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Exploring the Mental Health Impact of Incidents of Mass Violence on First Responders

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by

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Dedication

This paper is dedicated to the first responders who show up to other people's emergencies every day, having no idea the impact they will have, but are willing to show up all the same.

Abstract

The mental health impacts first responders face due to work-related stress can be extensive and severe. These impacts are understudied and often simply not considered. First responders, while trained to perform superhuman acts, are simply human beings who are not impervious to feeling the effects of the extraordinary events they are called to witness and partake in. Common mental health impacts can include sleep disorders, substance disorders, PTSD, Generalized Anxiety Disorder, and suicidal ideation. First responders are deserving of more time, attention, and study by great researchers who are willing to better understand associated risk factors, the severity of negative mental health cognitions, and most importantly resilience factors that can proactively be put into place. Furthermore, the prevalence of Incidents of Mass Violence such as mass shootings, warrants an additional look into the impacts of such events. This paper discussed historical incidents, both in America and in other countries, and the known mental health impacts first responders endured. This paper also provided insight into where opportunities of growth exist to better equip first responders for the incidents yet to come.

Keywords: mental health, first responder, incident of mass violence, mass casualty incident, shooting, terrorism, trauma, suicide, alcohol overuse, depression, stress, resilience

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Chapter 1: Introduction

Background and Issues to be Covered in the Capstone

It has been long established that the job of a first responder can result in significant mental health struggles and can even lead to suicide. The author is a long-time first responder herself and has seen these struggles up close. While it's widely known that being a first responder puts one at risk for mental health struggles, it's imperative for stakeholders to understand that not all first responders will struggle with their mental health. The sense of purpose and community gained from the emergency services is a major protective factor. But chronic exposure to trauma, a lack of tailored resources, rampant stigma, and normalized negative coping skills can contribute to significant mental health struggles. The stigma is often the biggest barrier to being willing to seek out help or whole-heartedly engage with it when it is available.

"Unfortunately, in many law enforcement departments the culture toward mental wellness or addressing emotional problems of any kind is one of disdain and avoidance" (Heyman, et al., 2018). The author has seen proof of this herself many times. This leads to high rates of turnover within the various career fields, with first responders not knowing where to turn or feeling like they will be chastised if they decide to ask for help. First responders might be burned out from the accumulation of many critical calls or might reach their breaking point after that one big call. They are unsure of who to turn to and fear being ridiculed. This can lead them to take the only other solution they see, which is to leave the career field. Sometimes, the feeling of not having any other options to deal with the overwhelming feelings is so great that the first responder takes their own life.

This issue is far reaching and has been thought of as a hidden epidemic in the first responder population. It is established that “the rates of suicidal ideation are 10X higher in fire and EMS professionals than in the general population” (Substance Abuse and Mental Health Services Association, p. 4, 2018). Historically, having one’s mental health impacted was simply not acceptable. In response to critical incidents and in the absence of any real mental health care, responders were sometimes encouraged to drink until they “didn’t remember anymore.” The author has heard this herself. Some firehouses still have a fully stocked bar in them.

Relying on this generationally accepted negative coping skill can lead to a significant substance use disorder which is thought to be culturally okay. Like mental health stigma, alcohol overuse is widely known to be common in the emergency services. “Recent heavy or binge alcohol drinking was reported in approximately 50% of male firefighters” (Substance Abuse and Mental Health Services Association, p. 6, 2018). That study wasn’t conducted in the direct aftermath of an incident of mass violence, but in regard to the general day to day job. Imagine how that rate might increase in response to a major incident, if there is not an appropriate, swift, specialized, and effective mental health response.

Statement of the Problem and First Responder Overview

For the purpose of this paper, a first responder is anyone with formal training that allows them to respond to disasters and emergencies, either locally or on a global scale. This includes 9-1-1 call-takers and dispatchers, firefighters (both volunteer and paid), Emergency Medical Works (both volunteer and paid), Law Enforcement Officers, and Medical Examiners / Coroners. In each of these disciplines, barriers and stigmas exist which make first responders think that either help is not there, that they are unable to access it, or that their job will be at risk if they do seek help. This leads to first responders being silent when certain calls bother them, which makes

everyone feel like they are the only one impacted, which continues the cycle of silent suffering. Regardless of circumstance, struggling with one's mental health is not a choice. It is not a character flaw and it is not a weakness. First responders deserve to have a better understanding of how to prepare themselves for the stressors and stress symptoms they face on the job. This is true for the everyday stress and it is especially true after incidents of mass violence, like a school shooting.

The 1999 Columbine High School Massacre in Littleton, Colorado is what is commonly thought of as "the first" school shooting. It's what comes to mind for most as their first time hearing of such an incident. It might not have actually been the first school shooting, but it was the first to unfold live on television screens across the world. On April 20th, 1999 shooters Dylan Klebold and Eric Harris murdered 12 students and 1 teacher. Most of those who were killed were in the school's library. The 9-1-1 recordings from the teacher in the library are haunting and the grainy security footage quickly became infamous. As the scene unfolded the world watched as 17-year-old Patrick Ireland saved his own life by flinging his bullet-riddled and semi-paralyzed body out of the second-story library window and onto the roof of a waiting SWAT vehicle. The SWAT Officers reached up to guide his body, his left leg leaving a bloody streak on the window as he fell. Snipers provided coverage while airborne news cameras rolled.

