# Understanding and Improving Mental Health Resiliency within the Council Bluffs Fire Department During Natural and Man-Made Disasters

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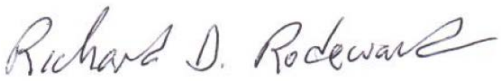
## CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

SIGNED: 

## Abstract

The problem was that it was unknown if members of the Council Bluffs Fire Department were adequately prepared to manage the unique mental health challenges associated with natural and man-made disasters. The purpose of this applied research project was to determine if members of the Council Bluffs Fire Department were adequately prepared to manage the unique mental health challenges associated with natural and man-made disasters and to improve the mental health resiliency of its members. Action research was used in order to answer the following research questions; (a) how have previous natural or man-made disasters affected the mental health of members of the Council Bluffs Fire Department, (b) how do members of the Council Bluffs Fire Department rate their own personal resilience, (c) how does the current peer support and employee assistance programs address the unique mental health challenges presented by natural or man-made disasters, and (d) what steps can be taken by the Council Bluffs Fire Department to improve mental health resiliency of responders before, during, and after natural or man-made disasters? Procedures included a comprehensive literature review, two survey instruments, one personal interview, situational analysis, and action plans. The results of the research established that, while transitory negative mental health effects likely occurred during the last disaster event, members of the CBFD were adequately prepared to manage the challenges presented by disasters. Resiliency scores were above average for a majority of sampled members. The action research product included a proposed firefighter resiliency training plan and job aid for incident commanders. Recommendations included; implementation of the proposed firefighter resiliency training plan, adoption of the job aid for incident commanders, establish baseline resiliency scores for all members, and evaluate firefighter resiliency improvement initiatives for effectiveness.

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# Understanding and Improving Mental Health Resiliency within the Council Bluffs Fire Department During Natural and Man-Made Disasters

The mission of the Council Bluffs Fire Department (CBFD) is to protect the lives and property of the citizens of Council Bluffs against fire and other emergencies. While most emergency calls fall into common categories (fires, rescues, medical emergencies) the CBFD does have a history of major natural and man-made disasters that fall outside the scope of a normal emergency response. These types of emergencies can place uncommon stressors on the men and women of the CBFD.

The problem is that it is unknown if members of the Council Bluffs Fire Department are adequately prepared to manage the unique mental health challenges associated with natural and man-made disasters. The purpose of this applied research project is to determine if members of the Council Bluffs Fire Department are adequately prepared to manage the unique mental health challenges associated with natural and man-made disasters and to improve the mental health resiliency of its members. Action research will be utilized to answer the following research questions; (a) how have previous natural or man-made disasters affected the mental health of members of the Council Bluffs Fire Department, (b) how do members of the Council Bluffs Fire Department rate their own personal resilience, (c) how does the current peer support and employee assistance programs address the unique mental health challenges presented by natural or man-made disasters, and (d) what steps can be taken by the Council Bluffs Fire Department to improve mental health resiliency of responders before, during, and after natural or man-made disasters?

## Background and Significance

The Council Bluffs (IA) Fire Department was formed on January 5, 1883, by resolution of the city council to establish a full-time, paid department (Petersen, 1992). The formation of a full-time paid department came after numerous disastrous fires in the previous 29 years nearly destroyed the fledgling pioneer town. In addition to devastating fires, the city suffered many catastrophic natural disasters in its early years that challenged the fire department and the city. The CBFD continued to grow during the mid-20$^{th}$ century, adding personnel and stations that paralleled population expansion (Petersen, 1992).

Currently, the CBFD has an authorized staffing of 107 personnel working out of five stations with an annual operating budget of $14 million. The highly trained, professional staff responds to approximately 9,000 emergency calls per year. Response apparatus includes five engines, two truck companies, three ambulances, one hazardous materials truck, one brush truck, three rescue boats, one hovercraft, one mobile command center, two light-rescue trucks, as well as multiple reserve apparatus. The CBFD provides an all-hazards response that includes fire suppression, advanced life support ambulance service, hazardous materials response, and numerous technical rescue disciplines. The hazardous materials team is a regional response asset covering seven Iowa counties and is part of the weapons of mass destruction response team for the state of Iowa. The CBFD is rated by Insurance Services Office (ISO) as a Class 2 fire department and is currently working on accreditation through the Commission on Fire Accreditation International.

The city of Council Bluffs is an urban community in Pottawattamie County with an estimated population of 62,597 within a geographic area of 43.62 mi$^2$ (70.2 km$^2$). The surrounding eight counties in Iowa and Nebraska that comprise the Omaha – Council Bluffs metropolitan area

have an estimated population of 915,000 citizens. Since 1988, Pottawattamie County has been included in 13 weather-related Federal Emergency Management Agency (FEMA) disaster declarations (*CB plan*, 2010).

Council Bluffs has potential exposure to a variety of natural and man-made disasters due to its weather and geographic location, local industry, and transportation corridors. Council Bluffs is in the region of the United States (U.S.) known as Tornado Alley. Of the 11 states that make up Tornado Alley, Iowa ranks third with 9.1 tornados per 10,000 $mi^2$ (26,000 $km^2$) annually (NOAA National Centers for Environmental Information [NOAA], n.d.). Between 1950 and 2010, Council Bluffs had 75 historical tornados, Fujita Scale (F)- 2 or greater, within 50 miles of the city (USA.com, 2017).

The worst of these tornados struck on July 15, 1988, when three tornados descended upon the city of Council Bluffs injuring 83 citizens and causing $53.2 million in damages (Arterburn, 1988). Two of the three tornados were later categorized by the National Weather Service as F-2 and F-3 events (USA.com, 2017). This tornado outbreak damaged 930 homes, destroying 21 (Arterburn, 1988). As a result, Pottawattamie County was officially declared a disaster area on July 17, 1988, by Governor Terry Branstad. (Arterburn, 1988).

Research shows that the number of days each year in which at least one F-1 (or greater) tornado strikes somewhere in the U.S. has declined from around 150 days in the 1970's to approximately 100 days annually (Erdman, 2016). However, the occurrences of multiple tornados in fewer days has increased. This clustering of tornadic activity has increased from 0.5 – 1 days per year with 30 or more F-1 (or greater) tornados in the 1960's and 70's to three days per year in the past decade (Erdman, 2016). It is reasonable to assume there will be less overall days where Council Bluffs has tornadic activity, but more days with multiple tornados in the future.

In addition to the dangers presented by tornados, the Council Bluffs community has seen historic flooding due to its proximity to the Missouri River. For centuries, inhabitants along the Missouri River have battled spring flooding to varying degrees depending on snowfall amounts and spring temperatures in the upper watershed basin (Knott, 2007). The Missouri River weaves 2,465 mi (3,983 km) across the upper Midwest from Three Forks, Montana to the Mississippi River near St. Louis, Missouri. Its watershed includes 10 U.S. states and portions of the Canadian Provinces of Alberta and Saskatchewan, totaling over 530,000 $mi^2$ (852,952 $km^2$) or one-sixth the land area of the continental U.S. (Knott, 2007).

Major flooding in 1943 prompted the US Army Corps of Engineers to develop a long-term strategy to manage future flood threats. The resulting $2.5 million plan would expand the existing system of dams and reservoirs on the upper Missouri River and its tributaries to provide flood protection from Sioux City to the Mississippi River (Knott, 2007). The local flood control plan included primary and secondary levee systems around Council Bluffs and relocating a section of the Indian Creek channel. These local improvements, completed in 1951, would be tested during a major flood event in 1952.

During the first week of April 1952, the Missouri River was predicted to crest at 25 ft. (7.26 m), well below the newly constructed levee system designed to protect the city up to 26.2 ft. (7.98 m). Over the next two weeks, the river rose to 40.2 ft. (12.25 m), 11.2 ft. (3.41m) above flood stage (National Weather Service, 2016). Thousands of volunteers, city workers, and National Guard troops worked tirelessly to temporarily raise the levee system and save the city from a major disaster (*Victory*, 1952). This was just one of many flood flights the community of Council Bluffs would grow accustomed to over the next six decades.

Since 1960, Council Bluffs has experienced 20 major flood events, averaging one significant flood every 2.8 years (*CB plan*, 2010). The most recent flood event occurred over the summer of 2011. Higher-than-average snowmelt runoff combined with substantial spring rainfall in the upper Missouri River basin resulted in widespread flooding from Sioux City, Iowa, to Kansas City, Missouri. Record levels of water were released from numerous upper basin dams to prevent the reservoirs from exceeding their capacity. This resulted in extraordinary amounts of water passing through the Council Bluffs area. The mean flow of the Missouri River through the Omaha – Council Bluffs metro is 26,300 cubic feet per second (CFS; USGS website, 2017). During the flood event, the Missouri River reached an unprecedented (post-dam era) flow of 217,000 CFS and exceeded 120,000 CFS for 87 days (USGS website, 2017). The previous post-dam era record flow in the Missouri River for Council Bluffs was 120,000 CFS set in 1960 (Gaarder, 2011). Unlike previous catastrophic floods which lasted days or weeks, Council Bluffs saw 105 consecutive days at or above 29 ft. (8.84 m), flood stage (USGS website, 2017). A formal command center following the National Incident Management System (NIMS) model was established and staffed 24 hours a day, seven days a week, for 95 days.

The levee system around the city was battered but remained intact throughout the event. Homes outside the levee were destroyed and the city sustained considerable damage to infrastructure due to the high water table. Hundreds of homes inside the levee system were also damaged with 40 homes destroyed due to foundation damage caused by isolated flooding and the high water table (Byers, 2011). Total cost of the flood event exceeded $60 million; emergency costs, $16,246,015; permanent repairs, $19,107,350; and estimated levee repairs, $25,000,000 (Byers, 2011). The risk of future flood events for the city of Council Bluffs should remain consistent with historic frequency and severity.

Winter storms are a constant hazard in Council Bluffs due to its upper-Midwest climate. The National Climatic Data Center recorded 71 severe winter storms affecting the Council Bluffs area between 1994 and 2010 (*CB plan*, 2010). Two significant winter storms received FEMA disaster declarations in 2007 alone. Unlike other types of disasters which might affect a specific area of the city, severe winter storms impact 100% of the population and therefore pose a tremendous risk. One factor that helps reduce the impact of these storms is that major winter storms are usually forecast several days in advance. The frequency and severity of future winter storms should remain consistent with historic averages.

In addition to weather and the geographic location of Council Bluffs as a source for natural and man-made disasters, local industries present potential for catastrophe. Like most metropolitan cities, Council Bluffs has numerous businesses and industry that utilize hazardous materials in their daily operations. The city is home to 12 facilities that use, store, or manufacture extremely hazardous substances (EHS) in quantifies that require reporting under Section 302, of the Emergency Planning and Community Right to Know Act (EPCRA). The predominant risk is the bulk storage and use of anhydrous ammonia by five of the twelve identified facilities (*CB plan*, 2010). Anhydrous ammonia is used in cold storage refrigeration at food processing plants, water purification plants, and in agriculture.

A hazard assessment of the 12 EHS reporting sites revealed that a worst-case scenario for each of the sites resulted in a vulnerability zone radius (VZR) from .1 to 4.3 mi (0.16 to 6.92 km; *CB plan*, 2010). VZR can be defined as an area where the anticipated airborne concentration of the released hazardous material reaches 10% of the Immediately Dangerous to Life and Health (IDLH) level. In a worst-case scenario, nearly half the population (30,000 citizens) could be affected by a catastrophic hazardous materials release (*CB plan*, 2010). The future risk associated

with local industry should remain steady in the coming year's given societies reliance on chemical and petroleum products and the stable Council Bluffs economy.

The numerous transportation corridors in and around the Omaha – Council Bluffs metro area pose a constant threat for a significant hazardous materials incident by roadway and/or rail. The intersection of Interstate (I)- 29 (running north and south) and I-80 (running east and west) creates a tremendous exposure for a roadway disaster. These two interstate roadways are major transportation routes for freight movement all over the U.S. An average of 95,500 vehicles travel through this corridor each day (http://mapacog.org/data-maps/2014-traffic-counts/). Many of those vehicles carry a wide variety of hazardous substances in large quantities. Approximately 3.6 million gallons (13.6 million liters) of hazardous materials travel through the I-29/I-80 corridor daily (*CB plan*, 2010). Between 2010 and 2014, traffic volume in the I-29/I-80 corridor increased by 24% and is predicted to see continued growth in the future (*CB plan*, 2010; http://mapacog.org/data-maps/2014-traffic-counts/). By 2030, the state of Iowa anticipates daily traffic on the I-29/I-80 corridor will be approximately 131,200 vehicles (T. Kramer, personal communication, December 4, 2017).

