may affect the risks and benefits to participation will be reported in writing to the UST IRB office and to the subjects.
  - The research will not be initiated and subjects cannot be recruited until final approval is granted.

Revised: 7/6/2011
Appendix C-Interview Schedule

Researcher will review and confirm participant signature on information/consent form.

The researcher will turn on the audio tape, with permission, after explaining the purpose of the audio tape as a means to accurately capture the words and opinions of the participant.

The researcher will begin by stating: “Thank you for taking the time to meet with me to participate in this interview. As you may be aware, this interview is a part of my master degree program in social work with the University of St. Thomas/St. Catherine University. This study is examining the stressors and ways emergency response workers cope. There is no right or wrong answer to any of the questions. I am looking to hear about your experiences and thoughts that you are willing to share. Questions will be grouped into several categories to include critical incidents or stressful situations, contributing factors of stress and coping and supports. If there are questions you do not wish to answer or you want to stop the interview, please feel free to do so. Do you have any questions before we begin?”

Introductory/Demographic Questions:
1. What is your current position?
2. How long have you been in emergency service work for this department as well as others?
3. How did you become interested in the work of an ERW?
4. How old are you? (Data will only be reported by decade)
5. What is your education? Have you received any formal training to deal with what you encounter on this job?

Critical Incident/Stressful Situation Questions:
6. Can you describe a typical shift or duty while on station? What is your routine?
7. What kinds of emergency response situations have you found to be stressful that are related to your work?
8. Can you describe an emergency response situation that stands out in your mind as being difficult to handle or deal with?
a. What is it about this event that makes it stand out?
b. What were your thoughts or feelings during and/or after the event?
c. Is this still stressful?

**Contributing Factors of Stress Questions:**

9. Have you experienced recent stressful situations or events that may contribute to your work related stress? (Yes/No)
   a. If so, and willing to briefly share, what were these stressful situations?

10. Have you experienced a prior or repeated stressful situation that may contribute to the work related stress? (Yes/No)
    a. If so, if you are willing to share, what were these stressful situations?

**Coping and Supports Questions:**

11. From whom do you receive support after experiencing or exposure to a work related stressful situation?
    a. Who in this group? Coworkers, supervisor, others connected to this organization?
    b. Do you feel valued by the organization?
    c. Who outside this group I supportive? Family, friends?
12. What do you do to cope or manage with a work related stressful situation?
13. What coping strategies have you found that work well versus not so well?
14. Is there anything not currently in place that could be done to help you and your colleagues to better cope?

**Concluding Questions:**

15. What do you like about your job?
16. Are there any other comments that you have made that you would like to further discuss?
17. Is there anything you would like to ask me or to add that I might not have thought to ask?