Watching the footage now, one can't help but think about the emotional experience of the police officers on that day. What was it like for them then and what sort of meaning have they made in the years since? SWAT Officer Grant Whittus was the first law enforcement officer to enter Columbine High School and he was the one who found the shooters dead in the library after they took their own lives. He can only make sense of his role that day by teaching other responders how to do better the next time. Columbine survivor student Sean Graves was shot six

times in a staircase and is paralyzed from the waist down. In a recent interview, he praised the first responders that helped him survive. Sean recalled, “It’s because of you that somebody like me survived that day” (Denver, 2019).

The Columbine High School massacre was the deadliest mass shooting in a K-12 school until the 2012 Sandy Hook Elementary School Shooting in Connecticut. Other major school shootings have occurred in the years since such as the 2018 Parkland High School Shooting in Florida and the 2022 Uvalde Elementary School shooting in Texas. Other major Incidents of Mass Violence in recent memory include the 1994 Oklahoma City Bombing, the September 11th 2001 terrorist attacks, the 2013 Boston Marathon Bombing, the 2016 Pulse Nightclub Shooting, and the 2017 Las Vegas Shooting. Each and every time, first responders have shown up in an attempt to calm the chaos, stop catastrophic bleeding, and hopefully save lives. They put their own lives in danger to do so and as the research shows, this can be a part of what can lead to an overwhelming stress response. The responders' emergency response training, emergency medical skills and protocols, and even active shooter training, have culminated in that moment. But what they almost never receive training on is what to do when the call is over. Post-traumatic stress symptoms can start immediately. In the absence of education first responders don’t know to expect them, don’t know what to do when they appear, or how to help themselves return to a baseline level of functioning.

Post-Traumatic Stress Symptoms Spectrum

Post-Traumatic Stress Symptoms a first responder may experience can be thought of as existing on a spectrum. The symptoms can be impacted by the severity or scale of the incident and will always be unique to each person, but the 30 day window post-incident is critical for mental health and emotional wellness. Every effort should be made to support the responder

during this time frame. In the fire service it's commonly said that "the first 5 minutes of the call determine how the entire call will go." The same can be said about emotional wellness post-critical incidents, in regard to that span of time. About this post-trauma time period Doctor Faith Harper states, "trauma puts us in survival mode for those first thirty days…those first thirty days are critical. We need time and space to recover, to process what happened, to find ways to make sense of how we want the world to work and our experience of how life actually unfolds" (Harper, p. 24, 2018). Within the first 30 days after a traumatic event some common stress reactions and their correlated symptoms can be expected. Fortunately, most times these symptoms will resolve on their own as the responder returns to their baseline of functioning.

The author defines a traumatic incident as one that overwhelms an individual's ability to cope with it. This of course means that what is traumatic and what isn't is highly personal and subjective. Two first responders can work side-by-side for an entire traumatic incident, yet both will internalize and make meaning of the event in different ways. Even though it's what they are trained for, first responders are human beings who have human reactions to seeing people hurt or injured. This human reaction, while it can and must be tamped down in the moment so the responder can do their job, ideally would be felt fully when the emergency has passed. But first responders aren't taught how to respond to their own emotions and aren't familiar with their own stress reactions. The emergency service culture as a whole does not support this either. Here is where the problem lies.

Any symptoms the responder experiences for the first few days and the associated first few sleep cycles after a critical incident can be thought of as Post-Traumatic Stress Symptoms. "Experiences that are considered a critical incident stressors include being exposed to physical or psychological threats as an EMS provider. Eighty to 100 percent of EMS personnel reported

being exposed to at least one of the above-mentioned critical incident stressors" (Catalan, p. 8, 2024). Post-Traumatic Stress Symptoms are very common. The author doesn't know of a responder who hasn't experienced these multiple times in their career. She has certainly experienced them herself. One example is when the responder ruminates on the incident. They might be thinking through every detail including their reaction time, response time, and performance on the call to see if there was anything they could have done differently to get a better outcome. The responder might have a loss of appetite or generally have difficulty eating. The responder might dream of the incident for the first night or two, as it makes sense that the unconscious mind will attempt to continue to make sense of the experience that was a shock to their system.

If these Post-Traumatic Stress Symptoms persist or worsen a week or so after the incident, the responder is experiencing what is known as Acute Stress. The full development of PTSD is not a given at this point. There are interventions that could still be used to give the responder what they need to process the event. As a crisis counselor who often works with responders in this 30 day window, a barrier she often sees is that responders didn't know how to relate or even name their emotions or stress responses before the traumatic incident occurs.

The far end of the Post-Traumatic Stress Symptom Spectrum is Post-Traumatic Stress Disorder, a diagnosable mental health disorder. If the responder is still struggling 31 days post-event, a PTSD diagnosis could be warranted and is to be diagnosed by a licensed clinician only. "Post-traumatic stress disorder (PTSD) is defined by DSM-5 as occurring following the experience or witnessing of an event(s) that involved actual or threatened death, serious injury, or sexual violence. Following this experience, an individual experiences (one of five of the following) recurrent, involuntary and intrusive recollections, nightmares, dissociative reactions

(e.g. flashbacks), significant distress or physiological responses after exposure to triggers or reminders of the event, plus: persistent avoidance of reminders or triggers related to the trauma (thoughts or feelings, or people, places, activities); negative alterations in cognitions and mood (dissociative amnesia, negative beliefs about oneself or the world, blame of self or others, negative trauma-related emotions, diminished interest in activities, sense of detachments from others, or restricted affect), and alterations in arousal and reactivity (irritability, self-destructive or reckless behavior, hypervigilance, exaggerated startle response, difficulty concentrating, or sleep disturbance); all leading to a significant symptom-related distress or impairment in functioning" (American Psychiatric Association, p. 271, 2013).