In addition to seeing significant ground transportation volume, Council Bluffs is a major rail hub for the U.S. Three railroad companies operate in Council Bluffs; Union Pacific, Burlington Northern, and Iowa Interstate. Between 1978 and 2010, there were 36 documented railway incidents causing 47 injuries and six deaths (*CB plan*, 2010). While the occurrence of railway incidents is relatively rare, the potential for a catastrophic event is ever present given the volume of hazardous materials traveling through the metro area. According to the Council Bluffs Pre-Disaster Mitigation Plan (2010), railroad tank cars carry over one billion gallons (3.87 billion liters) of hazardous materials through Council Bluffs each year, including; flammable and

combustible liquids, corrosive liquids, non-flammable gasses, flammable gasses, and poisonous gasses. Approximately 19% of all goods transported by Union Pacific are chemical goods with 99.99% arriving at its destination without incident (Union Pacific Railroad [UPRR], 2016).

Besides the possibility of ground and rail disasters, Council Bluffs has the potential for a catastrophic air traffic incident given its daily exposure to passenger, cargo, and military flights. Eppley Airfield in Omaha, Nebraska, maintains flight paths directed over populated portions of Council Bluffs. In 2016, over 96,000 flights carrying 4.3 million passengers and 142 million pounds (64 million kg) of cargo traveled through the airport ("Eppley," 2017). While there have been no significant commercial airline crashes in Omaha or Council Bluffs since Eppley Airfield opened in 1925, Council Bluffs has seen numerous fatal private aircraft crashes since the 1980's, none of which involved populated areas.

In addition to Eppley Airfield, Offutt Air Force Base is located just southwest of Council Bluffs in Bellevue, Nebraska. Offutt hosts the 55th Strategic Recon Wing, the 385th Bomb Wing, and is home to U.S. Strategic Air Command Headquarters (http://www.strategic-air-command.com/home.htm). Because Offutt is a secured military facility, flight information and statistics are not available to the public. But, given its significant role in the defense of our country, the potential for a weaponized and non-weaponized aircraft to crash in or around Council Bluffs will remain a present and future risk.

Council Bluffs has exposure to a wide variety of natural and man-made disasters. If a disaster strikes Council Bluffs in the future, the members of the CBFD will be on the front lines of disaster mitigation and recovery. The stressors associated with disaster work could potentially have a negative effect on the mental resiliency and mental health of the members of the CBFD and therefore have a negative impact on organizational effectiveness. Given the likelihood that a

disaster, in some form, will occur in the future, it is important to understand the unique mental health challenges created by disasters and prepare members of the CBFD to improve mental resiliency.

This applied research project (ARP) relates to the National Fire Academy *Executive Analysis of Fire Service Operations in Emergency Management (EAFSOEM)* course in several ways. Specifically, the enabling objective found in Unit 4: *Conduct a Critical Infrastructure and Key Resource (CIKR) vulnerability assessment that identifies and assesses the critical hazards in a simulated community*. This includes Vulnerability Assessment Factor 4; *Social Aspects*, including responder safety (*EAFSOEM*, 2016). In addition, EAFSOEM discussed the National Response Framework (NRF) and National Incident Management System (NIMS). Both the NRF and NIMS have protocols that address responder safety during disasters, including mental health.

This ARP is linked to the United States Fire Administration's Strategic Plan, Goal 3: *Enhance the Fire and Emergency Services' Capability for Response to and Recovery from All Hazards*. This includes Key Initiative 3 found in Goal 3: "Promote a culture of health, wellness, and behavior that enhances emergency responder safety and survival (U.S. Fire Administration [USFA], 2014, p. 12).

## Literature Review

The purpose of this literature review was to gain insight on the unique mental health challenges posed by natural and man-made disasters, examine the effects of disasters on first responder mental health, and explore the concept of mental health resiliency. In addition, this author reviewed peer counseling and employee assistance programs and examined strategies for improving mental health resiliency before, during, and after disasters.

While the specific circumstances of each emergency response can be unique, most responses fall into one of three categories; fire, rescue, or medical emergency. Responders develop coping mechanisms to process the stress created by these "everyday calls." The main difference for first responders between everyday calls and disasters is the magnitude of physical destruction and/or loss of life (Everly & Mitchell, 2008). Rarely are first responders called to mitigate disaster situations and therefore may not possess the skills necessary to mentally process these larger scale events. When disaster strikes, first responders commonly work long hours and are exposed to the worst aspects of the event. The lengthy, repeated exposure to the traumatic stressors associated with disasters place first responders at greater risk for psychological distress (McCaslin et al., 2009).

A disaster is defined as "a sudden calamitous event bringing great damage, loss, or destruction" ("Merriam-Webster," 2003, p. 355). In many cases, disasters exceed local response capabilities and cause major disruption to social cohesion or community function (Everly & Mitchell, 2008). First responders are likely to feel the effects of this disruption in two ways; the stress of the event as a member of the community, and the stress associated with the role of helper (Melerski, 2006). This double exposure for first responders was evident following the events of Hurricane Katrina which struck the gulf coast in 2005. Police officers and firefighters

responded to the disaster while simultaneously dealing with grave concern for their own families and homes. In a sample of New Orleans firefighters taken seven to thirteen weeks post-event, 22% (114 of 525) reported symptoms of post-traumatic stress disorder (PTSD) and 27% (133 of 494) reported symptoms of major depression ("Katrina," 2006). "In the aftermath of a disaster, acute stress, bereavement, property loss, and the disruption of social networks can potentially lead to mental health problems, including depression, hopelessness, anger, and aggression (Hung, 2010, p. 53)."

Disasters can vary greatly in type, severity, length, and social impact and therefore vary greatly with how they impact first responder mental health. In most disasters, first responders, like the general population, will suffer minor, transitory mental health impairment following exposure to the event (McCaslin et al., 2009). However, some police and firefighters will experience ongoing mental distress following exposure to disaster events, including; PTSD, depression, alcohol use, and anxiety (McCaslin et al., 2009).

The stressors associated with disaster work can appear in both external and internal ways. External stressors include involvement in rescue efforts, exposure to death and gruesome remains, the death of a child, and pre-existing mental health problems or stress (Katz, 2010). Internal stressors generally involve personal emotions. Survivor guilt, confusion, frustration, helplessness, and the overidentification with victims are common internal stressors that first responders may deal with following a disaster (Katz, 2010). If these stressors are not managed well, they can cause both acute and long-term mental health problems for first responders.

Acute stress disorder (ASD) was first introduced by the American Psychiatric Association in 1994 and is identified as a trauma- and stressor-related disorder that lasts between two days and four weeks (Everly & Mitchell, 2008). Symptoms of ASD include: intrusive

distressing memories or dreams; negative mood; feeling disconnected or numb; avoidance of people, places, and things associated with the event; sleep disturbances, hypervigilance, and/or problems with concentration ("Trauma," 2013). To be diagnosed with ASD, an individual must exhibit at least three dissociative symptoms, one re-experiencing symptom, avoidance traits, significant anxiety, and evidence of distress or impairment (Bryant & Litz, 2009).

PTSD is identified as a trauma- and stressor-related disorder with symptoms that are similar to ASD but more intense and persist for longer than one month after the event. Diagnostic criteria for PTSD include exposure to actual or threatened death, serious injury, or sexual violence either through direct experience, witnessing the event, learning that a close family member or friend has suffered a traumatic event, or experiencing *repeated or extreme exposure to a traumatic event* ("Trauma," 2013). Disaster work, by its nature, exposes first responders to repeated or extreme exposure to a traumatic event. In addition, clinical diagnosis of PTSD involves the presence of a combination of symptoms within several disorder categories, including; intrusion symptoms, avoidance symptoms, dissociative symptoms, and increased arousal/reactivity symptoms (Jones, 2010; "Trauma," 2013). Boffa and colleagues (2016) found a strong link between PTSD and the risk of suicide, suicidal ideation, and past suicide attempts among first responders.

The prevalence of PTSD among firefighters ranges from 7% to 37%, compared to the general population in which 8% of men and 20% of woman suffer from PTSD ("American Addiction Centers," 2014; Tull, 2017; Wilmoth, 2014). A study conducted by Regehr and Bober (2005) on baseline PTSD in three groups of first responders (firefighters, police, and paramedics) found the following levels of PTSD symptoms; 57.1% none to low, 18.3% moderate, 4.2% high,

20.4% severe. All three groups scored displayed similar levels of PTSD symptoms (Regehr & Bober, 2005).

A comparison study between recruit firefighters and experienced firefighters discovered an increase in depression and symptoms of traumatic stress among both groups proportional with a decline in perceived social support (Regehr, Hill, Knott, & Sault, 2003). Regehr and colleagues (2003) reported additional red flags for experienced firefighters, including; substantially lower perceived social support from their employer and families, higher levels of depression and trauma symptoms, and lower levels of self-efficacy. The study summarized that experienced firefighters are likely more vulnerable to the effects of traumatic stress than their younger counterparts (Regehr et al., 2003).

A study of ASD, PTSD, and depression in disaster workers was conducted following the crash of a United Airlines DC-10 that killed 112 passengers and seriously injured 59 (184 survived). Fullerton, Ursano, and Wang (2004) found that workers exposed to the trauma of the plane crash had significantly higher rates of ASD, PTSD, and depression than a comparison group of first responders. The comparison group had similar demographic characteristics and previous disaster experience as the exposed disaster workers but were not exposed to the DC-10 crash. Mental health assessments were conducted at three post-disaster intervals; 2 months, 7 months, and 13 months. Levels of ASD, PTSD, and depression were significantly higher in the exposed group verse the comparison group: ASD within the first week, 25.6% verse 2.4%; PTSD at 13 months, 16.7% verse 1.9%; depression at 7 months, 16.4% verse 10.0%; and depression at 13 months, 21.7% verse 12.6% (Fullerton, Ursano, & Wang, 2004). Fullerton and colleagues (2004) found that 15.1% of exposed workers sought professional mental health care, while 17.2% of exposed workers reported they needed care but chose not to seek help.

"The disaster response community is largely male, and, for this reason, not often pre-disposed to seek out mental health care" (Katz, 2010, p. 127-128). For many first responders, fear of being branded as mentally weak or unfit to handle the stressors of the job precludes them from acknowledging behavioral issues and seeking professional help (Wilmoth, 2014). In recent years, efforts to reduce the stigma associated with behavioral health services have been made by numerous fire service organizations, including; the International Association of Fire Fighters (IAFF), the National Fallen Firefighters Foundation (NFFF), and the International Association of Fire Chiefs (IAFC; Wilmoth, 2014).

Firefighter suicide is a topic that has gained attention in recent years following the clusters of firefighter suicides that occurred in Chicago, Philadelphia, Phoenix, and Surrey, BC (Wilmoth, 2014; IAFF website, n.d.). A study performed by the Department of Psychology at Florida State University investigated the prevalence of suicidal ideation, plans, attempts, and self-injury among firefighters (Stanley, Hom, Hagan, & Joiner, 2015). A sample group of 1,027 current and retired firefighters from around the U.S. completed a web-based survey on mental health to provide data for the research. The study found that 46.8% of the sample firefighters had suicidal thoughts or ideas, 19.2% had made plans to commit suicide, 15.5% had made suicide attempts, and 16.4% had harmed themselves in the past (Stanley et al., 2015). Stanley and colleagues (2015) concluded that firefighters display an alarmingly high occurrence of suicidal thoughts and behaviors and that the results warranted further study. In addition, the study recommended additional prevention and treatment efforts to reduce the risk of suicide among firefighters. Currently, there are no national organizations who collect data on firefighter suicides, making it difficult to understand the scope of the problem or identify trends (Wilmoth, 2014).

While nearly 100% of people exposed to disaster-related trauma will experience varying levels of mental distress, less than half may develop lasting dysfunction (Everly & Mitchell, 2008). This can be attributed to numerous factors, including; the natural recovery process, experience, training, and the selection process to become a first responder (Everly & Mitchell, 2008; McCaslin et al., 2009). Another factor that may promote recovery from a disaster-related trauma is *resiliency* among first responders.

Gagliano (2013) stated,

> Firefighters are resilient; they have to be. They have that unique quality of character that allows them to face danger with courage and patience; they view a crisis as a challenge and endure harrowing life experiences with a sense of pride. (p. 1)

Halmasy (2017) defines first responder resiliency as "our ability to withstand stressors without falling prey to them and to develop the necessary skills to have thriving mental health" (p.1). Deppa (2015) describes resiliency as "the way individuals deal with negative experiences – adversity and setbacks – that occur as part of a full life" (p. 20). Resiliency is a key component of a relatively new branch of psychology known as positive psychology (Deppa, 2015). Instead of focusing on causes of mental dysfunction and illness, positive psychology explores how people overcome adversity, mechanisms of positive human emotions and strengths, and the benefits of their development (Deppa, 2015; Gagliano, 2013). Human emotions and strengths that are important to understanding positive psychology include; joy, optimism, and courage (Deppa, 2015). Central to the concept of resiliency is optimism and the notion that individuals who are more optimistic in their daily lives tend to overcome adversity more effectively than those who are less optimistic (Carver, Scheier, Miller, & Fulford, 2011).

