The Impact of Chronic Work-Related Trauma and Loss on Firefighters and Other First Responders: Risk, Resilience, and New Directions for Assistance

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Goals of This Talk

1) Provide an overview of the unique presentation of trauma and loss reactions in firefighters/first responders

2) Describe common risk and resilience factors in firefighters

3) Address the accessibility and effectiveness of resources and support services

4) Propose new directions and perspectives to support the emotional and psychological health of the firefighter/first responder workforce

Firefighters are Unique

- There are more than a million firefighters in the US, but there is no “typical” Firefighter (FF) (Alden et al., 2021)
- The day-to-day work, rules and structures, available resources, etc., can all differ depending on :
  - Whether you’re a professional vs. a volunteer FFs
  - Whether you’re also trained in EMS/provide EMT services
  - Working in an urban vs. suburban vs. rural setting
  - The kind of rank, role, or job you hold (for example, Firefighter; Driver/Engineer, Rescue Personnel, Lieutenant, Captain, Chief…)

But, Firefighters Have Some Experiences in Common

- Firefighters and other first responders are exposed to a wide range of often acute traumatic events in their day-to-day work
- Day-to-day activities might include:
  - Putting out or suppressing fires
  - Directing rescue activities
  - Providing medical care
  - Recovering bodies
  - Assisting in managing the impact of natural disasters such as flooding or tornados, or structural crises such as collapsed bridges or downed power lines

Firefighter Culture

Some common FF values and beliefs:

- A strong sense of pride in their work and commitment to doing a good job
- A need to be able to compartmentalize what you see and experience in order to be able to do the job
  - This may make FFs less likely to confide in a partner or other family members – or even healthcare professionals – because they don't want to burden others or they believe someone who isn't a FF can never understand.
- A general discomfort with talking about emotions, preferring to focus on action instead
  - They might believe that having feelings about something means that they're weak or broken.
  - "You bury it for years, until you can't."
- A belief that they should be stronger and more resilient than everyone else
  - They might believe that if they need help they've failed as a FF, or that others in their company/house will believe they can't be depended on or can't do the job.
  - "We got this" (even if they maybe don't)
- They most often take a practical, problem-solving, "can-do" approach to situations
  - But, this may lead to them believing that they need to be able to always solve their own problems and never ask for help.
- Use of humor (sometimes "dark" humor) and jokes to blow off steam and cope with the difficult aspects of the job
  - This might be the only way they know how to cope, at the expense of being able to share how they really felt about something and talk it through with others to maybe reach a healthier point of view about what happened.

(Haslam & Mallon, 2003)

Firefighter Work Structure

Some aspects of the job can add to stress over time:

- Shift work
  - Can cut both ways, with respect to impact on family relationships. Can put stress on a partner and kids when the FF is gone for 24 hours - but can also provide a break for everyone.
- Lack of sleep – the nature of the job can really interfere with the ability to get a decent night's sleep during the work shift or get on a regular sleep schedule on the non-work nights.
  - Lack of sleep can make it harder to manage emotions or function well physically (especially in older FFs), and can increase arguing, snapping, and lashing out at home and at work
- The nature of the job can make it hard to develop and maintain a healthy eating and sleeping routine. (A FF friend: "After you run all night you just want to eat junk food.")
- Busy houses can increase the amount of exposure to stressful events (ex., my Lieutenant friend's experiences), but less busy houses can lead to boredom and more bickering and fighting.

Combined Stressors Can Lead to Problems Over Time

- Stress: "The psychological and physical responses that characterize a person's adaptive reaction to changes in their environment" (Nydegger et al., 2011, p. 11)
- Stress itself is neither good nor bad, but the particular conditions that cause it, combined with the way an individual reacts to it can result in negative outcomes.
- Most firefighters/first responders are resilient and effectively utilize personal strengths and positive coping strategies – they handle stress and what they have to deal with very well.
- But, the cumulative work-related exposure to trauma and loss combined with other work stressors and personal or family-related challenges and stressors can sometimes combine to take a toll on FFs.
- As a result, FFs can experience negative physical, emotional, psychological, social, spiritual, and perspective changes.

Common Mental Health (and Often, Stress-Related) Challenges That Impact FFs

- PTSD
- Grief and Loss
- Depression
- Anxiety
- Burnout
- Vicarious Traumatization
- Substance Abuse
- Suicide

PTSD – What is it?

Post-Traumatic Stress Disorder (PTSD) is a condition that can develop in people who are exposed to actual or threatened death, serious injury, of sexual violence in one or more of the following ways:

1) Directly experiencing the traumatic event

2) Witnessing, in person, the event as it happened to someone else

3) Learning that a violent or accidental death or threatened death occurred to a family member or friend

4) Experiencing repeated or extreme exposure to aversive details of traumatic events (ex., collecting human remains, or seeing children who have experienced trauma)

The categories of PTSD symptoms are ***intrusion/re-experiencing***, ***avoidance***, ***mood/cognition (thinking pattern) changes***, and ***hyperarousal/reactivity***.

People who are experiencing at least a few examples of each symptom "bucket" can meet the criteria for a PTSD diagnosis.