Interestingly, when studying hospital workers (physicians, nurses, and support personnel) who deployed on a hospital ship during Operation Iraqi Freedom, one study found that exposure to the injured and dying was not a predictor of developing post-traumatic stress disorder in the future (Benedek, et al., 2017). . "Perceived threat of harm to self-predicted the subsequent development of PTSD. Rates of depression, PTSD, and health care and mental health care utilization in the deployed group were significantly higher than in non-deployed controls. This study suggested that in a group of experienced military health care workers, the threat of personal harm in the high-stress environment of the combat theater setting was important in predicting illness and health care utilization for care providers returning from a military combat–related deployment" (Benedek, et al., p. 58, 2017). This provides insight into what factors, if present, should cause clinicians to look out for potential PTSD in responders.

In the instance of a school shooting for example, if a responder enters a school before the threat has been neutralized or secured, their sense of fear for their own safety is going to be extreme. So while they are doing their job, they are also in fear for their lives. They're trying to

balance doing their job in this highly stressful and potentially traumatic situation, but they're also thinking of their families and what would happen to them if they were killed. Conversely, if the threat is no longer an issue in the school and then the first responder is tending to the wounded, the way their brain is absorbing and processing that day is understandably different. Exposure to death and dying, especially if it's children, is a risk factor for PTSD in and of itself, but the results from the health care workers in the combat zone provide interesting insight.

Interestingly, much warranted discussion has taken place as to the words used to describe Post-Traumatic Stress Disorder. "An argument has been made that changing the name of the condition to Post- Traumatic Stress Injury (PTSI), and hence removing the word 'disorder', may remove some barriers to seeking diagnosis and treatment" (Wallace, et al., p. 39, 2020). The author agrees that calling Post-Traumatic Stress Disorder "Post-Traumatic Stress Injury" could remove some of the stigma and mystery surrounding it. The author had her own 2012 PTSD diagnosis explained as "an injury to the part of her brain that dealt with stress and fear" and she believes that it was this language that allowed the diagnosis to be more accessible for her and therefore, she was able to engage in recovery faster.

Pre, Peri, and Post Traumatic Factors

The response a first responder experiences after a traumatic incident has largely been written before the incident occurred. This is especially after a major or large-scale incident. So much energy is spent after a traumatic incident but not enough attention is spent on establishing resilient life-style practices in the first responder culture before a traumatic incident occurs. First responders do not do their jobs in a vacuum. They walk into the stations and onto emergency scenes carrying the habits, coping skills, and beliefs about themselves already established. These are called pre-traumatic factors and they include how stress was modeled in the person's home

growing up by their caregivers. Pre-traumatic factors also include any negative coping skills the person has already established such as using alcohol to cope when stress feels overwhelming, and beliefs about what it means to have one's mental health impacted.

The way that someone responds to a trauma is multi-faceted. "Psychological and physical responses to traumatic events (e.g., actual or threatened death or serious injury) vary with the social context of the event, biological and genetic makeup, and past experiences and expectations. These factors interact with the characteristics of the traumatic event (e.g., cause, intensity, duration of exposure, availability of medical and psychosocial support) to produce psychological and behavioral responses that range from resilience to disability" (Benedek, et al., p. 57, 2017).

Peri-traumatic factors come into play when factoring in how long the traumatic incident lasted. Was the call a fatal car accident caused by a drunk driver where the responder was on scene for less than 30 minutes? Or was the incident a school shooting where many children and their teachers were killed where the responder was on scene for an entire day? Peri-traumatic factors also include how quickly resources were available, if they were at all. Additionally, did the responder have healthy coping skills modeled in their station by those around them? Was a Critical Incident Stress Management Team available? Was it effective and run by empathetic, trauma-informed individuals? The post-traumatic factors are those previously discussed. It's critical to understand that when a traumatic incident occurs, especially if it's an incident of mass violence, the responder is not starting from square one, but will be relying on habits and belief systems already established. That doesn't mean that their stress reactions will be written though. It's possible to meet them where they are, help them identify what they are feeling, and walk with them as they process, find stability, and make meaning.

3 Types of Stressors

The stressors first responders experience can be broken down into three categories: day-to-day, infrequent, and unique. The author breaks stressors down this way to help illustrate the associated stress response that could be expected, not to prescribe stress reactions to individuals. The first stressor is the day-to-day stressors. These are stressors that are experienced the most frequently and after a day or week or month or two, there might not be much impact to the mental health load of the responder. These stressors can be shift work, constant adrenaline spikes, frequent sleep disruption, and time away from family. But day-to-day stressors can result in cumulative stress which provides a foundation of stress that can become unmanageable if allowed to build up over the course of someone's career.

The second type of stressor is infrequent and they can result in significant stress reactions from the responder. These incidents are less common, but are ones that result in a lot of time and resources. Some examples are fatal fires or fatal car accidents or calls involving children. These incidents can cause a surge of post-traumatic stress symptoms that will hopefully be met with positive coping skills, tailored and accessible resources, and resilience, which will allow the responder to return to baseline before a disorder could take root. The final type of stressor is unique. These are the (hopefully only) once-in-a-career incidents. Both Mass Casualty Incidents (MCI) and Incidents of Mass Violence (IMV), the focus of this paper, belong in this category. These incidents are the ones that make international news and can understandably result in extreme stress due to their nature.