Resiliency cannot be attributed to a specific trait or characteristic, but instead can be described as a culmination of factors that allow the individual to cope with the stressor (Deppa, 2015). Factors that may improve resiliency include personal innovation, decisiveness, honesty and integrity, self-control, and optimism (Everly, 2012).

Research conducted by Deppa and Saltzberg (2016) concluded that three core factors influence a firefighters' ability to display resilience in the wake of traumatic events. These factors include realistic optimistic thinking, social support, and self-efficacy for coping (Deppa & Saltzberg, 2016). Central to the concept of realistic optimistic thinking is positive self-appraisal. Positive self-appraisal is the general belief that one's actions are having a positive impact on others and that they are responsible for and can overcome their own problems (Deppa & Saltzberg, 2016). Honing resilient thinking techniques and behaviors can improve coping skills and reduce the occurrence of depression (Deppa & Saltzberg, 2016).

Communicating with social support groups, both co-workers and family members will increase personal resiliency during times of added stress (Gagliano, 2013; Center for Disease Control and Prevention [CDC], n.d.). A study by Pietrantoni and Prati (2008) concluded that social aspects, such as sense of community, could be considered factors that affect resiliency in first responders. Furthermore, both real and perceived social support are important factors that promote self-confidence, thus improving resiliency, in firefighters (Deppa & Saltzberg, 2016).

Lambert and colleagues (2012) defined coping self-efficacy as "an individual's perceived ability to manage stressful or traumatic events" (80). Firefighters who possess strong self-efficacy will improve outcomes and lower psychological distress when faced with a traumatic event (Deppa & Saltzberg, 2016). Research has demonstrated direct links between coping self-efficacy and mental health. Lambert and colleagues (2012) discovered reduced levels of work-

related stress and fewer behavioral problems in firefighters who scored higher in testing for perceived competencies for coping with trauma and stress. In addition, firefighters who scored high in coping self-efficacy reported greater social support, a purposeful life, greater perceived autonomy, greater self-acceptance, better relationships with others, and a tendency towards personal growth (Lambert, Benight, Harrison, & Cieslak, 2012).

Another aspect of firefighter mental health that has received more attention in recent years is peer support counseling. Firefighter peer support counseling is non-clinical assistance provided by a peer counselor with similar background and experience (Stelter, 2017). Peer counselors may be active or retired members who receive training on local mental health resources, confidentiality requirements, active listening skills, and suicide prevention (DeGryse, 2015). A key benefit of the peer support model is that firefighters are more likely to talk about difficult feelings with a colleague rather than with a mental health professional (Stelter, 2017).

According to Wilmoth (2014),

> While they may consider talking to peers about these kinds of problems, many emergency responders maintain an almost perverse aversion to therapists or other "outside" professionals who, some responders believe, understand neither the work nor the stresses they face. (p. 1)

The mission of the peer support model is to provide support for peers and their families who are experiencing stress caused by personal issues, non-emergency work-related issues, and traumatic incidents (Digliani, 2016). In addition to providing general assistance, peer support counselors work to minimize the effects of negative stressors by talking through emotional and physical reactions, listening to concerns, and assisting with family members as requested (Digliani, 2016). In many cases, one-on-one peer support is enough to start the healing process,

but when firefighters require professional assistance, peer support counselors recommend clinicians through referrals to local resources (Stelter, 2017).

Recently, the IAFF expanded the Joint Labor-Management Wellness-Fitness Initiative to include a behavioral health component and has created numerous programs to assist departments improve and support the behavioral health of its members ("IAFF," 2017). The cornerstone of the new initiative is the Peer Support Training Program which trains firefighters to become peer supporter counselors. The two-day course teaches participants active listening skills, suicide awareness and prevention, crisis intervention, and understanding local mental health resources ("IAFF," 2017),

Other IAFF mental health resources include; a two-hour online behavioral health awareness course, a downloadable three-month action plan to address members' behavioral health needs, a dedicated website that includes links to additional organizations who offer assistance, and information about the new IAFF Center for Excellence for Behavioral Health Treatment and Recovery ("IAFF," 2017).

Referral to an employee assistance program (EAP) may be the next step in behavioral health treatment for some first responders. An EAP is a confidential program offered to employees and family members on a voluntary basis to assist them with personal and/or work-related problems ("EAP," 2017). Originally designed as an alcohol abuse program in the 1940's, EAP has expanded to address a wide variety of personal and work-related situations, including, mental health issues, financial issues, family problems, and substance abuse issues ("EAP," 2017). "Many EAPs have also expanded the scope of their counseling to help workers grapple with eldercare issues, natural disasters, and workplace violence" ("Employee," 2017, p. 1). EAP's are generally free to use, available 24 hours a day and staffed by licensed professionals

(Zamosky, 2014). These programs are not intended to provide long-term treatment, but instead attempt to help employees resolve problems through short-term counseling and services ("Employee," 2017). Many EAPs offer training services to individuals, groups, and organizations on topics, including; leadership and management development, emotional and physical health, individual and team performance, stress and time management, effective communication, change management and resiliency, customer service excellence, diversity, harassment prevention, and substance abuse prevention (Best Care Employee Assistance Program website, 2017).

There are many strategies for improving resiliency before, during, and after natural or man-made disasters. Resilience is not something an individual is inherently born with but instead is comprised of several characteristics that can be learned and improved upon (Deppa, 2015; Gagliano, 2013). This ARP will focus on the three resiliency factors identified by Deppa and Saltzberg (2016) for improving resiliency; realistic optimistic thinking, social support, and self-efficacy for coping.

Teaching critical thinking and problem-solving skills to first responders improves performance in the field and therefore increases optimistic thinking (Deppa, 2015). In addition, teaching firefighters to avoid thinking traps by looking at problems factually and with flexibility and optimism will improve resiliency (Reivich, Seligman, & McBride, 2011). Another skill that will improve realistic optimistic thinking is counteracting unproductive thoughts in real time. Counteracting unproductive thoughts in real time is an intervention included in the U.S. Army's Master Resilience Training, Building Mental Toughness Module (Reivich et al., 2011). This process involves teaching firefighters to reframe difficult thoughts with optimism, evidence, or

perspective strategies (Reivich et al., 2011). The goal of this strategy is to have fewer nonproductive, less destructive thoughts.

Resiliency is highly dependent upon strong social bonds and being able to talk about stress (Halmasy, 2017). Teaching first responders methods to improve social interaction with co-workers and family may improve overall resiliency and reinforce the importance of those support groups (Gagliano, 2013; Halmasy, 2017). One method for improving social interactions includes promoting *active-constructive responding* (Deppa & Saltzberg, 2016). Gable and colleagues (2004) studied the benefits of sharing positive events and developed a four-part response matrix that included; active-constructive, active-destructive, passive-constructive, and passive-destructive response options (Gable, Impett, Reis, & Asher, 2004). Active-constructive responding (ACR) is characterized by expressing enthusiastic, authentic support and interest when responding to a good event that is being described (Turner, 2007). Engaging in ACR results in positive mental health benefits for both the person share the good news and the person responding to the news, including; better relationship quality, trust, and commitment. (Gable et al., 2004). Utilizing any of the other three responses will likely have some degree of negative effect on either the sender, receiver, or both.

Self-efficacy is strongly related to personal belief in one's capabilities and judgment. One strategy for improving self-efficacy for disaster response is to prepare first responders for the emergencies they may face. "Educated and trained individuals perform better in the field, experience lower levels of stress, are likely to be more resilient, and are likely to grow psychologically in response to the stress of disaster experience" (Aldrich et al., 2010, p. 21). When discussing methods to minimize the impact of traumatic events, McCaslin and colleagues (2009) wrote "the value of preparation for responding to disaster should not be underestimated"

(p. 310). Performing drills or other training not only builds confidence in handling the technical aspects of the emergency but also improves the resilience to negative mental health consequences (Deppa, 2015). Drills and exercises should challenge participants to set goals, look for solutions, and cope with stressful situations in a controlled environment (Deppa & Saltzberg, 2016). Making disaster drills, table-top exercises, and other disaster-related preparation part of an ongoing training program should increase proficiency at all levels and improve overall firefighter coping self-efficacy.

The findings of the literature review influenced the project in many ways. The findings of others clearly show evidence of widespread behavioral health problems within the U.S. fire service and a strong link between disaster response and mental health issues. The literature review also revealed the prevalence of social stigma surrounding behavioral health issues in the fire service. Furthermore, the literature review showed that; (a) resiliency is an important factor in first responder mental health, (b) resiliency can be improved upon through education, and (c) resiliency can reduce the occurrence and severity of behavioral health disorders. This information may be helpful in interpreting research results and could aid in formulating recommendations.

## Procedures

The purpose of this applied research project was to determine if members of the Council Bluffs Fire Department were adequately prepared to manage the unique mental health challenges associated with natural and man-made disasters and to improve the mental health resiliency of its members. To achieve that purpose, research was conducted to answer the following research questions; (a) how have previous natural or man-made disasters affected the mental health of members of the Council Bluffs Fire Department, (b) how do members of the Council Bluffs Fire

Department rate their own personal resilience, (c) how does the current peer support and employee assistance programs address the unique mental health challenges presented by natural or man-made disasters, and (d) what steps can be taken by the Council Bluffs Fire Department to improve mental health resiliency of responders before, during, and after natural or man-made disasters?

The action research method was utilized to identify situational forces that could assist or impede achieving the stated purpose of this ARP and to enhance possible solutions or eliminate causes or contributors to the organizational problem. This author examined a variety of pertinent subjects, including; previous natural and man-made disasters, mental health resiliency, mental health support programs, and mental health interventions and training. Furthermore, a comprehensive literature review, two survey instruments, one personal interview, a situational analysis, and action plans were employed to formulate the content of this ARP. The product of the action research can be found in Appendix D.

Research for this project began while attending the course *Executive Analysis of Fire Service Operations in Emergency Management* (EAFSOEM) on campus at the National Fire Academy (NFA) in Emmitsburg, Maryland, June 2017. Research was conducted at the NFA Learning Resource Center (LRC), including card catalog searches for keywords; firefighter mental health, firefighter resiliency, firefighter suicide, disaster mental health, and Council Bluffs disaster. Digitally scanned copies of relevant content were made on site at the LRC. Sources of information included fire service magazine articles, trade journals, and textbooks. In addition, research was conducted at the Council Bluffs Public Library utilizing on-site printed materials, special collection archived materials, inter-library loans, and internet sources.

Research Question 1: How have previous natural or man-made disasters affected the mental health of members of the Council Bluffs Fire Department? To answer Question 1, this author utilized a 10-question survey given to 14 individuals who had significant roles in the Missouri River flood event of 2011. This event was selected because it represented the most recent major disaster suffered by the city of Council Bluffs. Survey participants were selected based on their leadership role within the unified command structure utilized throughout the event. Survey questions were designed to determine (a) the amount of time exposed to the stressors of the event, (b) the occurrence and duration of ASD symptoms, (c) the occurrence and duration of PTSD symptoms, and (d) the effectiveness of stress management activities during the flood. Survey questions that pertained to ASD and PTSD utilized symptom criteria found in the book *Integrative Crisis Intervention and Disaster Management,* Chapter 3, *Mental Health Aspects of Crisis and Disaster* by Everly Jr. and Mitchell (2008). The survey was constructed using the Survey Monkey (www.surveymonkey.com) platform. A link to the survey was distributed via email along with a request for participants and a brief explanation of the project. Participants were given 30 days to complete the survey. Details of the flood survey and results can be found in Appendix A.

Research Question 2. How do members of the Council Bluffs Fire Department rate their own personal resilience? To answer Question 2, this author utilized an existing resiliency survey called *The Resilience Checkup*. The survey was discovered through an internet search for resiliency self-assessment tools. Created by Dr. Glenn R. Schiraldi, The Resilience Checkup is a 22-statement research tool used to measure personal resiliency. This author contacted Dr. Schiraldi via email and obtained permission to use the survey for the purposes of this ARP. Respondents scored each statement on a 0 to 10 scale based on their agreement with each

resiliency statement. A score of zero meant they completely disbelieve the statement, a score of 10 meant they believe the statement is completely true. The 22-statement survey was supplemented by three demographic questions created by this author. The Resilience Checkup and demographic questions were placed on the eServ (www.eserv.org) internet survey platform. A link to the survey was distributed to all 107 members of the CBFD via email along with a request for participants and a brief explanation of the project. Participants were given 30 days to complete the survey. A reminder email was sent to all members with 1 week left to complete the survey. The sample size and participants were determined by simply including all current department members. Details of the resiliency survey results can be found in Appendix B.