(APA, 2013)

PTSD – What Does it Look Like? Intrusion/Re-Experiencing Symptoms

Intrusion/Re-experiencing symptoms include:

- Recurrent, involuntary, and intrusive **memories** of the traumatic event(s)
- Recurrent distressing **dreams/nightmares** (the content of the nightmare is very similar or related to the traumatic event)
- **Flashbacks** of the event (the person feels as if they are back in the middle of the event/it's happening again)
  - Flashbacks can include seeing the event, or smelling the smells or hearing the sounds of the event
  - Triggers: BBQ smoke, sirens, parts of their turnout/gear
- Intense or prolonged **psychological distress** (fear, grief, rage, panic attacks) when the individual thinks or talks about or remembers the event, or is in the presence of anything that reminds them about it
- Intense of prolonged **physiological distress** (fight/flight reactions) when the individual thinks or talks about or remembers the event, or is in the presence of anything that reminds them about it

The FF doesn't have to have <u>all</u> of these symptoms; if they have two, it counts for PTSD.

(APA, 2013)

PTSD – What Does it Look Like? Avoidance Symptoms

Avoidance symptoms include:

- **Avoiding/trying to avoid distressing memories, thoughts, or feelings** that have to do with the traumatic event (avoidance can include numbing out or the use of substances)
- **Avoiding/trying to avoid external reminders** of the traumatic event (people, places, objects, situations, activities) that bring up distressing memories, thoughts, or feelings about the traumatic event
  - Example: a FF's boots
  - The need to avoid reminders can be very problematic when the reminder is a part of the FF's job.

The FF doesn't have to have all of these symptoms; if they have one, it counts for PTSD.

(APA, 2013)

PTSD – What Does it Look Like? Thinking and Mood Changes

Negative changes in thinking patterns and mood include:

- **Inability to remember** some aspect of the traumatic event ("amnesia"; blackouts; lost time)
- **Exaggerated negative beliefs** about oneself, other people, or the world (ex., "I suck at this and I should quit"; "nothing we do makes any difference, and there's no point to it"; "people suck, and they deserve what they get in life"; "I can't count on anyone else"; "I'll always let my buddies down when the chips are down"; "something bad like this will also happen to my kid or my family")
- **Distorted thinking** about the cause or consequences of the event that leads the person to blame themselves or others ("I should have been able to save that person, no matter what." "They're dead because I screwed up.")
- Persistent **negative emotional state(s)** (anger, guilt, shame, horror, fear)
- **Loss of interest** or no longer participating in things the person used to care about (friendships, family activities, doing a good job)
- Feeling detached or **estranged from other people** (co-workers, buddies, family)
- Loss of ability to feel **positive emotions** (love, happiness, enjoyment, laughter)

The FF doesn't have to have all of these symptoms; if they have two or more, it counts for PTSD.

(APA, 2013)

PTSD – What Does it Look Like? Hyperarousal and Reactivity Changes

Changes in **arousal and reactivity** starting or worsening after the traumatic event

- Irritable behavior and **angry outbursts** (verbal and/or physical aggression against people and objects)
- **Reckless or self-destructive behavior**
- **Hypervigilance** (scanning all around/being on hyper-alert or on guard against sources of threat)
- Increased **startle** reaction ("hitting the deck" at the sound of fireworks)
- **Concentration problems** (can't pay attention to a conversation, TV show, or movie)
- Difficulty **falling or staying asleep**

The FF doesn't have to have all of these symptoms; if they have two or more, it counts for PTSD.

(APA, 2013)

PTSD – What Does it Look Like?

- Anyone might have some of these symptoms for a day or two after the traumatic event – this is normal – and then the symptoms usually fade and disappear over time.

- If they last for a **month**, the person might have what's called **Acute Stress Disorder**, but even then, symptoms can resolve on their own.

- If they last for **more than a month**, the person would be considered to have **PTSD**.

- In most cases, if symptoms are still persisting 6 months after the traumatic event, they're unlikely to go away on their own, and the person would benefit from treatment

- Sometimes the person has only some of the symptoms, but more and more gradually "pop up" over time. This is called "Delayed Expression" PTSD, and it's common in first responders.
  - Even though a FF might have only some of the symptoms but not enough to make a full diagnosis of PTSD, the symptoms can be pretty distressing, and can contribute to increased use of substances to cope, which can be dangerous in itself (more on that later). (APA, 2013)

PTSD – Prevalence

- Although most people in the US, and the vast majority of FFs, have been exposed to potentially traumatizing events, only a portion go on to develop PTSD.
- PTSD rates in FFs are higher than rates in the general US population, and are probably even higher than rates in other first responders (Alden et al., 2021)
  - Lifetime PTSD rates in the adult US population: 6.8%
  - PTSD rates in FFs: 18.5-31.8% (Chiang et al., 2021; Del Ben et al., 2006)
  - True rates are probably even higher due to stigma against reporting symptoms and changes in diagnostic criteria.
- In most studies, PTSD rates are higher in younger FFs with less years on the job, and lower in older male FFs with more years on the job. (Del Ben et al., 2006)
  - This might be because most FFs figure out more effective ways to cope over time; it might also be because the ones with PTSD leave the job earlier than they ordinarily might have.
  - PTSD rates are higher in female vs. male FFs; female FFs tend to have higher PTSD rates at the mid-career level. (Noor et al., 2019)

Other Factors Making PTSD More Likely

- FFs can also develop PTSD as a result of traumatic events that happen to them off the job or their own loved ones – it doesn't have to be just due to what they experience on the job.