Mass Casualty Incident (MCI) vs. Incident of Mass Violence (IMV)

Mass Casualty Incidents and Incidents of Mass Violence differ in definition and potential mental health impact on the responders. The reason the incident occurred is what makes the

distinction. An Incident of Mass Violence is always also Mass Casualty Incident but a Mass Casualty Incident is not always an Incident of Mass Violence. An MCI by definition is an emergency event where the number of those injured or impacted outnumbers the number of rescuers available. An IMV has a perpetrator, a person who caused the harm, while an MCI could be caused by a natural disaster. A natural disaster, such as a tornado that causes dozens of injuries and fatalities, would be a MCI but not an IMV. A school shooting where dozens of students and staff are injured and killed is an IMV and also an MCI, but differs in that there is a person to blame who is responsible for the murder and destruction. This "bad guy" factor is the reason for the distinction and potential extreme stress response.

One responder from a recent Incident of Mass Violence, the 2018 murder of 17 students at Marjory Stoneman Douglas High School in Parkland, FL, provides insight into the impact he felt. The Broward County Sheriff's Office Detective humbly shared: "I wish I could tell you that I was the consummate professional, who left there unaffected, and that this was something that you get used to in my line of work and the constant exposure, but this is not, and should not be anything that one gets used to. I am affected. We all are affected" (Straub, p. 14, 2019). May his words provide a jumping off point for stakeholders to understand the need felt by this community.

Conclusion

The author posits that while both MCIs and IMV can result in severe post-traumatic stress reactions, Incidents of Mass Violence have unique qualities that can result in the most extreme, often life-altering, and potentially long-lasting stress reactions for the responders. The addition of the "bad guy" into the equation can cause this. While the first responder is in the midst of the chaos caused, they have the awareness that innocent people were hurt or killed

because someone chose to commit a horrible act. This can add to the injustice and tragedy of the event and therefore, can add to the stress reaction. When the gunman opened fire in the Pulse Nightclub in Orlando in 2016, he would eventually kill 49 people and wound 53. The nightclub was across the street from an Orlando Fire Station. When the firefighters first heard the gunshots, they made sure the front doors were closed, and retreated to safety in the back of the fire house. After a few minutes, they started to hear banging on the front door. Having no idea what was occurring, the responders chose to risk their own lives to act in a way that would enable them to save others. Raising their doors, they found their front ramp strewn with the injured and dying.

In the days following the massacre, the emergency service agencies in Orlando provided a series of Critical Incident Stress Defusings and Debriefings. They also had a plethora of resources and mental health professionals available on an ongoing basis for anyone impacted and as a whole being interested in seeking mental health services was modeled well by their leadership (Straub, 2017). This is an example of a mental health response being done well after an incident of mass violence.

Chapter 2: Review of the Literature

To discuss the impacts of Incidents of Mass Violence, the state of first responder's mental health before such events must be reviewed. Current studies illustrate high rates of disorder and mental injury among this population. "According to the Substance Abuse and Mental Health Services Administration (SAMHSA), roughly 1 in 3 first responders develop Post-Traumatic Stress Disorder (PTSD)" (Substance Abuse and Mental Health Services Association, p. 4, 2018).

This is not a reflection of any sort of personal weakness among these individuals, but rather, speaks to the chronic exposure to trauma that can be a part of the job. If met with a lack of coping skills, a lack of specialized, effective, and available mental health care, and highly stigmatized culture, this chronic exposure to trauma can have catastrophic impacts. "Among current firefighters, rates of post-traumatic stress disorder and depression were 8% and 5% respectively; while 4% reported consumption of more than 42 alcoholic drinks per week. There was a significant positive linear relationship between the number of fatal incidents attended and rates of post-traumatic stress disorder, depression, and heavy drinking" (Spitzer, 2020). In addition to this statistic, one could posit that exchanging the words "fatal incidents" in the above quote with "incidents of mass violence" would prove the same high rates of post-traumatic stress disorder, depression, and heavy drinking, if not higher.

Mental Health Impact

Anxiety and Depression

The general unpredictability of the emergency service can lead to feelings of anxiety for first responders. No one ever knows what sorts of calls are going to come on that day, the specific role that they will be asked to play, the impacts that could be felt. If the responder already was dealing with anxiety earlier in their life, a job in the emergency services can

exacerbate these feelings. “The Health Hazard Evaluation Program reported that 53% of firefighters experienced symptoms of Generalized Anxiety Disorder” (Holland-Winkler, et al., p. 5, 2024). Furthermore, when speaking about responders who’ve specifically responded to any type of critical incident, their rates of depression were significantly higher than the responders who were not exposed to such an event. “Rescue and disaster workers who were exposed to a disaster were significantly more likely to experience depression at 7 and 13 months following the event relative to rescue and disaster workers who were not exposed to a similar event. Specifically, 21.7% of the exposed workers experienced depression, while 12.6% of non-exposed workers experienced similar feelings of depression 13 months after the event” (Holland-Winkler, et al., p. 5, 2024). This shows that feelings of anxiety and depression are directly correlated to being a first responder, yet, there is so often not the education or resources to allow first responders to process these events and return to a healthy baseline.