Research Question 3. How does the current peer support and employee assistance programs address the unique mental health challenges presented by natural or man-made disasters? To answer Question 3, this author conducted a personal interview with Captain David Hyde, Engine 41, A-Shift on December 17, 2017. Captain Hyde is a subject matter expert and is a member of the local peer support team that serves the CBFD members. The one-hour interview was conducted at Council Bluffs Fire Station 4, 2112 Greenview Road, Council Bluffs, Iowa, 51503. The interview contained 10 questions and notes were taken by this author to record the answers given by Captain Hyde. Details of the interview can be found in Appendix C. In addition, this author investigated the services provided by Best Care EAP. Best Care EAP is the employee assistance program utilized by the city of Council Bluffs for all employees and is operated in conjunction with Methodist Health Systems. Information was gathered from the Best Care EAP website (www.bestcareeap.org). Furthermore, this author researched additional general information about employee assistance programs utilizing both online and written sources.

Research Question 4. What steps can be taken by the Council Bluffs Fire Department to improve mental health resiliency of responders before, during, and after natural or man-made disasters? To answer Question 4, this author established a goal statement and conducted a situational analysis to determine: (a) what factors are causing or contributing to the problem; (b) what existing situational forces could assist in improving the mental health resiliency of members of the CBFD before, during, and after natural or man-made disasters; and (c) what existing situational forces could impede improvement of the mental health resiliency of members of the CBFD before, during, and after natural or man-made disasters? The situational analysis resulted in two action plan objectives that would assist in answering the research question. Each action plan objectives were developed using a four-step process. The processes resulted in products of the action research, including a proposed firefighter resiliency training plan and a job aid for incident commanders to utilize during disaster events. The action plans were developed based on information gathered during several aspects of this ARP, including, the literature review, personal interview, flood survey, and resiliency survey. The situational analysis, action plan processes, and final products of this work can be found in Appendix D.

There were several limitations to this research. The survey used to answer Research Question 1 had a small sample group. This was due to numerous factors, including; the inability to contact some potential participants due to retirement, inability to contact potential participants who assisted from state and national incident management teams, and inability to contact members of the National Guard who assisted with the flood fight. In addition, the flood event had a minimal impact on most line staff members of the CBFD, as most daily fire department operations continued with minimal changes. This eliminated most line-staff members from consideration for participation in the survey. Another limitation was the 7 years that had passed

since the flood event. It can be assumed that individual memories of symptoms may not be as accurate compared to taking the same survey within the first year after the event.

There were also limitations present in the resiliency survey. The resiliency survey that was given to all members of the CBFD had many non-respondents. Additionally, several limitations are inherent with anonymous surveys, including; the inability to clarify respondent questions about the survey, the inability for follow-up questions, and the unknown candidness of the answers.

## Results

Research Question 1. How have previous natural or man-made disasters affected the mental health of members of the Council Bluffs Fire Department?

The first research question was answered through analysis of data collected from a survey given to personnel who had a significant role within the unified command structure during the Missouri River flood of 2011 in Council Bluffs, Iowa. The survey included 10 questions and was given to 14 participants, representing both active and retired personnel. The completion rate for this survey tool was 100%, as all 14 participants completed the survey.

Participants were asked how many days they spent working in the command center during the flood. Two respondents (14.29%) reported spending two months or less working in the command center. One respondent (7.14%) indicated working for three or less months in the command center. Most respondents, 11 (78.57%), reported working in the command center the entire flood event, roughly 100 days. (Appendix A, Question 1)

Questions 2 – 6 were designed to establish the occurrence of ASD symptoms exhibited either during the flood event or within thirty days after the event. Seven of the fourteen respondents (50%) indicated at least one symptom of dissociative disorder. Three respondents

(21.42%) reported three or more symptoms of dissociation. Additional dissociative symptom data includes: four respondents (28.57%) reported feeling numb, detached, or emotionally unresponsive; three (21.43%) suffered from a reduced awareness of surroundings; four (28.57%) showed derealization symptoms; three (21.43%) indicated their thoughts or emotions didn't seem like they belonged to them; and one respondent (7.14%) reported symptoms of dissociative amnesia. Fifty percent of respondents reported no dissociative symptoms during or after the flood event. (Appendix A, Question 2)

When asked about re-experiencing the event, one respondent (7.14%) reported having recurring images, thoughts, nightmares, or flashbacks of the event. Feelings of reliving the event were indicated by three participants (21.43%). In addition, three (21.43%) felt distressed when reminded of the event. Nine (64.29%) reported no symptoms in this category. (Appendix A, Question 3)

Avoidance symptoms were experienced by four of the fourteen survey participants (28.57%). The type of stimuli and number of participants who experienced distress as a result of exposure to those stimuli included: people, four participants (28.57%); conversations, two participants (14.29%); places, one participant (7.14%); activities, two participants (14.29%); thoughts, one participant (7.14%); and feelings, one participant (7.14%). Ten participants (71.43%) reported no distress when exposed to the provided list of stimuli. (Appendix A, Question 4)

Anxiety or increased arousal symptoms were reported by nine of the fourteen survey participants. Eight respondents (57.14%) reported having trouble sleeping. Four (28.57%) indicated being irritable. Two (14.29%) expressed difficulty concentrating. Five (35.71%)

reported being constantly tense or on guard. Five (35.71%) did not suffer any anxiety or increased arousal symptoms. (Appendix A, Question 5)

The final ASD indicator that was studied in this survey was symptoms of general distress. Six respondents (42.86%) reported distress or disruption of important aspects of their live, such as social or work settings. Two (14.29%) indicated an inability to start or complete necessary tasks. Seven (50.00%) reported no symptoms of distress during the event or within thirty days after the event. (Appendix A, Question 6)

The seventh question of the flood survey looked for indications of PTSD among respondents. Eleven respondents (78.57%) reported no symptoms associated with PTSD more than thirty days after the flood event. Two (14.29%) indicated suffering from intrusive memories in the form of distressing dreams, flashbacks, persistent thoughts or images. One participant (7.14%) reported persistent avoidance and withdrawal from people, places, and/or things associated with the flood event. Additionally, one participant (7.14%) suffered from persistent irritability and/or anger more than thirty days after the event. (Appendix A, Question 7)

The time needed to recover from negative mental health effects caused by the flood event was examined in Question 8. Full recovery was reported by one participant (7.14%) in each of the following categories; immediately, within one month, and within one year. Four participants reported full recovery within six months of the flood event ending. (Appendix A, Question 8)

When asked about lingering negative mental health effects, 12 respondents (92.31%) indicated experiencing no lasting effect from the flood event. One respondent (7.69%) indicated that they continue to have negative mental health effects from the flood event. One participant did not answer this question. (Appendix A, Question 9)

The last question in the flood event survey examined the adequacy of stress reduction/management training before, during and after the flood event. Participants rated the amount of training they received into four categories; (a) not enough, (b) about right, (c) too much, and (d) don't know. Before the flood event, eight respondents (57.14%) felt they had not received enough stress reduction/management training, five (35.71%) responded the amount of training was about right, none felt there was too much training, and one (7.14%) didn't know. During the flood event, two (14.29%) categorized the amount of stress reduction/management training as not enough, eleven (78.57%) felt it was about right, none felt there was too much training, and one (7.14%) didn't know. After the flood event, nine (64.29%) said there was not enough stress reduction/management training, four (28.57%) felt the about of training was about right, none felt there was too much training, and one (7.14%) didn't know. (Appendix A, Question 10)

Specific answer to Research Question 1: A segment of respondents to the 2011 Flood Survey reported indicators of several transitory negative mental health effects. One respondent reported negative mental health effects caused by the event that have not abated.

Research Question 2. How do members of the Council Bluffs Fire Department rate their own personal resilience? To answer Question 2, this author utilized an internal survey that was sent to all 107 members of the CBFD. Of the 107 survey requests that were sent, 50 members attempted to complete the survey. Five surveys were discarded due to incomplete answers, yielding 45 valid surveys and a 42.0% response rate. The survey consisted of 22 statements addressing personal resiliency. The final three questions recorded gender, age, and years of service with the CBFD. Survey responses were segmented, based on years of service, into three groups: Group A, 0-5 years (10 respondents); Group B, 6 to 15 years (15 respondents); and

Group C, 16 to 25 years and over (20 respondents). Male gender was reported in 100% of respondents. The average age of each were calculated as follows: Group A = 32 years old; Group B = 36 years old; and Group C = 48 years old.

A copy of Dr. Schiraldi's survey, The Resilience Checkup, can be found in Appendix B. The survey rating scale indicates the following: 176 or higher = you consider yourself *very resilient*; 154 – 175 = *above average resilience*; 132 – 153 = *average resilience*; 131 or below = *below average resilience*. The lowest score possible for the survey was 0 and the highest 220.

Group A had an average resiliency score of 167.7 and a median score of 172.5. Four of the ten respondents (40.0%) self-reported to be *very resilient*. Three (30.0%) scored in the *above average resiliency* range. Two respondents (20.0%) reported *average resiliency* and one respondent (10.0%) reported *below average resiliency*. The high resiliency score for Group A was 201 and the low resiliency score was 125. (Table B1)

Group B had an average resiliency score of 177.9 and a median score 181.0. Nine of the fifteen respondents (60.0%) self-reported to be *very resilient*. Three respondents (20.0%) reported scores that showed *above average resiliency*. Two participants (13.3%) reported *average resiliency* and one respondent (6.6%) reported *below average resiliency*. The high resiliency score for Group B was 218 and the low resiliency score was 123. (Table B2)

Group C had an average resiliency score of 156.6 and a median score of 161.5. This group reported six of the 20 (30.0%) to be *very resilient*. Five respondents (25.0%) reported *above average resiliency*. Four participants (20.0%) reported scores in the *average resiliency* range. Five participants (25.0%) reported scores indicating *below average resiliency*. The high resiliency score for Group C was 215 and the low resiliency score was 96. (Table B3)

When combining all three groups, 19 of the 45 (42.2%) reported scoring 176 or higher, indicating they consider themselves to be *very resilient.* Eleven respondents (24.4%) scored in the 154 – 175 range, indicating *above average resiliency*. Eight (17.7%) reported scores in the 132 – 153 range, indicating *average resiliency*. Seven respondents (15.6%) reported in the 131 or below range, indicating *below average resiliency*. Overall, 84.4% of the sample CBFD members reported a minimum of *average resiliency* or greater. The average score for respondents in all groups was 167.3 placing it in the *above average resiliency* category. (Table B4)

Research Question 3. How does the current peer support and employee assistance programs address the unique mental health challenges presented by natural or man-made disasters? Information gathered during the personal interview with Captain Dave Hyde indicated that the current peer support program does not address natural and man-made disasters specifically. According the Captain Hyde, the training he received did not include counseling techniques or protocols specific to disaster events. Regardless, they could be integrated into the ICS during a disaster event to provide peer counseling and support for acute needs. Captain Hyde informed this author that the CBFD is supported by nine peer support counselors that received training from the Fire Strong Peer Support Program. In the event of a disaster, Fire Strong peer support counselors could also be called in from Omaha Fire Department. Off-site counselors are also available through the Fire Strong website that members could contact via phone. Furthermore, local counseling services are available through the Horizon Group in Council Bluffs for all members of the CBFD who need assistance due to disaster-related behavioral distress. It should be noted that the CBFD peer support team will play a key role in long-term recovery of personnel *after* natural or man-made disasters strike.

The Employee Assistance Program utilized by the CBFD lists “Critical Incident Onsite Support” as a service that is provided. Best Care EAP provides critical incident response to natural disasters with trained counselors to provide group and individual support. Besides critical incident response, Best Care EAP is designed to assist firefighters with short-term mental health needs after the disaster event and refer them to long-term care as needed.

Research Question 4. What steps can be taken by the Council Bluffs Fire Department to improve mental health resiliency of responders before, during, and after natural or man-made disasters? A situational analysis was completed to identify organizational, cultural, and other factors that may affect efforts to improve the mental health resiliency of members of the CBFD. Numerous factors that may be causing or contributing to the problem were identified, including; CBFD does not have a firefighter resiliency training program, CBFD does not have a strategy to maintain firefighter resiliency during disasters, stressors associated with disasters may exceed the resiliency of CBFD members, and firefighter mental health resiliency has not previously been measured within the CBFD.

Existing situational forces that could assist in improving the mental health resiliency of members of the CBFD before, during, and after natural or man-made disasters were identified as the following: CBFD has implemented the Fire Strong Peer Support Program; CBFD has access to Methodist Health System, Best Care Employee Assistance Program, 24 hours a day, 7 days a week; CBFD performs numerous tabletop and hands-on drills to prepare for mass casualty and other disaster events as part of the ongoing training schedule; support from the administrative staff to improve the health and wellness for members of the CBFD; and the fire service has promoted the importance of improving mental health, suicide prevention, and building firefighter resiliency in recent years.

Numerous situational forces that could impede improvement of the mental health resiliency of members of the CBFD were also identified, including; stigma associated with seeking mental health assistance among members of the CBFD, the existing Peer Support Program does not address the unique mental health challenges associated with natural or man-made disasters specifically, general resistance from CBFD members, and time constraints within the training schedule may not allow all aspects of the proposed training plan to be implemented.