- PTSD can also result from being exposed to many smaller events over a long period of time, and/or one big, very upsetting event.

- Certain traumatic events seem to be more likely to lead to PTSD reactions:
  - Death or injury of children
  - A traumatic event that reminds them of their own loved ones
  - Situations where they had to witness a high number of victims, lots of gore, or victims in pain
  - An event in which another FF is injured or killed
  - An event in which they themselves were injured or almost killed
  - Events in which they felt helpless or something went seriously wrong.

PTSD and Physical Health

- PTSD is associated with an increased risk of a wide range of physical health problems over time, including:
  - Cardiovascular diseases, heart attacks, strokes, arthritis and joint problems, GI problems, cancer, and chronic pain
- This might be due to long-term changes in stress handling systems that leads to wear and tear on the body
- It might also be due to a heightened awareness of body sensations – "hypervigilance" (Milligan-Saville, et al., 2017)

Grief and Loss Reactions: Non-Death Losses

Exposure to traumatic events may also lead to feelings of personal and professional loss.

- Losses can include the death of someone a FF cares about.
- There are also non-death losses.

Non-death losses include experiences or things that are ended or taken away (Harris, 2020).

Examples:

- A relationship ends (e.g., cut-off with a peer, family member, or the FF community)
- An aspect of one's identity is permanently changed (e.g., through an illness, disability, functioning change – I can no longer do this particular job, or be a FF at all)
- Loss of a sense of the self or positive view of the self ("I suck at this"; "I screwed up and people died"; "I let my buddies down"; "I'm a bad partner")
- Loss of trust (in the mayor, leadership, peers, the non-FF community)
- Loss of a sense of safety or meaning in the world
- An addiction to substances or other potentially harmful coping mechanisms might prevent one from being able to be fully present for life milestones (missed an important family event because the FF went on a bender)
- Loss of physical health (the absence of severe chronic pain or disability)
- Loss of professional success and financial stability (job loss, lost promotions or opportunities)
- Loss of spiritual beliefs

Types of Losses: Secondary, Non-Finite, and Intangible Losses

- **Secondary or sub-losses:** aspects of a broader loss that lead to grief reactions in a particular individual. For example:
  - Chronic/acute illness: impacts the future; functionality; body image; how one is viewed by others, changes in meaning (ideas about predictability and control)
  - Career changes: loss of income, changes in career trajectory and roles, lost contact with coworkers, reduced confidence in self
  - Loss of home or community: loss of belongings, neighbors, memories, feelings of safety, predictability and control
- ***Non-finite losses*** are loss experiences that are caused by a negative life event, and that have a long-term physical or psychological impact ("the gift that keeps on giving".
- They often include ***intangible losses***, such as a loss of dreams, hopes, or ideals about what might have been, could have been, or should have been.
- There is an ongoing need to for the person to keep adjusting to and adapting to these loss that derailed life as they thought it was going to go.

(Harris, 2020)

Reactions to Loss

Reactions to losses may potentially include physical, social, behavioral, emotional, psychological, and spiritual effects such as:

- Grief, sadness, or other mood changes (numbness, anger, relief, agitation, guilt, fear, elation, etc.)
- Loss of energy OR increased energy
- Sleep and/or appetite changes
- Social isolation or needing to constantly be with others
- Withdrawal from previously enjoyed activities, or frantic activity
- Increased use of substances to "self-medicate"
- Increased vulnerability to illness or accidents
- Loss of meaning, purpose, hope, including moving toward or away from spiritual beliefs and engagement

- Situations someone is currently facing may also trigger feelings or reactions about previous, losses, and their experiences with previous losses may impact how they react to current situations.
  - Events that bring up emotional responses are connected with memories with similar emotional responses: "They get lit up together like Christmas lights on a string."

"Disenfranchisement" of Non-Death Losses

The FF griever may have a very strong and lasting reaction to non-death losses, but these losses are often disenfranchised (Doka, 1989; Corr, 2002)

This means that:

- There may be no recognition of the loss/es from peers, leadership, the community, family/friends or even from the FF griever themselves
- There are often no social rules or rituals that could help with grieving non-death losses.
- There may be no social support for the griever concerning the loss;
- Instead, there may be pressure to be grateful for what has been possible or the functioning that still remains, and/or pressure from others to "get over it and move on" and forget about it. (Ex., your leg was shattered in a training exercise, and even though you can walk again after months of rehab, you can never do some physical jobs again.)

Other Common Mental Health Concerns in FFs

- Depression
- Anxiety
- Substance Abuse/Addictions
- Suicidality
- Some combination of PTSD, Depression, and Anxiety may be present in FFs, who then may use substances to cope
- These conditions may all combine to increase the risk of suicide in FFs.