Sleep Disorders

Career firefighters (those whose full time job it is to be a firefighter vs. volunteer who earn no money for their efforts) work in shifts. The shifts can be divided into day work and night work, but many career first responders (including Emergency Medical Workers and Law Enforcement Officers) work a combination of both in any given week or month. This means that they never have a regular sleep schedule that their body and mind can get used to. Researchers and doctors have long since proven that a lack of consistent deep and restorative sleep can lead to catastrophic issues within the body. So much so that the International Agency for Research on Cancer of the World Health Organization announced that sufficient scientific evidence is available from animal and human studies to label shift work with circadian disruption a “probable” carcinogen (Erren, et al., p. 659, 2010).

Additional studies further highlight this problem. “880 current and retired United States firefighters completed a web-based ISI and 52.7% reported clinically significant insomnia symptoms with 19.2% reporting nightmare problems. 46% of firefighters self-reported their mental health to be a significant factor impacting their sleep disturbance” (Holland-Winkler, et al., p. 5, 2024). This highlights the impact lack of sufficient sleep has on the responders. The addition of the nightmare problem being reported, allows one to understand why responding to incidents of mass violence could cause this issue.

“Studies of dreams after traumatic events have found prominent central images and have led to the suggestion that the powerful central image of a dream can be understood as picturing the dominant emotion or emotional concern of the dreamer” (Hartmann & Brezzler, p. 213, 2008). While having nightmares after a bad call can certainly be disturbing, it can become a starting point to understand the path forward. If the fear of nightmares becomes a fear of sleep, deeper problems can develop. “Identifying fear of sleep as a clinically meaningful construct among first responders might inform early screening and intervention efforts to improve their sleep health and overall well-being” (Hartmann & Brezzler, p. 214, 2008).

Suicide

The author has attended too many suicide funerals of first responders. Additionally, the author will never forget her first, but unfortunately not last, crisis call for a first responder who killed themselves in their station. This is always a tragedy and is always preventable. The first responder community and society as a whole should never forget the haunting facebook post left by Florida Battalion Chief David Dangerfield moments before he took his own life in 2016. *“PTSD for Firefighters is real. If your loved one is experiencing signs, get them help quickly. 27 years of deaths and babies dying in your hands is a memory that you will never get rid off. It*

haunted me daily until now. My love to my crews. Be safe, take care. I love you all."

His body was found with a self-inflicted gunshot wound shortly after. SAMHSA provides shocking statistics that illustrate just how significant this problem is. "Based on findings from a study included in the review—only two studies of suicidality in EMS personnel met the criteria for the review—authors found a lifetime prevalence rate of 28% for feeling life is not worth living, 10.4% for serious suicidal ideation, and 3.1% for a past suicide attempt" (Substance Abuse and Mental Health Services Association, p. 4, 2018). It's really remarkable how many first responders have dealt with suicide ideation, never having talked about it until they found a way to the other side. It might shock the public to know that "both police officers and firefighters are more likely to die by suicide than in the line of duty" (Haymen, et al., 2018). First responder suicides are usually kept very quiet and often, no one outside of the small first responder community who knew them actually knows their real cause of death. It's a tragedy that is preventable, but only if the community as a whole works to decrease stigma and increase the availability of effective, culturally competent resources.

Incidents Compared

This paper aims to compare and contrast the impacts of a variety of infamous incidents, one a Mass Casualty Incident brought on by a natural disaster to establish a baseline and the others, Mass Casualty Incidents that were also an Incident of Mass Violence. Studies do show that the terror attacks can cause Post-Traumatic Stress disorder for first responders specifically. Arriving in the chaos, first responders aim to bring calm, order, and to save lives. This means they are showing up when circumstances are at their most raw and chaotic. This exposure can have detrimental emotional, mental, and spiritual impacts if not meant with adequate resources. "Most epidemiological studies after terror attacks found that the more people are exposed to the

horror of a terror attack the more likely they are to develop PTSD. This was specifically true for those intervening in unsecured crime scenes, those intervening immediately after an attack, and those intervening directly at the crime scene who consequently had greater exposure to disturbing stimuli" (Motreff, et al., p. 148, 2020).

In America

It's important to understand the mental health impacts that can come from any Mass Casualty Incident. This paper will begin here before looking further at Incidents of Mass Violence. Commonly these are incidents that occur due to weather or other natural disasters. Other notable incidents include the 2023 Hawaiian wildfires, 2012's Hurricane Sandy, the tsunami in Indonesia in 2004, the 2011 tsunami and earthquake in Japan, and 1989's San Francisco earthquake. After a traumatic incident, be it a mass casualty incident or an incident of mass violence with a perpetrator, a variety of stress reactions can occur from those who interact with the incident up close. But contrary to some beliefs, post-traumatic stress disorder does not occur all the time, or even most of the time. "Healthy adjustment (resilience) should be expected in most, however, traumatic responses include: distress, worry, disturbed sleep or concentration, alterations in work function, difficulties with interpersonal relationships, increase in substance use, somatization, and depression" (Benedek, et al., p. 56, 2017). One of the most catastrophic natural disasters to occur in the United States came in 2005 and it's impacts are still being felt today.

Hurricane Katrina

At the end of August in 2005, New Orleans was a city divided. With Hurricane Katrina bearing down on the Gulf of Mexico there was both a max exodus of those who hurried to flee and those who refused to go, citing decades of storms successfully weathered. In preparation for

the storm, the Superdome opened for those with medical and special needs, as it was the only structure in the city that could sustain hurricane winds higher than the Category 3. Hurricane Katrina thundered in at a Category 5 hitting the city around 2:30 in the morning on August 29th, 2005. Overnight the roof of the Superdome came apart, dumping rain in on those who were taking shelter. Then the storm turned east, and residents thought they had been mostly spared. But around 9am, the waters from Lake Pontchartrain hit the levees and as history would have it, they catastrophically failed.