The situational analysis resulted in two action plan objectives; (a) the CBFD shall establish a firefighter behavioral health resiliency training program, and (b) the CBFD shall develop strategies to maintain firefighter behavioral resiliency during disaster events.

The first objective was accomplished through the creation of the Proposed Firefighter Resiliency Training Plan. The second objective was satisfied through the creation of a job aid for incident commanders titled Maintaining Firefighter Resiliency During Disasters for Incident Commanders- Quick Reference Guide. Both products of the action research provide answers to the research question and can be found in Appendix D.

## Discussion

The research results provided valuable insight towards answering the four research questions. Information gathered in the literature review reflected many of the findings of the research results.

The survey was given to personnel who worked in the command center during the Missouri River flood of 2011 revealed symptoms consistent with both ASD and PTSD. Bryant and Litz (2009) described the requirements to be diagnosed with ASD as an individual exhibiting at least three dissociative symptoms, one reexperiencing symptom, avoidance traits, significant anxiety, and evidence of distress or impairment. Three of the 14 respondents (21.42%) met this

criterion, reporting three or more dissociative disorder symptoms. These same three respondents met all other criteria for ASD except for avoidance traits. This author interpreted that information as indicating borderline ASD for 21.42% of the survey sample. In addition, flood survey respondents reported ASD symptoms in every disorder category listed by Bryant and Litz (2009), ranging from 28.57% reporting avoidance behaviors to 64.29% reporting anxiety.

The Fullerton, Ursano, and Wang (2004) study following the DC-10 aircraft crash found that 25.6% of first responders showed symptoms of ASD in the first two weeks of the event. Their findings (25.6% with ASD) are comparable to the results of the flood survey that showed 21.42% of respondents reported borderline ASD. The flood survey results are significant given that, unlike the plane crash studied by Fullerton and colleagues, there was no substantial loss of life during the flood, yet the percentage of reported ASD was comparable. A mitigating factor may be the length of exposure to the disaster event. McCaslin and colleagues (2009) noted that lengthy, repeated exposure to the traumatic stressors associated with disasters place first responders at greater risk for psychological distress. All three of the respondents who reported symptoms consistent with borderline ASD had significant exposure to the disaster, working the entire flood event of over 100 days.

Everly and Mitchell (2008) noted that while nearly 100% of people exposed to disaster-related trauma will experience varying levels of mental distress, less than half may develop lasting dysfunction. This was reflected in the data from the flood survey as 54% of respondents reported no symptoms of ASD during the flood event and 78.57% reported no symptoms associated with PTSD more than six months following the event. (Appendix A, Question 8)

Jones (2010) outlined symptoms required for the clinical diagnosis of PTSD to include, intrusion symptoms, avoidance symptoms, dissociative symptoms, and increased

arousal/reactivity symptoms. Although three flood survey respondents reported some symptoms of PTSD, none indicated symptoms in all disorder categories as required for diagnosis. Two respondents reported one symptom of PTSD each, and one respondent reported two symptoms of PTSD. Interestingly, one respondent reported that the flood caused negative mental health consequences that continue today (Appendix A, Question 9). Those negative mental health consequences were undefined.

Despite the non-clinical nature of the ASD and PTSD evaluations, this author recognizes that some personnel who worked during the flood event suffered varying levels of mental distress and behavioral issues that went untreated. Unsurprisingly, nine of the flood survey respondents (64.29%) reported that there was not enough stress management training available after the flood event was over. The Council Bluffs Fire Department must do a better job recognizing the behavioral health needs of first responders before, during, and after future disaster incidents; including awareness regarding the warning signs of ASD and PTSD, providing peer counseling early in the event, and making referrals to professional counseling services when needed.

When discussing how firefighters are inherently resilient by the nature of their job, Gagliano (2013) wrote, “Firefighters are resilient; they have to be…” (p. 1). These sentiments were reflected in the results of The Resiliency Checkup survey tool. Overall scores in all three groups revealed that 38 of the 45 (84.4%) respondents reported a minimum of *average resiliency* or greater. The average resiliency score was 167.3 placing it in the *above average resiliency* category (Table B4).

Unexpectedly, many older firefighters are less resilient than younger firefighters. Regehr and colleagues (2003) reported red flags for experienced firefighters, including; substantially

lower perceived social support from their employer and families, higher levels of depression and trauma symptoms, and lower levels of self-efficacy. The study summarized that experienced firefighters are likely more vulnerable to the effects of traumatic stress than their younger counterparts (Regehr et al., 2003). This information was reflected in the results of The Resiliency Checkup (Table B3). Firefighters in Group C, comprised of experience levels 16 to 25 years and over, reported low scores in statements on topics such as social support (Statement 10, average score 6.1), self-efficacy (Statement 14, average score 6.2), and negative self-appraisal (Statement 20, average score 6.2).

There were further significant links between Regehr and colleague's (2003) findings and the resiliency survey in the overall resiliency in older members of the CBFD. Group C had five firefighters (25%) report *below average resiliency*. This is compared to Groups A and B who each had one firefighter report *below average resiliency* (Tables B1, B2). When Group C is subdivided to include only those firefighters serving 21 years or longer, scores drop dramatically, increasing the percentage of firefighters reporting *below average resiliency* to 50% (four out of eight).

Carver and colleagues (2011) discussed the importance of optimism as a central concept of resiliency and the notion that individuals who are more optimistic in their daily lives tend to overcome adversity more effectively than those who are less optimistic. Groups A and B scored higher than Group C in statements that measured the dimension of optimism, specifically Statements 7, 8, 13, and 16 (Table B4).

Halmasy (2017) discussed how resiliency is highly dependent upon strong social bonds. When compared to Groups A and B, Group C scored lower on The Resiliency Checkup on statements centered on social aspects, specifically, Statements 3, 10, 15, and 17 (Table B4). In

addition, Halmasy (2017) stressed the importance of being able to talk about stress. Wilmoth (2014) summarized that historically, the culture of the fire service has not been supportive of firefighters openly seeking mental health services. Katz (2010) discussed how mental health care is not sought out by the disaster response community largely because of male gender ideals. These references may further explain why the older male sample of CBFD members scored lower on the resiliency scale; inadequate social support network, a culture of internalizing emotions, and gender.

The information from The Resiliency Checkup revealed 84.4% reporting *average resiliency* or better within the CBFD sample. This author interpreted those results as a good start in building a firefighter resiliency program and shows that the CBFD maintains a resilient workforce. The exercise also provided a valuable insight on vulnerabilities within an older segment of the CBFD workforce that otherwise would have gone unnoticed. The 15.6% of firefighters that reported *below average resiliency* was concerning. Literature review sources indicated that poor resiliency may reflect a negative self-appraisal, inadequate social support system, and predisposition to more serious behavioral disorders. Organizational implications of the below average resiliency scores could best be described by the numerous baseline statistics found in the literature review; firefighters suffering from PTSD range from 7% to 37% (Tull, 2017; Wilmoth, 2014), suicidal thoughts 46.8% (Stanley et al., 2015), depression 12.6% (Fullerton et al., 2004). Older, more experienced firefighters are at the greatest risk of developing a behavioral health disorder and should be prioritized by the organization for education and assistance.

The negative culture surrounding mental health services discussed by Wilmoth (2014) and Katz (2010) was confirmed in my personal interview with Captain Dave Hyde (Appendix

C). While discussing peer support teams as they relate to disaster events, Captain Hyde informed me “there is still a tremendous amount of stigma surrounding mental health issues in the fire service and the CBFD. If a member comes forward and admits he is having problems he runs the risk of being ostracized by co-workers” (personal communication, December 17, 2017).

Stelter (2017) discussed the peer support model, stating that firefighters are more likely to talk about difficult feelings with a colleague than with a mental health professional. Wilmoth (2014) made similar assertions saying that emergency responders see therapists as “outside” professionals who don’t understand the job or stresses of firefighting. This was reinforced by the content of the Hyde interview. CBFD has contracted with Fire Strong for peer support counseling services. The system is peer-based, meaning the if a member feels like they need assistance, they can seek help from another firefighter, not a doctor, counselor, or social worker. (Appendix C). As discussed in this author’s interview with Captain Hyde, Fire Strong provides initial and ongoing training on topics that include; stress, PTSD, depression, suicide awareness and prevention, basic counseling, active listening skills, confidentiality issues, local resources (Appendix C). The interview findings mirror Peer Support Training Program course outlined in the literature review (IAFF 2017).

The literature review clearly demonstrates that the stigma associated with behavioral health issues is not a local problem. The key to making behavioral health issues acceptable to discuss and share is strong, vocal leadership from both formal and informal group leaders. Recent studies and campaigns have increased awareness regarding firefighter PTSD, suicide rates, and depression. For the CBFD, the organizational implications of inaction considering the current elevated state of education on the topic could damage both the wellbeing of the membership and the public image of the department.

## Recommendations

The purpose of this ARP was to determine if members of the CBFD were adequately prepared to manage the unique mental health challenges associated with natural and man-made disasters and to improve the mental health resiliency of its members. Based on the results of the flood and resiliency surveys, information learned in the interview, extensive literature review, and knowledge of past performance of CBFD members, this author believes that, while transitory negative mental health effects likely occurred during the most recent disaster event, members of the CBFD are still adequately prepared to manage the unique mental health challenges associated with natural and man-made disasters. Regardless, the CBFD should strive to improve the quality of life for employees and their families through resiliency. The following recommendations are intended to improve and maintain the behavioral health resiliency of the CBFD members. Recommendations include; (1) implementation of the proposed firefighter resiliency training plan, (2) adoption of the job aid for incident commanders, (3) establish baseline resiliency scores for all members, and (4) evaluate firefighter resiliency improvement initiatives for effectiveness.

The specific elements of these recommendations will prepare the CBFD to improve firefighter resiliency before a disaster event and maintain firefighter resiliency during a disaster event. Successful implementation of these recommendations will ensure the CBFD has the resources in place to facilitate firefighter resiliency recovery *after* a disaster event as well. Recovery of resiliency after disaster events will rely on peer support and counseling, ongoing training and development of resiliency skills, and utilization of EAP and professional behavioral health services as needed.

Recommendation 1: The proposed firefighter resiliency training plan outlines a 12-month schedule of programs and classes that should be integrated into the existing CBFD training schedule. The program includes the Three-Month Action Plan provided by the IAFF for fire department administrations and union leadership. The importance of investment by administrative and union leadership into this effort cannot be overstated. Additional training for command staff would consist of training on mental health considerations during disaster response including integration of peer counselors and other mental health professionals into the ICS system. This training would serve as an introduction and orientation to the job aid described in Recommendation 2.

In addition, the proposal recommends hosting the IAFF peer support counselor training program for our current peer support team. Due to the length of time since the team received their initial peer support training from Fire Strong, this training should invest them with the latest information and techniques, sharpen their skills, and reignite their interest in the program. In addition, having a strong peer support team is important for long-term recovery of firefighter resiliency after a disaster strikes. These points are supported by the results of the interview this author conducted with Captain Hyde.

Resiliency training should focus on three main areas; realistic optimistic thinking, social support, and coping self-efficacy. Realistic optimistic thinking and social support are important topics that should be taught by local professional EAP representatives. Given the low scores in these two areas by older members of the CBFD in the resiliency survey, the fire department training division should vet potential instructors to ensure a high-quality class. The results of the resiliency survey support this recommendation. Coping self-efficacy can be reinforced through honing mental and practical skills during drills, exercises, and other training. Complete

recommendations on resiliency training for the CBFD is detailed in the proposed firefighter resiliency training plan (Appendix D).

Recommendation 2: The job aid titled *Maintaining Firefighter Resiliency During Disasters for Incident Commanders- Quick Response Guide* is intended to keep incident commanders mindful of mental health considerations during disaster events. This author recommends the CBFD adopts this job aid by adding it to Standard Operating Procedure #200 Incident Command System. In addition, this guide could be added to city and Pottawattamie County disaster and hazard mitigation plans for future use. The content of the job aid is supported by the literature review and personal interview with Captain Hyde.

Recommendation 3: The Resiliency Checkup is an evaluation tool developed Dr. Glenn Schiraldi and utilized by this author to evaluate the resiliency of a partial sample (42.2%) of CBFD members. This author recommends all members participate in the survey to establish a baseline resiliency score. Baseline scores should be established prior to the start of resiliency training and reassessed periodically to measure improvement. Scores should be explained to participants, and individual development is encouraged as part of the broader firefighter resiliency training program. In addition, this author strongly recommends that individuals be allowed to maintain a record of their scores privately. The fire department would not have names associated with scores, only data. Despite having less than half of the department members participating, the resiliency survey yielded compelling results. Full participation is necessary to gain an accurate understanding of the resiliency within the CBFD. The recommendation for full participation is supported by the results detailed in Appendix B.

Recommendation 4: This author recommends evaluating the several firefighter resiliency improvement initiatives to ensure they are effective. Evaluations may include; a) course

evaluation forms completed by members following individual resiliency classes, b) customized online surveys evaluating the overall program effectiveness, c) re-taking The Resiliency Checkup, following baseline scores to look for improvement, and d) other evaluation tools as needed. Evaluation is critical to gauge progress and should be repeated on a regular basis.