Depression

- Depression is common; about 20% of people in the US will experience it at some point in their lives.
- Although there is very little research on this subject, some studies indicate that depression is more common in FFs compared with the general population. (Alden et al., 2021)
- A large percentage (maybe as high as 80%) of people with PTSD will also have symptoms consistent with depression.
- Symptoms of depression include:
  - Depressed mood most of the day, nearly every day, including sadness, feelings of emptiness or hopelessness.
  - Diminished interest or pleasure in activities the person used to enjoy
  - "Physical symptoms": weight loss or gain; sleeping much less or much more than usual
  - Fatigue, loss of energy, or agitation
  - Feeling worthless or inappropriately and excessively guilty – often about a wide range of things
  - Diminished ability to think or concentrate
  - Thoughts of death, suicidal thoughts, or even suicide attempts (APA, 2022)

Anxiety

- Other Anxiety conditions and disorders that FFs can develop include:
  - Panic attacks and Panic Disorder
  - Phobias
  - Social Anxiety
- Although there is very little research on this subject, some studies indicate that non-PTSD anxiety disorders are also more common in FFs compared with the general population. (Alden et al., 2021)

- It's common to have some **combination** of depression, anxiety, and PTSD – there is significant overlap in the symptoms, and they have common risk factors.
- People with these conditions often turn to substances such as alcohol to "self-medicate."
  - They may be trying to drown out or forget about their symptoms, shift into positive emotions or have fun, help themselves overcome fear or phobias, or induce sleep (this doesn't work in the long run! Alcohol use actually interferes with good sleep.)

Addictions

- Addictions in FF can include abuse of alcohol or drugs, as well as gambling, sex, and other behaviors.
- To qualify for a diagnosis of an Alcohol Use Disorder, there is a problematic pattern of alcohol use leading to significant impairment and/or distress. The following symptoms are typical:

  - Alcohol is drunk in larger amounts or over a longer period of time than the FF intended
  - There is a desire and/or unsuccessful efforts to cut down on or control alcohol use
  - Much time is spent in using alcohol or trying to recover from its effects
  - There is a strong craving or urge to drink alcohol
  - Alcohol use is leading to a failure to fulfill responsibilities at work or at home
  - The FF continues to use alcohol despite problems that have been caused by alcohol use
  - Important work or social activities are given up or reduced because of alcohol use
  - The FF continues to use alcohol even when it's dangerous to do so
  - There is a reduced effect of the alcohol over time, leading the FF to drink increased amounts
  - The FF experiences withdrawal symptoms if they don't continue to drink.

  - In some ways, shift work contributes to alcohol abuse, because the FF "only has to get through the shift" and then can drink on the off days.

Alcohol Abuse

- Alcohol abuse can result in problems in all aspects of a FF's life, including the job, family, and health.
- Alcohol abuse is common in FFs.
  - In some studies, 30-50% of FFs met criteria for an alcohol abuse disorder. (Bing-Canar et al., 2019)
  - Alcohol abuse symptoms are similar across genders (31% vs. 32% in one study) (Noor et al., 2019)

- Alcohol use can be a part of FF culture – a way to bond and blow off steam – but it's often also used to cope with stress and symptoms of PTSD, depression, and anxiety.
- Alcohol abuse can increase isolation and social withdrawal, which can contribute to depression, PTSD, and suicidality. (Bing-Canar et al., 2019)
- Male FFs who are in a romantic relationship have lower levels of alcohol abuse. (Bartlett et al., 2019)

Suicide

- **Suicidality** includes thinking about suicide, making plans to carry it out, and actually attempting to kill oneself.
- There is very little research on suicidality in FFs, but some evidence suggests that rates of suicidality are higher in FFs compared with the general population. (Boffa et al., 2018)
  - In one study of 1027 current and retired US FFs, 46.8% reported having made plans to kill themselves at some point, and 15.5% reported attempting suicide. (Stanley et al., 2015)
- Suicidality is under-reported in FFs, so actual rates are probably higher. (Bing-Canar et al., 2019)

How PTSD, Impulsivity, and Substance Use Combine to Increase Risk of Suicide

- PTSD is strongly linked to increased suicidality, particularly in people who have re-experiencing symptoms.
  - This may be because they gradually get used to the idea of experiencing pain and get over the fear of death through repetitive flashbacks. (Boffa et al., 2017)
- Depression is strongly linked to increased suicidality.
- Substance abuse is linked to suicidality, particularly in men. (Noor et al., 2019).
- Substance abuse and PTSD are both associated with increased **impulsivity**
  - Impulsivity has been defined as actions that are "poorly conceived, prematurely expressed, unduly risky, or inappropriate to the situation, and may result in undesirable outcomes." (Bartlett et al., 2019)
- Impulsivity is also highly associated with increased suicidality. (Bartlett et al., 2019)

- So all of these factors may combine to increase the risk of suicide:
- FFs may use alcohol to cope with stress; those who are also higher in impulsivity and then consume alcohol may be at very high risk for potentially harmful or dangerous events even in their personal lives (not to mention the job), which may then also increase the risk for PTSD. (Bartlett et al., 2019)

PTSD, Impulsivity, and Substance Use Combine to Increase Risk of Suicide

- **Anxiety Sensitivity** (AS) is an exaggerated fear of the negative consequences that might come from feeling or showing anxiety
- A FF with AS might fear that their PTSD symptoms mean that they are "going crazy" or will have to quit the force.
- A FF with AS might be afraid that if they show any signs of anxiety, other FFs will reject, make fun of, or criticize them.
- AS is linked to an increase risk of suicidality in FFs. (Boffa et al., 2018)
  - This might be because they then choose to isolate themselves from others.
  - AS might also contribute to feelings of despair or hopelessness if they think they are "crazy" or the PTSD will never get better.

PTSD and Substance Use Increase Risk of Injuries as Well

- People with PTSD are likelier to experience work-related physical injuries
- People who abuse alcohol are also likelier to experience work-related physical injuries
- Alcohol is also independently associated with long-term physical health problems.