Generations of families proceeded to wait for help for days and days, some dying where they stood either from the heat or from the rising water levels they could no longer escape. While 50,000 people at the Superdome were running out of food and water, little girls played double-dutch in the middle of the I-10 freeway with an elderly man dying a few feet away. Temperatures had reached 100 degrees. Children clung to the metal sides of Coast Guard rescue baskets and as they were finally carried skyward, leaving behind any sense of home. Coast Guard pilots are only supposed to fly for 8 hours a day but during Katrina they were flying 16 plus hours a day simply saying “there are no rules anymore.” Some daughters left their mother’s bodies behind, other children stayed in the house with their deceased relatives having no way out of the house and nowhere else to go anyway. Caskets floated up out of the ground, the graves laying bare. First responders did their best, but were not immune to the same conditions that plagued the city. Many lost their own homes, pets, and families. They were then forced to hold this reality in the same one that required them to do their jobs and show up for other people.

A study published by the National Library of Medicine tells us “Hurricane Katrina highlighted both the crucial role of first responders in times of disaster and the resultant stress on them and their families” (Rhodes, et al., p. 3, 2010). The primary objective of this study was to

describe the mental health status and symptoms of first responders in the New Orleans area. A total of 1,382 first responders, including respondents from police, fire, emergency medical services, and city workers, participated in this longitudinal study. The first screening was conducted between 6 and 9 months after Hurricane Katrina and the second round of data collection was conducted 13 to 18 months after the hurricane (Rhodes, et al., p. 3, 2010).

This study measured all of the respondents' levels of traumatic experiences, alcohol use, partner conflict, requests for services, post-traumatic stress, and depression (Rhodes, et al., 2010). First responders reported the following traumatic experiences: 70% witnessed injury or death, 93% witnessed damage to home, 25% witnessed injury to a friend, and 30% reported previous loss or trauma. Data also revealed that at least 10% of the respondents had significant levels of posttraumatic stress symptoms; 25% of the participants reported significant levels of depression; and more than 40% reported increased alcohol use and conflict with a partner (Rhodes, et al., p. 4, 2010).

A statistically significant decrease in the symptoms of posttraumatic stress or depression was not found within 18 months of Hurricane Katrina. Results suggest that the severity of the traumas experienced from both the impact of Hurricane Katrina and the subsequent recovery has important mental health implications for first responders. Reports of symptoms of anxiety or depression should be attended to so as to prevent increasing symptoms that could negatively affect the first responder and his or her family. These findings highlight the importance of not only providing mental health services for first responders but also having adequate plans in place before disasters strike. The first responder impacts after Hurricane Katrina provide an example of what these workers face. While this was not an Incident of Mass Violence, it provides a baseline of understanding regarding the mental health impacts first responders after such a large scale

disaster. Add to those impacts a perpetrator, someone who chose to harm innocent people, and the impacts can be even more far reaching.

Oklahoma City Bombing

In 1995, firefighter Chris Fields became famous for a picture most have seen. The picture is iconic. It brought the entire world to a single moment of tragedy. The picture is Chris in his firefighting gear, wearing a red helmet. In his arms he gently holds the body of 1 year old Baylee Almon. She has on little white socks and blood covering her small body. Chris and Baylee are outside of the Alfred P. Murrah Federal Building in downtown Oklahoma City, Oklahoma. It was April 15, 1995, a little after 9 in the morning. A 5,000 pound fertilizer and fuel oil bomb had just detonated.

As it happened, the Federal Building was four blocks from the Oklahoma City Fire Department and six blocks from the Oklahoma City police department. Police Sergeant John Avera had pulled Baylee from the rubble of the building, and ran looking for help. As Chris arrived on scene, Sergeant thrust Baylee into his arms. If you look at the uncropped version of the famous picture of Chris and Baylee, you'll see two paramedics that are crouched on the ground next to Chris, waiting to begin care on Baylee. The closest intersection was turned into triage and staffed by nurses and physicians from the nearby hospital. All told, 168 people were killed in this act of terrorism, 19 of them were children in the building's day care. 680 people were injured. Half of the building collapsed when the bomb was detonated and the remaining structure was brought to the ground one month later.

On the day of the bombing, Incident Command mandated that every responder attend a Critical Incident Stress Debriefing, which was a decision truly ahead of its time. A church was designated as the Death Notification Center and the National Disaster Medical System Disaster

Mortuary Teams assisted with collection and preservation of remains. FEMA activated 11 Urban Search And Rescue teams that brought 665 rescuers to the site.

181 firefighters who responded to the bombing volunteered for a study that showed important findings as it relates to first responders mental health post-disaster (North, et al., p. 857, 2002). High rates of alcohol disorders were seen among all rescue workers, but interestingly, there were virtually no new cases occurring after the bombing (North, et al., p. 857, 2002). This startling finding means that alcohol disorders or alcohol misuse and overuse were endemic in the firefighters before the disaster. This states that the problem was naturally occurring at high levels which indicates a need for ongoing programs targeting this problem. This is not an Oklahoma City problem, but rather, speaks to the culture of the emergency services which often perpetuates the idea that talking about your problems makes you weak and incapable and that a better alternative is to drink to excess. In Oklahoma City according to this study, more than one-half of the firefighters had a preexisting psychiatric disorder, with alcohol abuse/dependence complicating most (North, et al., p. 859, 2002). Additionally, nearly one-half of the firefighters qualified for a lifetime diagnosis of alcohol abuse/dependence (North, et al., p. 859, 2002).