Behavioral health awareness in the fire service is an emerging topic that is growing in acceptance and understanding. Therefore, future readers may notice a positive shift in attitudes towards mental health issues since the writing of this ARP. Improved reporting and data collection will likely result in a more robust understanding of the behavioral health issues facing the fire service for future readers. Unfortunately, the complexity of these issues coupled with the personal circumstances of individuals makes full understanding difficult.

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List of Tables

# Appendix A

## Flood 2011 Survey

Question 1
Disaster Exposure
*The flood event of 2011 lasted roughly 100 days. Approximately how many days did you work in the command center or in the field during the event?*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Less than 2 weeks | 0.00% | 0 |
| 2-4 weeks | 0.00% | 0 |
| 2 months | 14.29% | 2 |
| 3 months | 7.14% | 1 |
| The entire event, start to finish | 78.57% | 11 |
| Total responses | | 14 |

Question 2
Dissociation
*Did you experience any of the following symptoms during the event or within the first month after the event? Please mark all that apply.*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Feeling numb, detached, or being emotionally unresponsive | 28.57% | 4 |
| A reduced awareness of your surroundings | 21.43% | 3 |
| Derealization (your environment seems strange or unreal to you) | 28.57% | 4 |
| Depersonalization (your thoughts or emotions don't seem real or don't seem like they belong to you) | 21.43% | 3 |
| Dissociative amnesia (you cannot remember one or more important aspects of the event) | 7.14% | 1 |
| None | 50.00% | 7 |
| Total responses | | 14 |

Question 3

Re-experiencing the Event

*Did you experience any of the following symptoms during the event or within the first month after the event? Please mark all that apply.*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Having recurring images, thoughts, nightmares, or flashback episodes of the event | 7.14% | 1 |
| Feeling like you are reliving the event | 21.43% | 3 |
| Feeling distressed when something reminds you of the event | 21.43% | 3 |
| None | 64.29% | 9 |
| Total responses | | 14 |

Question 4

Avoidance

*Did you avoid stimuli that could cause you distress during the event or within the first month after the event? Please mark all that apply.*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| People | 28.57% | 4 |
| Conversations | 14.29% | 2 |
| Places | 7.14% | 1 |
| Objects | 0.00% | 0 |
| Activities | 14.29% | 2 |
| Thoughts | 7.14% | 1 |
| Feelings | 7.14% | 1 |
| None | 71.43% | 10 |
| Total responses | | 14 |

Question 5
Anxiety and/or Increased Arousal
*Did you experience any of the symptoms of anxiety and/or increased arousal during the event or within the first month after the event? Please mark all that apply.*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Having trouble sleeping | 57.14% | 8 |
| Being irritable | 28.57% | 4 |
| Having difficulty concentrating | 14.29% | 2 |
| Being unable to stop moving or sit still | 0.00% | 0 |
| Being constantly tense or on guard | 35.71% | 5 |
| Becoming startled too easily or at inappropriate times | 0.00% | 0 |
| None | 35.71% | 5 |
| Total responses | | 14 |

Question 6
Distress
*Did you experience any of the following symptoms of distress during the event or within the first month after the event? Please mark all that apply.*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Distress of disruption of important aspects of your life, such as your social or work settings | 42.86% | 6 |
| Inability to start or complete necessary tasks | 14.29% | 2 |
| Inability to tell others about the event | 0.00% | 0 |
| None | 50.00% | 7 |
| Total responses | | 14 |

Question 7

*Did you experience any of the following symptoms more than 30 days after the event? Please mark all that apply.*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Intrusive memories, distressing dreams, flashbacks, persistent thoughts or images | 14.29% | 2 |
| Persistent avoidance and withdrawal from people, places, and/or things associated with the event | 7.14% | 1 |
| Persistent irritability and/or anger | 7.14% | 1 |
| Trouble sleeping | 0.00% | 0 |
| None | 78.57% | 11 |
| Other (please specify) | 0.00% | 0 |
| Total responses | | 14 |

Question 8

*If you experienced any negative mental health effects, how soon after the flood event ended would you say you had recovered fully? (If you did not experience any negative mental health effects select " not applicable")*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Immediately | 7.14% | 1 |
| Within 2 weeks | 0.00% | 0 |
| Within 1 month | 7.14% | 1 |
| Within 6 months | 28.57% | 4 |
| Within 1 year | 7.14% | 1 |
| Longer than 1 year | 0.00% | 0 |
| Not applicable | 50.00% | 7 |
| Total responses | | 14 |

Question 9

*Did the flood event of 2011 cause any negative mental health effects that continue today?*

| Answer choices | Response percentage | Number of responses |
|---|---|---|
| Yes | 7.14% | 1 |
| No | 92.31% | 12 |
| Total responses | | 13 |

Question 10

*Stress reduction/management was addressed at several times during the flood event as part of the Safety Message. How would you rate the adequacy of stress reduction/management training that you received before, during, and after the flood event?*

| Time | Not enough | | About right | | Too much | | Don't know | |
|---|---|---|---|---|---|---|---|---|
| | Response percentage | Number of responses | Response percentage | Number of responses | Response percentage | Number of responses | Response percentage | Number of responses |
| Before the event | 57.14% | 8 | 35.71% | 5 | 0.00% | 0 | 7.14% | 1 |
| During the event | 14.29% | 2 | 78.57% | 11 | 0.00% | 0 | 7.14% | 1 |
| After the event | 64.29% | 9 | 28.57% | 4 | 0.00% | 0 | 7.14% | 1 |

Appendix B

## The Resilience Checkup*

**Please rate from 0 to 10 how much you believe each of the following statements**. **0** means you completely disbelieve it. **10** means you think it is completely true.

| **Statement** | **Rating** (0-10) |
|---|---|
| 1. I generally feel strong and capable of overcoming my problems. | |
| 2. When I get stressed, I usually bounce back fairly quickly. | |
| 3. I generally function well in the various areas of life: job/school, relationships, and play. | |
| 4. I generally stay calm and steady when the going gets tough. | |
| 5 I am generally flexible, meaning if my usual way of doing things isn't working I readily try something else. | |
| 6. I am in a good mood most of the time. | |
| 7. I think well of myself and like who I am inside. | |
| 8. Difficult times don't change the way I feel about myself. | |
| 9. I believe that if I try my best things will usually turn out well. | |
| 10. I am good at reaching out and connecting with people. | |
| 11. I usually try to solve my problems, but I know when to bend if something is beyond my control. | |
| 12. I anticipate difficult situations, make a plan, and carry out my plan. | |
| 13. I enjoy life and am satisfied with what I am contributing to the world. | |
| 14. I am good at coping with strong negative emotions. | |
| 15. I am good at separating myself from people who get me down or upset me. | |
| 16. I have goals and am optimistic about my future. | |
| 17. I'm involved in a variety of activities that I enjoy. | |
| 18. I don't have self-destructive habits. | |
| 19. I feel at peace with myself and my past. I've grown stronger from what I've experienced. | |
| 20. I don't beat myself up when my best efforts don't succeed. | |
| 21. I know when to seek help, and where to find it. | |
| 22. I stay focused and think clearly under pressure. I am persistent, determined, and resolved. | |

**Total Score** (add the scores from items 0-22) _____

| **Total Score** | **Indicates** |
|---|---|
| 176 or higher | You consider yourself very resilient |
| 154-175 | Above average resilience |
| 132-153 | Average resilience |
| 131 or below | There seem to be many areas to improve. The good news is that someone who scores here is likely to show the most improvement from resilience training. |

Table B1

*The Resiliency Checkup- Summary of Group A*

Years of service- 0 to 5

| Question | Respondents | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 39 | 40 | 3 | 7 | 12 | 19 | 21 | 43 | 45 | Ave |
| 1 | 8 | 9 | 10 | 8 | 9 | 9 | 7 | 9 | 8 | 9 | 8.6 |
| 2 | 8 | 9 | 10 | 8 | 8 | 9 | 7 | 8 | 8 | 8 | 8.3 |
| 3 | 7 | 9 | 10 | 8 | 8 | 6 | 9 | 8 | 6 | 10 | 8.1 |
| 4 | 8 | 9 | 10 | 8 | 7 | 9 | 9 | 8 | 7 | 8 | 8.3 |
| 5 | 8 | 10 | 10 | 7 | 7 | 8 | 7 | 9 | 5 | 9 | 8.0 |
| 6 | 8 | 10 | 8 | 6 | 9 | 6 | 9 | 9 | 7 | 8 | 8.0 |
| 7 | 5 | 9 | 10 | 9 | 10 | 6 | 8 | 8 | 6 | 9 | 8.0 |
| 8 | 6 | 8 | 8 | 8 | 8 | 7 | 9 | 7 | 4 | 8 | 7.3 |
| 9 | 7 | 9 | 10 | 6 | 7 | 7 | 9 | 9 | 6 | 10 | 8.0 |
| 10 | 7 | 7 | 8 | 6 | 6 | 5 | 8 | 6 | 8 | 8 | 6.9 |
| 11 | 7 | 8 | 8 | 7 | 7 | 4 | 8 | 9 | 3 | 9 | 7.0 |
| 12 | 8 | 8 | 8 | 7 | 6 | 4 | 6 | 8 | 6 | 8 | 6.9 |
| 13 | 7 | 10 | 10 | 8 | 10 | 5 | 9 | 8 | 7 | 10 | 8.4 |
| 14 | 7 | 9 | 8 | 5 | 6 | 4 | 7 | 7 | 7 | 9 | 6.9 |
| 15 | 5 | 8 | 8 | 7 | 7 | 6 | 8 | 8 | 8 | 10 | 7.5 |
| 16 | 7 | 9 | 10 | 8 | 9 | 8 | 9 | 8 | 6 | 10 | 8.4 |
| 17 | 7 | 8 | 10 | 7 | 10 | 7 | 10 | 9 | 3 | 9 | 8.0 |
| 18 | 5 | 7 | 9 | 7 | 9 | 4 | 8 | 7 | 1 | 10 | 6.7 |
| 19 | 5 | 10 | 10 | 10 | 9 | 6 | 8 | 7 | 5 | 9 | 7.9 |
| 20 | 7 | 3 | 8 | 7 | 6 | 4 | 8 | 6 | 2 | 9 | 6.0 |
| 21 | 5 | 4 | 10 | 7 | 8 | 3 | 9 | 6 | 3 | 9 | 6.4 |
| 22 | 8 | 5 | 8 | 8 | 7 | 10 | 9 | 8 | 9 | 9 | 8.1 |
| Total | 150 | 178 | 201 | 162 | 173 | 137 | 181 | 172 | 125 | 198 | |
| Gender | M | M | M | M | M | M | M | M | M | M | |
| Age | 28 | 24 | 33 | 32 | 35 | 27 | 40 | 37 | 35 | 32 | |
| Service | 0-3 | 0-3 | 0-3 | 3-5 | 3-5 | 3-5 | 3-5 | 3-5 | 3-5 | 3-5 | |