Other Long-term Negative Effects

- PTSD, depression, substance abuse, and suicidality can negatively impact not just the FF, but also:
  - Co-workers
  - Partners, family members, and friends

Other Negative Effects: **Burnout** and Vicarious Traumatization

- **Burnout** is defined as, "a syndrome of **emotional exhaustion, depersonalization, and reduced personal accomplishment** that can occur among individuals who work with people in some capacity." (Maslach, Jackson, & Leiter, 1996)
  - **Emotional exhaustion**: emotional resources are depleted and workers feel they are no longer able to give of themselves at a psychological level.
  - **Depersonalization**: negative, cynical feelings and attitudes about the people one serves. The individual may even begin to feel on some level that the recipients of services are deserving of their troubles.
  - **Reduced personal accomplishment**: The tendency to evaluate oneself negatively, especially with respect to one's work.
- In some studies, emotional exhaustion and depersonalization are more common overall in FFs. (Katsavouni et al., 2015)

Other Negative Effects: Burnout and Vicarious Traumatization

Symptoms of **Burnout**:

- Physical Signs:
  - Fatigue or exhaustion, frequent headaches, GI symptoms, shortness of breath, lingering viral illnesses, sleep changes
- Cognitive, Emotional, and Behavioral changes:
  - Difficulty in regulating emotions: increased irritability, frustration, or anger
  - Increased rigidity and stubbornness, desire to block organizational change
  - Increased suspicion of others
  - Negative attitudes toward work
  - Overconfidence or increased risk-taking behavior
  - Depressive symptoms
  - Increased use of tranquilizers or sleep medications

- In some studies, up to 20% of FFs reported having burnout (Katsavouni et al., 2015)
- Burnout has been seen at higher levels in later-career FFs.
- PTSD increases the chance of developing burnout.
- Substance abuse increases the chance of developing burnout. (Chiang et al., 2021)

Other Negative Effects: Burnout and Vicarious Traumatization

- The concept of **vicarious traumatization (VT)** evolved from research in therapists, but the concepts can apply to other professionals who have frequent contact with traumatized people.

Definition: A process through which the helper's *inner experience* is negatively transformed through empathic engagement with trauma-exposed people on the job. (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995)

- If empathy is the process of simply understanding another person's suffering:
- VT reflects an additional, probably closely related process of a helper "reflecting and experiencing" a traumatized person's distress at some deeper level rather than merely understanding it.
- Batsson, Fultz, & Schoenrade's (1987) theory: Personal distress arises from the helper imagining that they (or loved ones) are personally experiencing the traumatic event.
- This can lead to the helper becoming overinvolved with and/or distancing from the work.

Other Negative Effects: Burnout and Vicarious Traumatization

Symptoms of Vicarious Traumatization:

- VT leads to pervasive effects on the identity, worldview, psychological beliefs, and memory system of the helper. These changes are cumulative over time.
  - Examples: a FF's personality may change over time. Extroverts may become introverted; optimists may become pessimistic.
  - It may be harder to remember positive events and times when things went well, and easier to remember mistakes or times when other people treated the FF badly.
- VT alters the therapists' own affect states, meaning systems, and behaviors, and impacts the therapeutic relationship by altering the helper's defenses against disturbing emotions, reactions, and empathy level.
- Examples – a FF may become more withdrawn, irritable, angry, or cold, or may engage in behaviors they previously would not have considered (such as infidelity or risky behavior on the job).

Potential Risk Factors for Any of These Conditions

- Risk factors combine in unique and individual ways. Risk factors for FFs include:
- Event exposure (quantity and severity of potentially traumatizing events; specific nature of events)
- Quantity of calls in general - How busy is the house?
- The day-to-day aspects of the job
  - Workload and high demands
  - Work schedule
  - Interpersonal conflict
  - Lack of resources
  - Sleep deprivation
- Social disconnectedness – difficulties with interpersonal relationships or unmet needs to connect with others (thwarted belongingness) (Leonard & Vujanovic, 2022)
- Non-work stressors (family issues) can increase risk of mental health concerns
  - For example, female FFs who are single and have a second job are likelier to report suicidality. (Noor et al., 2019)

Potential Risk Factors for Any of These Conditions

- Negative or less effective coping strategies (over the long haul – they work in the short term, but have a high "price tag"):
  - Self-blame
  - Denial
  - Venting (without an effort to problem-solve or reframe)
  - Long-term avoidance of emotions and distraction
  - Substance abuse
  - Isolating from others
  - Risky behaviors

Resilience

- **Resilience** has been defined several ways.
- Some say that *resilience* means that someone who has experienced a traumatic event or loss never really experiences negative symptoms or effects (Bonanno, 2004); others (Zoellner & Feeny, 2014) believe that resilient individuals may initially experience some negative effects, but these effects dissipate over time as the individual engages in efforts to cope, make meaning, etc.
- According to some researchers (Bonanno, 2004; Zoellner & Feeny, 2014) **resilience is the norm**.
  - A smaller subset of individuals experience symptoms which resolve slowly over time ("recovery"), and an even smaller subset may experience more severe, and chronic, symptoms. (Bonanno, 2014)
- "Resilience" may result from the dynamic interplay of many personal characteristics and coping styles (ex., hardiness, cognitive flexibility, self-efficacy, spirituality, extraversion) as well as external resources (supportive and/or enriching social environments) in the context of adversity. (Southwick, Vythilingam, & Charney, 2005; Zoellner & Feeny, 2014)
- The ability to "catalyze" FF resilience may be an important element of successful treatment of trauma. (Gleiser et al., 2008)
  - Therapists would ideally be able to listen for and then "harness" any movement toward resilience, no matter how small.