The majority of responders with any psychiatric disorder after the bombing had preexisting psychopathology (Tucker, et al., p. 560, 2014). An article from Dr. Phoebe Tucker tells us “The impact was felt by survivors (adults and children) of direct exposure as well as first responders and family and friends of victims via indirect exposure. Not surprisingly, in a study of 255 who were directly exposed to the blast, about one-third had a PTSD diagnosis. For those that did develop PTSD, this was associated with more time spent at the bombing site, and more time spent in the pit” (Tucker, et al., p. 560, 2014). This highlights a logistical opportunity when

working in disaster locations for leadership to cycle responders through so each is spending shorter periods of time up close and personal with the tragedy. It also could provide an opportunity for first responders to be met with culturally competent crisis counselors when they are not actively working. This of course assumes that there are 1) enough responders to cycle through at an incident site, which is not the case in smaller or rural departments and 2) that there are those culturally competent crisis counselors nearby and available. Often that is not the case. To this end, "Turner, et al., studied the emergency medical personnel involved in Kings Cross underground railway fire in London (England, 1987) and found that the severity of PTSD symptoms correlated to the degree of exposure to the disaster" (Naushad, et al., p. 643, 2019).

Project Heartland, a five-year counseling program set up to help Oklahomans affected by the bombing, provided services to 363 first responders, according to the program's final report. The Fire Department chaplain said he conducted nearly 80 suicide interventions among firefighters (Witt, 2021). A police officer and an assistant prosecutor died by suicide (Witt, 2021). The divorce rate doubled in the Fire Department and tripled in the Police Department in the years after the Oklahoma City attack, according to Diane Leonard, who coordinated a series of three-day crisis-debriefing sessions set up to help first responders (Witt, 2021).

But overall, firefighters experienced less PTSD than did direct bomb blast survivors. "The prevalence of posttraumatic stress disorder related to the bombing was significantly lower in male rescue workers (13%) than in male victims (23%)" (North, et al., p. 858, 2002). The researchers thought that overall, the resilience seen in firefighters may be related to their career selection, their preparedness and experience, the fewer injuries they suffered, and post-disaster mental health interventions. In terms of the other groups that mobilized for this disaster, instead of being vicariously traumatized, the Disaster Mortuary Teams found purpose in their ability to

give grieving family members something to hold or something to bury, and younger team members described being grateful to be able to learn from the top forensic scientists in the county. Dr. Tucker said "first responders seemed to handle the stresses relatively well, which may be partially due to onsite briefings, use of healthy coping techniques (social support and positive reframing), onsite critical stress management, a strong ambiance and sense of community, positive management style, medical experience, and assumption of a professional role" (Tucker, et al., p. 560, 2014). It's interesting that this doctor states responders were handling the stress relatively well, when suicidal ideations and divorce rates seemed to skyrocket. This incident and the resulting studies provide a glimpse into the impacts that first responders live with after experiencing such a devastating event. Interestingly, an additional study on this group found that "PTSD was most associated with low job satisfaction" (Call & Pfefferbaum, 1999).

Sandy Hook Elementary School Shooting

On the morning of December 14, 2012 a 20-year-old shooter walked into Sandy Hook Elementary School. Using a rifle purchased by his mother, he murdered her right before entering the school. Around 9:35 am, he shot his way through the glass panels next to the locked front doors. The gunshots were heard throughout the school's intercom system which was being used for the morning announcements at that moment. Teachers barricaded their classroom doors, shoved the children into closets and bathroom stalls, and covered them with their bodies. The janitor, Rick Thorne, ran through the hallways alerting anyone who could hear him. At 9:35am the first 9-1-1 was placed. In the background of the calls, you can hear the dispatcher simultaneously talking to the callers altering their colleagues to the scope of the incident and the extra resources needed. It's a remarkable example of 9-1-1 dispatching and it gives a glimpse

into the trauma emergency telecommunicators are exposed to. At 9:36 am, Newtown Police broadcast that there was a shooting taking place. One minute later the Connecticut State Police were dispatched to the scene. 10 minutes after he entered the school, the shooter died by suicide. He'd killed 20 children, mostly first graders, and 6 adults.

More and more emergency resources began to arrive on the scene. One police officer warned a paramedic, who was about to enter the school, that it was "the worst thing you will ever see" (Altimari, 2023). For the Sandy Hook volunteer firefighters, this horror hit close to home. Their station on Riverside Road sat just 300 feet from Sandy Hook Elementary. At the initial dispatch, their Rescue (a fire truck that has rescue tools such as the Jaws of Life and medical equipment on it) responded instantly. The driver, Rob Sibley, had just gotten a call from his wife Barb who'd stopped by the school to drop off something their son, a student there, had forgotten. She arrived exactly one minute after the shooter. Both Barb and Rob's son survived and were physically uninjured. The Sandy Hook volunteer firehouse became a meeting place for the community and then a place where parents could reunite with their children. But as the day went on, that firehouse became the location where some parents were told that their children had been murdered (Altimari, 2023). The firefighters then did what firefighters do, they helped in any way they could. Whether it was holding someone's hand or finding a quiet place for people to grieve, they were as supportive and present as possible. The national news media descended and like "Columbine", "Sandy Hook" became a term now synonymous with violence.