Average score: 168 Median score: 173 Average age: 32

Indicates below average resiliency

Table B2

*The Resiliency Checkup- Summary of Group B*

Years of service- 6 to 15

| Question | Respondents | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 6 | 8 | 14 | 15 | 16 | 27 | 29 | 30 | 34 | 44 | 46 | 48 | 22 | 25 | Ave |
| 1 | 8 | 5 | 9 | 9 | 9 | 10 | 10 | 8 | 7 | 10 | 8 | 8 | 10 | 10 | 9 | 8.7 |
| 2 | 8 | 5 | 8 | 8 | 9 | 7 | 10 | 7 | 9 | 10 | 7 | 8 | 5 | 10 | 9 | 8.0 |
| 3 | 8 | 8 | 9 | 8 | 9 | 10 | 10 | 8 | 7 | 10 | 6 | 8 | 10 | 10 | 9 | 8.7 |
| 4 | 8 | 5 | 9 | 8 | 9 | 8 | 9 | 6 | 10 | 10 | 10 | 8 | 10 | 8 | 9 | 8.5 |
| 5 | 7 | 9 | 9 | 8 | 8 | 9 | 9 | 7 | 6 | 10 | 6 | 9 | 8 | 10 | 8 | 8.2 |
| 6 | 8 | 4 | 9 | 6 | 9 | 8 | 10 | 6 | 8 | 10 | 6 | 9 | 10 | 9 | 10 | 8.1 |
| 7 | 8 | 4 | 9 | 8 | 8 | 8 | 10 | 5 | 8 | 10 | 6 | 9 | 9 | 9 | 9 | 8.0 |
| 8 | 9 | 5 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7.9 |
| 9 | 8 | 5 | 9 | 8 | 7 | 10 | 10 | 8 | 8 | 9 | 5 | 8 | 10 | 10 | 9 | 8.3 |
| 10 | 6 | 7 | 9 | 8 | 8 | 9 | 9 | 7 | 10 | 10 | 7 | 6 | 8 | 10 | 8 | 8.1 |
| 11 | 10 | 5 | 7 | 8 | 9 | 10 | 9 | 7 | 10 | 9 | 8 | 6 | 9 | 10 | 8 | 8.3 |
| 12 | 7 | 8 | 8 | 8 | 8 | 10 | 9 | 7 | 10 | 10 | 7 | 5 | 10 | 10 | 9 | 8.4 |
| 13 | 8 | 3 | 9 | 8 | 8 | 9 | 10 | 6 | 5 | 10 | 7 | 8 | 10 | 10 | 10 | 8.1 |
| 14 | 10 | 4 | 8 | 8 | 8 | 9 | 9 | 6 | 3 | 10 | 3 | 7 | 10 | 10 | 9 | 7.6 |
| 15 | 8 | 5 | 8 | 9 | 8 | 8 | 9 | 7 | 7 | 10 | 4 | 9 | 10 | 10 | 8 | 8.0 |
| 16 | 8 | 5 | 8 | 9 | 9 | 7 | 10 | 8 | 10 | 10 | 7 | 8 | 10 | 10 | 10 | 8.6 |
| 17 | 6 | 7 | 8 | 9 | 10 | 10 | 10 | 8 | 10 | 10 | 5 | 5 | 10 | 10 | 9 | 8.5 |
| 18 | 8 | 5 | 6 | 9 | 7 | 5 | 9 | 3 | 4 | 10 | 4 | 5 | 10 | 10 | 8 | 6.9 |
| 19 | 8 | 8 | 9 | 8 | 7 | 7 | 10 | 7 | 8 | 10 | 7 | 9 | 10 | 10 | 9 | 8.5 |
| 20 | 8 | 4 | 8 | 6 | 7 | 7 | 9 | 5 | 2 | 10 | 7 | 5 | 10 | 10 | 6 | 6.9 |
| 21 | 7 | 5 | 5 | 8 | 8 | 9 | 10 | 7 | 5 | 10 | 8 | 5 | 10 | 10 | 8 | 7.7 |
| 22 | 8 | 7 | 9 | 8 | 8 | 9 | 9 | 5 | 8 | 10 | 1 | 5 | 10 | 10 | 9 | 7.7 |
| Total | 174 | 123 | 181 | 177 | 181 | 187 | 208 | 146 | 163 | 216 | 137 | 158 | 207 | 214 | 191 | |
| Gender | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | |
| Age | 39 | 32 | 43 | 28 | 31 | 33 | 36 | 34 | 37 | 32 | 37 | 32 | 30 | 47 | 45 | |
| Service | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 6 to 10 | 11 to 15 | 11 to 15 | |

Average score: 177.5 Median score: 181 Average age: 36

Indicates below average resiliency

Table B3

*The Resiliency Checkup- Summary of Group C*

Years of service- 16 to 25 and over

| Question | Respondents | | | | | | | | | | | | | | | | | | | | Ave |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11 | 13 | 17 | 18 | 23 | 31 | 33 | 36 | 37 | 38 | 47 | 49 | 1 | 4 | 9 | 28 | 41 | 42 | 24 | 26 | |
| 1 | 9 | 9 | 10 | 3 | 7 | 9 | 7 | 9 | 10 | 10 | 8 | 9 | 8 | 10 | 8 | 7 | 8 | 8 | 10 | 5 | 8.2 |
| 2 | 8 | 9 | 10 | 4 | 6 | 6 | 8 | 8 | 10 | 7 | 6 | 7 | 7 | 8 | 6 | 7 | 7 | 8 | 9 | 4 | 7.3 |
| 3 | 8 | 9 | 8 | 4 | 7 | 5 | 8 | 6 | 10 | 9 | 8 | 4 | 5 | 10 | 7 | 6 | 9 | 8 | 9 | 6 | 7.3 |
| 4 | 8 | 9 | 9 | 8 | 8 | 8 | 9 | 8 | 10 | 10 | 8 | 6 | 7 | 9 | 8 | 9 | 7 | 8 | 8 | 8 | 8.3 |
| 5 | 8 | 10 | 9 | 6 | 7 | 10 | 6 | 9 | 10 | 9 | 10 | 7 | 6 | 8 | 4 | 4 | 5 | 5 | 8 | 5 | 7.3 |
| 6 | 7 | 10 | 9 | 4 | 7 | 7 | 6 | 8 | 10 | 9 | 7 | 9 | 7 | 9 | 5 | 6 | 7 | 10 | 9 | 3 | 7.5 |
| 7 | 5 | 10 | 9 | 3 | 8 | 5 | 7 | 9 | 10 | 8 | 7 | 9 | 3 | 9 | 4 | 1 | 7 | 9 | 9 | 3 | 6.8 |
| 8 | 7 | 9 | 8 | 3 | 7 | 5 | 7 | 6 | 10 | 8 | 7 | 7 | 4 | 7 | 4 | 2 | 8 | 5 | 9 | 4 | 6.4 |
| 9 | 7 | 10 | 8 | 4 | 8 | 8 | 7 | 7 | 10 | 9 | 7 | 7 | 4 | 9 | 6 | 5 | 8 | 9 | 6 | 4 | 7.2 |
| 10 | 5 | 9 | 9 | 3 | 5 | 6 | 6 | 8 | 10 | 3 | 6 | 10 | 4 | 7 | 5 | 3 | 7 | 10 | 3 | 3 | 6.1 |
| 11 | 8 | 10 | 8 | 8 | 7 | 5 | 7 | 8 | 10 | 6 | 8 | 7 | 6 | 8 | 6 | 9 | 8 | 6 | 8 | 3 | 7.3 |
| 12 | 8 | 7 | 8 | 7 | 7 | 9 | 8 | 7 | 10 | 9 | 8 | 5 | 7 | 7 | 8 | 9 | 7 | 9 | 8 | 7 | 7.8 |
| 13 | 6 | 10 | 8 | 2 | 8 | 5 | 7 | 8 | 10 | 9 | 7 | 9 | 3 | 9 | 4 | 5 | 9 | 9 | 9 | 4 | 7.1 |
| 14 | 4 | 10 | 8 | 3 | 6 | 8 | 7 | 8 | 10 | 8 | 8 | 4 | 4 | 8 | 3 | 3 | 5 | 4 | 9 | 4 | 6.2 |
| 15 | 5 | 10 | 8 | 4 | 8 | 8 | 7 | 7 | 10 | 8 | 9 | 3 | 4 | 8 | 4 | 4 | 8 | 8 | 8 | 5 | 6.8 |
| 16 | 6 | 9 | 9 | 3 | 7 | 5 | 8 | 8 | 10 | 9 | 8 | 8 | 6 | 6 | 5 | 5 | 9 | 6 | 9 | 4 | 7.0 |
| 17 | 6 | 9 | 8 | 3 | 8 | 8 | 7 | 8 | 10 | 8 | 8 | 10 | 6 | 7 | 3 | 6 | 8 | 8 | 10 | 5 | 7.3 |
| 18 | 7 | 8 | 9 | 1 | 5 | 6 | 3 | 7 | 5 | 10 | 9 | 10 | 4 | 10 | 4 | 2 | 9 | 9 | 10 | 4 | 6.6 |
| 19 | 7 | 10 | 9 | 3 | 7 | 6 | 5 | 9 | 10 | 9 | 9 | 9 | 4 | 9 | 3 | 3 | 8 | 9 | 10 | 7 | 7.3 |
| 20 | 8 | 10 | 7 | 3 | 6 | 2 | 6 | 5 | 10 | 6 | 7 | 7 | 4 | 8 | 7 | 3 | 6 | 6 | 8 | 4 | 6.2 |
| 21 | 6 | 9 | 8 | 8 | 5 | 4 | 7 | 6 | 10 | 7 | 8 | 4 | 4 | 8 | 6 | 5 | 8 | 9 | 8 | 4 | 6.7 |
| 22 | 7 | 9 | 9 | 9 | 7 | 6 | 7 | 9 | 10 | 9 | 8 | 7 | 7 | 8 | 7 | 9 | 7 | 8 | 8 | 7 | 7.9 |
| Total | 150 | 205 | 188 | 96 | 151 | 141 | 150 | 168 | 215 | 180 | 171 | 158 | 114 | 182 | 117 | 113 | 165 | 171 | 185 | 103 | |
| Gender | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | |
| Age | 51 | 47 | 47 | 48 | 51 | 40 | 53 | 48 | 41 | 58 | 43 | 41 | 47 | 47 | 47 | 47 | 49 | 47 | 57 | 52 | |
| Service | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 16 to 20 | 21 to 25 | 21 to 25 | 21 to 25 | 21 to 25 | 21 to 25 | 21 to 25 | 25 and over | 25 and over | |

Average score: 156.6 Median score: 161.5 Average age: 48

Indicates below average resiliency

Table B4

*The Resiliency Checkup- Summary of all Groups*

| Question | Resiliency Checkup average scores | | | Comparison of Groups A & B scores to Group C |
|---|---|---|---|---|
| | Group A | Group B | Group C | |
| 1 | 8.6 | 8.7 | 8.2 | |
| 2 | 8.3 | 8.0 | 7.3 | |
| 3 | 8.1 | 8.7 | 7.3 | -0.8 / -1.4 |
| 4 | 8.3 | 8.5 | 8.3 | |
| 5 | 8.0 | 8.2 | 7.3 | |
| 6 | 8.0 | 8.1 | 7.5 | |
| 7 | 8.0 | 8.0 | 6.8 | -1.2 / -1.2 |
| 8 | 7.3 | 7.9 | 6.4 | -0.9 / -1.5 |
| 9 | 8.0 | 8.3 | 7.2 | |
| 10 | 6.9 | 8.1 | 6.1 | -0.8 / -2.0 |
| 11 | 7.0 | 8.3 | 7.3 | |
| 12 | 6.9 | 8.4 | 7.8 | |
| 13 | 8.4 | 8.1 | 7.1 | -1.3 / -1.0 |
| 14 | 6.9 | 7.6 | 6.2 | |
| 15 | 7.5 | 8.0 | 6.8 | -0.7 / -1.2 |
| 16 | 8.4 | 8.6 | 7.0 | -1.4 / -1.6 |
| 17 | 8.0 | 8.5 | 7.3 | -0.7 / -1.2 |
| 18 | 6.7 | 6.9 | 6.6 | |
| 19 | 7.9 | 8.5 | 7.3 | |
| 20 | 6.0 | 6.9 | 6.2 | |
| 21 | 6.4 | 7.7 | 6.7 | |
| 22 | 8.1 | 7.7 | 7.9 | |
| Total | 167.7 | 177.7 | 156.6 | |

Overall average: 167.3

Statements which measure optimism

Statements which measure social support

Appendix C
Personal Interview Summary

Captain Dave Hyde
Council Bluffs Fire Department
Fire Strong Peer Support Team Member

Interview conducted on December 17, 2017
Location:
CBFD Fire Station 4
2112 Greenview Road
Council Bluffs, Iowa 51503

Question 1
Describe the Peer Support Program and Team utilized by the CBFD, including; how many local team members, initial and ongoing training for counselors, types of services, etc.

Answer: Basically, we are firefighters supporting other firefighters. The peer support program that we use is the Fire Strong Program. It offers training, online resources, 24/7 crisis line for firefighters and families, counseling, and other help. Fire Strong is a subscription service that costs $1,500 per year, paid by the City of Council Bluffs. The team currently has nine local members. I received my first training in peer support counseling at the IAFF Redmond Symposium several years ago. The rest of the team and I received our training with Fire Strong three years ago. We did our training in Omaha with some other Omaha Fire Department members. Topics were stress, PTSD, depression, suicide awareness and prevention, basic counseling, active listening skills, confidentiality issues, local resources. We maintain a partnership with Omaha Fire, sharing resources and training.

(*Captain Hyde showed me the Firestrong.org website and we navigated the services and materials, including links to information on: local resources, fire strong support team, Chaplain team, Testimonials, Mental Health Assessments, Counseling, Anxiety, Sleep Deprivation, Cancer Support, Alcohol Abuse, Financial Fitness, Depression, PTSD, Resiliency Skills, Gambling Addiction, Relationships, The Counseling Team, Drug Abuse, Crisis Intervention, Stop Suicide, Signs of Codependency, Self-Harm, Grief, Mindability, Membership info, Kids Corner, Heart Fit, IAFF Center of Excellence.*)

Question 2
How does a fire department member or family member request assistance from a peer support counselor?

Answer: The member can call the crisis line 24/7 844-525-FIRE (3473), This will connect them with a counselor directly. If they want to speak with a local peer support team member, they can call, text, or email us. Fire Strong business cards have been given to all members and have been placed in all stations. On the back of the cards is contact information for all peer support team members. Also, login and password information for the Members Page on the

Firestrong.org website can be found on the business cards. Contact information for all local peer support team members can be found on the Fire Strong website on the CBFD page.