Resilience Factors

Resilience Factors – Combine in Unique and individual Ways in FFs

- Personal factors:
  - Locus of Control – the belief that there is a relationship between one's own behavior and what happens in the world. One's decisions and actions influence one's environment (as opposed to the belief that what happens is entirely in the control of fate, luck, or powerful others).
  - Seeks and has access to effective social support
  - Effective communicator
  - Positive/flexible/adaptive thinking patterns
  - Optimism
  - Agreeableness
  - Openness to new experiences
  - Tolerance for ambiguity
  - Two styles of coping
    - Problem solving
    - Emotional coping
  - Long- and short-term self-care
  - Sense of meaning and purpose
  - Committed to personal excellence (Onyedire et al., 2017)

Resilience Factors

Positive coping strategies help the person recover from the event and improve their functioning

- Task or problem-focused coping (planning; focusing on how to do things differently next time; increase relevant knowledge or skills)
- Emotion-focused coping (validate one's response, observe it with curiosity and self-acceptance, work on regulating or managing emotional responses)
- Seeking positive support from others
  - Talk over what one is experiencing
  - Seek comfort
- Humor that connects with others (not humor that cuts down others)
- Practicing self-acceptance
- Positive reframing of the event
- Connecting with meaning and spiritual supports

(Nydegger et al., 2011)

Risk or Resilience Factors, Depending on the Situation

External (systemic) factors

- Professional culture and identity – how did the FF decide to join the service?
- Type of job held within the FD
- Rules and expectations
- Chain of command
- Access to resources
- Availability of support in the workplace

Posttraumatic Growth as a Positive Outcome of PTSD

- ***Posttraumatic Growth*** (PTG) has been defined in different ways (Tedeschi & Calhoun, 1996; Zoellner & Feeny, 2014).
  - In general, it can be viewed as a "subjective experience of positive psychological change resulting from a traumatic event, which presents the individual with opportunities for personal development." (Nijdam et al., 2018, p. 424)
  - PTG is usually associated with a major trauma or loss exposure that may severely challenge an individual's understanding of life and who they are in the world. (Calhoun & Tedeschi, 2013)
  - PTG may include self-perceptions of better relationships, more adaptive beliefs, increased appreciation of life and the present moment, deepening of faith, increased wisdom, and better overall functioning. (Calhoun & Tedeschi, 2013)
- In studies, different types of trauma treatment (EMDR, CBT, Brief Eclectic Therapy for PTSD, and others) have been associated with significant increases in PTG, along with reduction in PTSD symptoms. (Nijdam et al., 2018)

Why is it so Important to Address All of These Issues?

- Negative long-term impacts of trauma and loss and related reactions in FFs are costly.
  - Loss of competent FFs is expensive, no matter whether they're no longer on the force because:
    - They choose to leave
    - Injury or disability
    - Work-related death
    - Suicide
  - Mistakes or inappropriate behaviors in FFs with work-related mental health issues can result in harm to people and property, as well as to the reputation of FFs.
  - PTSD and other work-related conditions cause tremendous suffering in FFs, their co-workers, and their loved ones.

Resources for Support/Assistance

- "In house" support
  - City-provided resources
  - Union-provided resources

- "Outside" support/therapists

  - In house services (such as referrals to in-house therapists) can be a good fit for FFs because they're "part of the system" and therapists may understand FF culture better.
  - On the other hand, FFs might be afraid to seek out these services because of shame, fear of stigma, or a belief that they will lose their job or lose out on promotions or preferred jobs or projects if it "gets out" that they need help.
  - Competent outside therapists can be expensive and hard to find, and waiting lists can be long.

- Support groups with other FFs: some FFs might feel more comfortable, but many don't want to open up about emotions in front of other FFs.
- younger FFs are likelier to seek professional help. (Johnson et al., 2019)
- Peer support: can really make a difference in normalizing the need for support, but make sure they're knowledgeable enough about PTSD, depression, suicidality, etc., to know when it's time to "kick it up the chain"/"box it" and bring in a licensed mental health professional.
  - My colleague's story

Effective Therapists for FFs

Characteristics of therapists who are likely to work well with FFs:

- Straightforward, honest, direct, problem-solving style
  - Ability to explain things in "regular person language" without talking down to the FF
  - Frame therapy as speeding up their progress toward their goals, or helping them be more effective in doing their job and helping others
- Awareness of FF culture
  - Use of relatable language and metaphors that resonate: frame antidepressants as a "rescue rope" or a "machine reset"; the idea of water getting in a crack in a stone wall over time – when it freezes, it expands and busts up hard stone.
- Knowledge about relevant rules & policies (what conditions might prevent the FF from being able to work) to best assist the FF (such as the current NFPA - https://www.nfpa.org) – "What you're seeing me for won't get you fired"
- Ability to collaborate and think systemically (work in the context of the company, house, other providers, the partner/family)
- Specific knowledge about PTSD, loss, depression, anxiety, addictions/SA, and suicide
- Ability to actively engage in crisis management when needed
- Great listener
- Available/reachable on the FFs schedule
  - My colleague came to a house after a LODD and gave business cards to those who wanted them

Effective Therapists for FFs

Tips for putting together an outside therapist resource list:

- Have a conversation with the therapist first to find out about their credentials, approach, and cultural competence.
- Listen to word of mouth from FFs who had a good experience with someone
  - Ex.: I have conversations with colleagues who treat first responders to pick their brains - my colleague on the east coast who treats FFs strongly recommends harborofgracerecovery.com Comprehensive Addiction Treatment Services - Harbor of Grace Recovery

Effective Therapy Approaches for PTSD (and Related Mental Health Conditions)

Very few studies have evaluated therapy treatment approaches in FFs. (Alden et al., 2021)

In general, the most effective treatment for PTSD focus on:

- Psychoeducation:
  - Helps the FF understand the symptoms and what causes them
  - "Normalizes" the symptoms as common and treatable reactions to the kinds of situations the FF has faced, not an indicator that the FF is weak or broken
  - Instills hope: we can figure this out and come up with a good treatment approach; "it works if you work it"
- Re-orientation to using healthy coping strategies (exercise; reaching out to social supports; engaging in hobbies)
- Cognitive restructuring – helping getting rigid, catastrophic, or problematic thinking patterns back into balance
- Desensitization/exposure: guiding the FF in revisiting the traumatic event in memory in a safe and controlled way, or helping the FF to once again engage in activities they need to do in order to do their job
  - The goal is the be able to remember the event, feel the natural emotions that go with it to a tolerable degree, and put it into the overall context of their life story
  - Often that means being able to be in the presence of external reminders of the event (ex., the boots) without feeling too much distress.
    - It's helpful to shore up coping skills and stabilize the FF before using exposure interventions
    - Use with caution if the FF has been experiencing suicidality!
- Re-orientation to a sense of meaning and purpose that matters to this FF (such as altruism, pride in the job, or spirituality)
- Some examples of effective treatments for PTSD include CBT, CPT, EMDR, PE, and stage-oriented integrated therapies.

Effective Therapy Approaches

The therapy should also:

- Emphasize **symptom reduction & stabilization** of suicidality and self-harm; encourage the FF's sense of control and self-efficacy in taking responsibility for the safety of self and others.

- Help the FF develop **emotion regulation, grounding, and self-soothing skills** to decrease distress, improve impulse control, and reduce excessive use of substances. Examples:
  - Medication, deep breathing, yoga,
  - Focusing on sensory "grounding in the here and now"
  - Teaching the FF emotion regulation techniques such as being able to name emotions, normalizing them, understanding that they often pass or reduce in intensity with the passage of time, and the use of skills to make them more tolerable until they do lessen.
  - Exercise and physical self-care
  - Reaching out to supportive others and talking through whatever's bothering them
  - Appropriate short-term distraction when necessary (such as watching a movie or listening to music)

Less Effective Therapy Approaches

Critical Incident Stress Debriefing (now renamed Critical incidence Stress Management) was popular in fire service for a while, but a number of more recent studies have shown a lack of effectiveness or in some cases, worse outcomes with its use. (ex., Carlier et al., 2000)

This may be because:

- It utilizes exposure to the narrative of the event too soon, before the brain has had a chance to recover and "digest" the trauma experience on its own.
- It may be traumatizing for FFs who were doing ok after the event, but are required to participate in the groups.
- It doesn't utilize active support in balancing potentially problematic thought patterns.

Other Treatment Considerations

- Unlike military servicemembers, FFs can't rotate out of the "combat zone." Responding to calls is a large part of the job. But it may not necessarily be helpful to give someone with PTSD time off. Studies haven't indicated clear benefits from work leave. (Alden et al., 2021)
  - This may be because a FF with PTSD may do better if they have structure and tasks to complete, and being alone (particularly if they don't have a partner) with nothing to do may mean that they have more time to ruminate and worry.
- Treatment should focus on reducing impulsivity or alcohol abuse when relevant to particular FFs.

Other Treatment Considerations

- If appropriate, services may also focus on resolving conflicts or problems in the partner relationship and/or family
- Therapy can also focus on strengthening personality characteristics that are associated with better adjustment to stressors (previously mentioned).
  - Assistance in flexible thinking and problem-solving; ability to focus on the big picture and learn from mistakes
- My fire fighter friends have talked about the importance of life balance and developing hobbies (ex., my three guitar-playing FF friends!). This also helps productively fill downtime on shifts.

Intervention Approaches: Psychoeducation

- Psychoeducation should be provided to FFs about the symptoms of PTSD (or depression or anxiety), how it develops, and what treatment looks like.
  - For example, male FFs might notice physical symptoms of PTSD before they recognize emotion-related symptoms. (Nydegger et al., 2011)
- Information should be provided that normalizes PTSD or other trauma-related reactions, talks about how common it is in FFs, and de-stigmatizes seeking support and treatment.
- PTSD should be framed as a work-place injury that deserves attention just the same as a broken bone
- PTSD should be framed as a condition that improves with treatment, and that can even be transformed into post-traumatic growth, but the longer the FF waits the worse the symptoms might get.
  - This information should be provided to all FFs
  - This information should also be provided to leadership at all levels so that they can ensure that it reaches their personnel and the message is reinforced at all levels.