Question 3
What happens after a member requests help from a Peer Support team member?

Answer: The team member will assess the urgency of the request. Also, depending on the situation, the team member may include an additional peer support team member with permission of the member in need. We will agree on a time and place to meet. Then conduct an informal counseling session with the member. Sometimes they need to be referred to more formal counseling. If that's the case, we can refer them to the local EAP at Best Care or counselors at Horizon Group. From my past experience, I can tell you that there is a lot of distrust in EAP within CBFD.

Question 4
Does the Fire Strong Peer Support program discuss mental health resiliency? If so, how?

Answer: Yes. There is a page on the website dedicated to mental resiliency. The page describes resiliency and gives tips on how to develop resiliency. There are several videos as well.

Question 7
Does the Fire Strong Peer Support program address the stressors associated with natural and man-made disasters specifically?

Answer: No, not specifically. If there was a disaster event, the team would be available to work on- and off-site to assist our members. We would be advocates for our members; making sure they have defined work periods, shared workloads, physical needs, etc. During the event we would probably ask for assistance from Omaha fire for counselors. We would try to address family needs if their own property was affected as some members don't live in the community, some do. We have two Fire Department Chaplains that could be called to assist if needed. Also, EAP has disaster services that would be called to help. Horizon Group could also be utilized for counselors for members as needed. In the long term, referrals for therapy, counseling, etc., as needed. Our biggest contribution may be in the long-term care of our members. Peer support counseling may increase months after the disaster event so our members should be looking for members who are showing signs of needing assistance.

Question 8
Does the Fire Strong Peer Support program include preventative measures or training for members?

Answer: Yes. There are lots of videos, self-assessment exercises, and a wide variety of educational materials on the website.
(topics described in question 1)
Question 9
How much do the Fire Strong services get used by members of the CBFD.

Answer: We see 10-12 members log into the "members only" portion of the Firestrong.org website each month. Lots of people will look at the website before contacting a team member. It's unfortunate, but there is still a tremendous amount of stigma surrounding mental health issues in the fire service and the CBFD. If a member comes forward and admits he is having problems he runs the risk of being ostracized by co-workers. We really need to change this.

Question 10
Does the team have regular meetings?
Answer: We communicate through email but no regular face-to-face meeting currently. We need to do a better job of communicating with each other on the team. There has been a change in leadership with our partners in Omaha and that has hampered communications on that end of our program.

Appendix D

**Firefighter Resiliency Action Plan**

Goal: Determine what steps can be taken by the CBFD to improve and maintain mental health resiliency of responders before, during, and after natural or man-made disasters.

| SITUATIONAL ANALYSIS | ACTIONS | |
|---|---|---|
| What factors are causing or contributing to the problem? | Can we change/control? | Method |
| CBFD does not have a firefighter resiliency training program | Yes | Establish a firefighter resiliency training program for the CBFD |
| CBFD does not have a plan to maintain FF resiliency during disasters | Yes | Develop strategies to maintain firefighter resiliency during disaster events. |
| Stressors may exceed the resiliency of responders | No | Unable to determine all factors |
| Firefighter resiliency has not been previously measured within the CBFD | Yes | Measure resiliency for all members |
| **What existing situational forces could assist in improving the mental health resiliency of members of the CBFD before, during, and after natural or man-made disasters?** | **ACTIONS** | |
| | Can we optimize resource? | Method |
| CBFD peer support team is available | Yes | Teaching classes, receiving additional training<br>Emergency disaster scene and non-emerg. peer counseling. Long-term assistance post disaster. |
| Best Care EAP | Yes | Teaching classes, Disaster scene response |
| Internal Training, hands-on disaster drills, MCI drills | Yes | Regular drills may improve resiliency |
| Support from FD Administration for health and wellness | Yes | Achieve support for program initiatives to ensure funding<br>Engage Administration participation |
| Greater national awareness regarding FF mental health in recent years | Yes | Information may be used to reduce stigma associated with openly talking about mental health issues. |
| **What existing situational forces could impede improvement of the mental health resiliency of members of the CBFD before, during, and after natural or man-made disasters?** | **ACTIONS** | |
| | Can we change/control? | Method |
| Stigma associated with seeking mental health assistance among members of the CBFD | Yes | Strong, vocal leadership. Educational campaign to reduce stigma. |
| Existing peer support program does not address disasters specifically | No | Although, all program components still function. |
| Pushback from CBFD members due to privacy concerns | Yes | Confidentiality safeguards built into the program. Educate members on program. Ensure safeguards. |
| Time constraints on the training schedule may not allow all aspects of the proposed training plan to be implemented | No | Difficult to control. Scheduling performed by the Training Division. Many disciplines competing for schedule time. |

**ACTION PLAN OBJECTIVES**

1. The CBFD shall establish a firefighter behavioral health resiliency training program.

2. The CBFD shall develop strategies to maintain firefighter behavioral resiliency during disaster events.

| **Firefighter Resiliency Action Plan** | | | |
|---|---|---|---|
| **Action Plan Objective 1** | The CBFD shall establish a firefighter behavioral health resiliency training program. | | |
| STEP 1 | | ACTIONS | METHODS |
| Determine program elements. | | Baseline resiliency scores for all members | The Resiliency Checkup |
| | | Follow up resiliency scores as needed | The Resiliency Checkup |
| | | Direct-delivery training | Peer support team, EAP |
| | | Computer-based learning | Self-directed learning |
| | | Disaster drills, exercises, table-tops exercises, MCI drills, HazMat Drills | Hands-on training |
| | | Resiliency educational materials | flyers, pamphlets, etc. (print or digital format) |
| | | Peer support for members | Local peer support team |
| | | Administration support and involvement | Letter of support from Fire Chief |
| | | Union leadership support and involvement | Letter of support from Union |
| STEP 2 | | ACTIONS | METHODS |
| Determine curriculum elements. | | *Resiliency Class Topics* | |
| | | Improving Realistic Optimistic Thinking | Classroom- EAP Instructor |
| | | Improving Social Support | Classroom- EAP Instructor |
| | | Improving Coping Self-Efficacy | Hands-on drills, exercises, and/or table-tops exercises |
| | | IAFF Behavioral Health Awareness Course | Self-directed, online training |
| | | Fire Strong website resources | Self-directed, online training |
| Administration and Union Leadership Training | | IAFF Three-Month Action Plan- Responding to Members Behavioral Health Needs | Self-directed guide from IAFF for local leaders |
| | | Training on the Mental Health Considerations During Disaster Response and Integration of Mental Health Considerations into ICS | Classroom- Training Division Instructor |
| Peer Support Team Training | | IAFF Peer Support Counselor Training | Classroom- IAFF Instructors |
| STEP 3 | | ACTIONS | |
| Develop a 12-month schedule of resiliency class topics. | | See Proposed Firefighter Resiliency Training Plan. | |
| STEP 4 | | ACTIONS | |
| Adopt and implement the Proposed Firefighter Resiliency Training Plan. | | Deliver training as outlined in the Proposed Firefighter Resiliency Training Plan. | |

*Proposed Firefighter Resiliency Training Plan*

| 2018 | Administration and Union Leadership Training | CBFD: All Personnel Training |
|---|---|---|
| January | IAFF Three-Month Action Plan<br>Month 1 | |
| February | IAFF Three-Month Action Plan<br>Month 2 | |
| March | IAFF Three-Month Action Plan<br>Month 3 | |
| April | | Resiliency Checkup- All Members |
| May | Administrative Staff Only- Presentation on Mental Health Considerations During Disaster Response and Integration of Mental Health Considerations into ICS | IAFF Online Behavioral Health Awareness |
| June | | Mass Casualty Incidents Training and Drill |
| July | IAFF Peer Support Program Training | |
| August | | Hazardous Materials Incident Drill |
| September | | Resiliency Training: Optimistic Thinking<br>Local EAP |
| October | | NIMS Exercise |
| November | | Resiliency Training: Social Support<br>Local EAP |
| December | Program Evaluation | |

| **Firefighter Resiliency Action Plan** | |
|---|---|
| **Action Plan Objective 2** | The CBFD shall develop strategies to maintain firefighter behavioral health resiliency during disaster events. |
| STEP 1 Analyze | |
| Identify problems, likely behaviors, and outcomes during disaster events that could deteriorate firefighter resiliency. | Responders exposed to high magnitude of trauma, destruction, and/or loss of life |
| | Responders exposed to long duration disaster events resulting in physical and mental exhaustion |
| | Lengthy, repeated exposure to traumatic events without rehabilitation |
| | Dual Role(victim/rescuer): Firefighters as both first responder and affected personally by the disaster (home damaged, family in danger, etc.) |
| | Responders with pre-existing PTSD, depression, suicidal idealization, or other behavioral health challenge may easily become overwhelmed |
| | Incident commanders and other supervisors may not be aware of important crisis support and suicide prevention phoneline information |
| | Incident Commanders and other supervisors may not recognize common signs and symptoms of behavioral health distress |
| | Incident Commanders and other supervisors develop channeled attention due to the scale of the incident. Behavioral health of personnel may become an afterthought given the magnitude of the incident. |
| STEP 2 Planning | ACTIONS |
| Describe options, response strategies, and determine resource need that will help maintain firefighter resiliency during disaster events. | Incident Commanders should limit exposure to potential traumatic tasks by dividing workloads between crews. |
| | Incident Commanders should integrate peer support teams into the ICS to provide counseling services to members where they are needed most. |
| | Incident commanders should limit firefighter exposure to potentially traumatic tasks by establishing and enforcing reasonable work/rest periods. |
| | Incident Commanders should make reasonable accommodations for dual-role firefighters (firefighters who find themselves, family, or homes, in danger from the disaster event), allowing them time to stabilize their life. |
| | Common signs and symptoms of behavioral health problems include; depressed mood, hopelessness, anxiety, angry outbursts, withdrawal, suicidal ideation, loss of appetite, insomnia, recurrent dreams, and avoiding people, places, and things associated with the event. |
| | Incident Commanders should provide appropriate incident scene rehabilitation in compliance with NFPA 1584 during disaster incidents. |
| | Emergency contact lines include:<br>Fire Strong Crisis and Support Line 1-844-525-FIRE (3473)<br>National Suicide Prevention Lifeline 1-800-273-TALK (8255)<br>Local resource Best Care EAP 1-800-4182 or 402-354-8000 |
| STEP 3 | ACTIONS |
| Develop a job aid for command staff based on the analysis and planning steps of this action plan. | See Job Aid- *Maintaining Firefighter Resiliency During Disasters for Incident Commanders- Guide Response Guide* |
| STEP 4 | ACTIONS |
| Adopt and add job aid to CBFD SOP #200 ICS | Conduct training on the job aid for the command staff and supervisors as part of firefighter resiliency training. |

**Maintaining *Firefighter Resiliency* During Disasters for Incident Commanders**

**QUICK RESPONSE GUIDE**

Disasters can have devastating effects on the mental health of firefighters. Incident Commanders, Safety Officers, Company Officers and all personnel must be aware of these red flag conditions and behaviors and employ strategies for avoiding and mitigating negative behavioral health outcomes.

## RED FLAG CONDITIONS

HIGH magnitude of TRAUMA, DESTRUCTION or LOSS OF LIFE

Working long hours- FATIGUE, including MENTAL FATIGUE

LENGTHY, REPEATED EXPOSURE TO TRAUMA

DUAL-ROLE (Victim/Rescuer)- firefighters may find THEMSELVES, THEIR FAMILIES, OR HOMES THREATENED by the disaster. In this case they are responding as RESCUER while carrying the stress of a DISASTER VICTIM.

PRE-EXISTING CONDITIONS- PTSD, SUICIDAL IDEALIZATION, DEPRESSION

## STRATEGIES

LIMIT EXPOSURE to potentially traumatic tasks by DIVIDING WORK LOADS

LIMIT EXPOSURE by establishing and enforcing REASONABLE WORK/REST PERIODS

PROVIDE LEAVE for DUAL-ROLE FFs as soon as operationally possible

PROVIDE PEER SUPPORT TEAM COUNSELORS ON-SITE

PROVIDE ADEQUATE REHABILITATION ONSITE FOR RESPONDERS

## RED FLAG BEHAVIORS

Crew members expressing any of the following signs or symptoms should be provided with an informal peer support counseling session to assess the need for referral to formal counseling follow up.

| | | |
|---|---|---|
| Depressed mood | Loss of appetite | Insomnia |
| Hopelessness | Suicidal ideation | Recurrent dreams |
| Anxiety | Avoiding people, places, things associated with the event | Withdrawal |
| Angry outbursts | | Any behavior that is out of character |

EMERGENCY CONTACT INFORMATION:

FireStrong Crisis and Support Line 1-844-525-FIRE (3473)

National Suicide Prevention Lifeline 1-800-273-TALK (8255)

Best Care EAP 1-800-801-4182 or 402-354-8000

24-hour assistance CBFD 2018