Intervention Approaches: Psychoeducation

- Efforts should be made to deliver the information in a format that is readable, understandable, and accessible.
  - A mix of approaches can be most effective (printed materials, workshops, virtual talks or trainings such as podcasts; online videos)
- It's not enough to deliver the information once, and then forget about it. It should be repeated at regular intervals, with brush-ups.
- Timing matters: FFs don't like having their regular workplace activities disrupted, on the one hand, but in-services on off-duty hours may be seen as a hassle and imposition.
- It might be helpful to have someone with expertise in PTSD (and related conditions) visit the House regularly just to check in, and provide resources or support if anyone in the House is in need or there has been a recent high-impact event.

Addressing Grief and Loss

It's important to also address reactions in a company or department after a LODD (line of duty death) or suicide death of another FF.

- FFs may take comfort in rituals and memorials
- The National Fallen Firefighters Foundation (firehero.org) website offers helpful resources and suggestions
- Psychoeducation about normal grief can be helpful
- FFs may appreciate support from leaders.
- Therapists who specialize in grief and loss can be identified through the therapist finder resource at Adec.org (Association for Death Education and Counseling)
- Gullivar et al. (2016) created and studied a **suicide post-vention model** for fire service that includes steps for notification procedures, determining who should be on and who should lead the postvention team, how a suicide should be responded to, how the family should be assisted, how responses to department members should be handled, how at-risk FFs should be assisted, and how and when to conclude the postvention.

Develop a Longer-Term Strategy for Addressing Both Acute and Chronic Stressors

- Psychoeducation alone or "boring" lectures or trainings aren't enough. FFs should also have the opportunity to learn positive coping strategies.

- Active trainings and support should be provided on an ongoing basis to foster resilience and self-care, AND post-vention strategies should also be developed to respond to more acute stressors (LODDs, injured FFs, a suicide, events with many injuries and fatalities, situations where the event got out of control or mistakes had negative outcomes).

- For acute situations, instead of a traditional "Critical Incident Debrief" that includes detailed narration of the events, provide an after-action opportunity to get together and informally discuss the event as a group.
  - See how everyone is doing in a more general way.
  - Ask about reactions, without necessarily going through the details of the event.
  - Provide psychoeducation and normalization about potential short- and long-term reactions.
  - Provide practical suggestions for coping and distress relief.
  - Address problem-solving in a supportive, non-critical way: "what do we need to plan for, learn, brush up on?" How can we "own" mistakes but use them to learn and do better next time?"

Helpful Training Approaches to Build Resilience

- Schedule regular visits should from specialists or providers who can check in with the company, house, Captains or Chiefs, refresh knowledge and resources, and address acute needs
- **Resilience building training programs** can be designed to occur during downtime on shifts. They should be customized for the needs of the company/house. "Canned" interventions haven't been shown to be effective.
- Could include:
  - Developmental assignments matched to the FF's particular learning needs to increase self-efficacy
  - Coaching in professional development and goal-setting to reduce burnout
  - Training in communication and interpersonal skills and how to get along well with others (not just planning social events for the company or house)
  - Guidance in how to minimize – or deal with – social disconnection and ostracizing/being ostracized by others
    - Research suggests that younger FFs are more likely to reach out for social support, whereas older FFs with more years on the job are likelier to disengage. (Nydegger et al., 2011)
  - Coaching in flexible thinking and problem-solving
    - Research suggests that older FFs with more years on the job are likelier to engage in self-blame. (Nydegger et al., 2011)
  - Skill building in distress tolerance strategies and decision-making under stress

Suggestions for Leaders

- Chiefs, Captains, etc. have a larger span of control, so there is more to worry about (including the safety and well-being of your guys).
- They also have to manage administrative challenges.

- Leaders should ideally help change the culture toward one that understands and accepts that stress reactions can impact anyone, and "Firefighter Strong" also means being strong enough to seek out the support you need.
- In the words of my Chief friend: "The whole climate needs to change. It can be like pulling teeth to get guys to come out of a situation that's ambiguous, or even come out and get water on a hot day. There's an attitude of 'we got this.' But sometimes, we **don't** got this. And the smart thing to do is come out so that no one gets hurt, and we use it to learn and get better so we can fight again another day."
- They can help identify good resources for education and support, but also model healthy attitudes through their words and actions.
- Leaders should be aware of the potential for problems to crop up over time and check up on the involved FFs regularly, especially those who appear to be struggling.

Questions?

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Some Resources

- Code Green Campaign: codegrencampaign.org – organization that brings awareness to high rates of mental health issue in first responders and provides resources

- Firefighter Strong: Firefighter-Strong-2021-web.pdf (nvfc.org)
- Fire Department Family Blog: *firedpartmentfamily.com/about-us*
- Firefighterwife.com
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- National Fallen Firefighters Foundation National Fallen Firefighters Foundation (firehero.org)
- National Suicide Prevention Lifeline: 1-800-273-TALK

- www.aa.org: search on the site for an AA group specifically for FFs

Podcasts:

- "Whole PTSD": podcasts.apple.com/us/podcast/whole-ptsd/id1459695469

- Living with a Firefighter's PTSD: A Wife's Story: The Fire Inside Podcast (Episode 43, September 21, 2019)

Ilffps.org/living-with-a-firefighters-ptsd-a-wifes-story