"None of the Sandy Hook firefighters lost a child or family member in the shooting, but that didn't mean they had not experienced their own trauma" said Fire Chief Bill Halstead (Foskett, 2024). This correctly illustrates what a trauma-informed response can look like, and accurately shows what stance leadership should take after an event such as this. Describing the

candlelight vigil that took place a few days later, Bill stated, ““For the Sandy Hook Volunteer Fire Company, when Sunday night came around, they had kind of circled around as a family and realized that they could only get through this together…so we banded together to really help support each other. That night was the largest transfer of grief, and everybody kind of let it go to the next spot so that we weren’t just holding it as a single company” (Foskett, 2024). This powerfully speaks to the significance of community and to the importance of surrounding oneself with people who have experienced something similar. It also speaks to the power of vulnerability, and the support one can receive if they are open about how they are feeling.

10 years after the shooting at Sandy Hook Elementary, many of the 100 police officers who responded to the shooter are still receiving mental health help. Trooper Carlo Guerra remembers the mental health impact the shooting had on him. Him and his partner entered the school as soon as they arrived on scene. Trooper Guerra would eventually find himself inside classroom eight, where his job was to photograph the 15 children who were dead inside the bathroom where they’d tried to hide. Trooper Guerra struggled for years until he was able to use the treatment modality of Eye Movement Desensitization and Reprocessing (EMDR). “Eye Movement Desensitization and Reprocessing therapy is an integrative, client-centered approach that treats problems of daily living based on disturbing life experiences that continue to have a negative impact on a person throughout their lifespan…the benefits of protocol treatment are that it is short-term, effective, accessible, and affordable” (Laliotis, et al., p. 187, 2021).

Connecticut State Police Sergeant William Cario also found EDMR to be life-changing. He ran into Sandy Hook Elementary through the glass panel the shooter had destroyed and was one of the first to arrive at classroom eight. Realizing one boy was still alive, he rushed him to a waiting ambulance but he did not survive. “You can never unsee what you saw that day, but it

[EMDR[has lessened the impact and the flashbacks aren't as intense," Cario said. "I've never heard anyone say that EMDR didn't help them. It makes what we experienced a less significant event" (Altimari, 2023).

It's unacceptable that any first responder would be left to their own devices after responding to an incident like this elementary school shooting or any other incident of mass violence. The Sandy Hook Elementary School Shooting understandably left responders with lifelong memories that they deserve to have help with managing. Luckily, there are responders who are willing to offer their own stories and share the support that worked for them and this is often what helps other first responders feel they too can ask for help. It's important for clinicians and resources to understand that first responders have an understandable hesitancy in engaging in help that isn't coming from other first responders or people familiar with that world.

The September 11, 2001 Terrorist Attacks

The morning of September 11th, 2001 dawned clear in the bustling cities of New York City, Washington D.C., and in the quiet rural town of Shanksville, PA. Americans were going about their daily business and first responders readied for what they assumed would be like any other day, but it would be infamously anything but. At 8:46am Flight 11 crashed into the World Trade Center's North Tower in Lower Manhattan. Many assumed this to be a singular accident and the city's first responders mobilized to respond. While New York City's first responders arrived en masse at the base of the North Tower, they set up a command post on the first floor and prepared to rescue those trapped and extinguish the massive fire.

But at 9:03am Flight 175 crashed into the South Tower, immediately doubling the size of the crisis and killing many instantly. At 9:37am, Flight 77 flew into the Pentagon in Washington D.C., killing all people on board as well as 125 in the building. At 9:59am the South Tower

collapsed, drowning Lower Manhattan in carcinogenic smoke and debris. Two minutes later Flight 93 crashed into the empty field in Shanksville, PA, brought down by the brave passengers before it could reach its intended target, which is assumed to be the White House or Capital Building in Washington, D.C. At 10:28am, the North Tower collapsed, bringing an end to the active terrorism, killing almost 3,000. All survivors scrambled to find their way to safety while the first responders worked amongst the largest Mass Casualty Incident and Incident of Mass Violence the United States of America had ever seen.

The world watched in horror, many seeing the events unfold live. It's impossible to ever fully quantify the effect that witnessing such mass death had on those who saw it happen. Some studies have found the correlated impacts. "The September 11th attacks traumatized many Americans, creating or worsening mental health problems in people across the United States" (Strum, 2023). Understandably, these terrorist attacks caused a seismic shift in people's feelings of safety. Innocuous acts like going to work or getting on an airplane were suddenly potential locations for one to become a victim of a terrorist act.

As it relates to first responders and the PTSD impact, it's critical to realize that affects can be felt years and even decades later. "Four years after 9/11, partial PTSD prevalence among police officers involved in the World Trade Centre rescue and recovery effort was 15.4%" (Motreff, et al., 2023). Due to many factors, including emotional shock and an availability of resources immediately after an incident, PTSD impacts might not be felt right away. We know that it takes time for responders to find a new baseline and sometimes that baseline is less well than the previous. "Some studies show that as many as 42% of first responders experienced PTSD due to the event… a study showed that police responders who suffered from PTSD in 2003–2007 were still experiencing it in 2011–2012. (Strum, 2023).

A comprehensive study aimed to find the association between post-traumatic stress disorder and mortality among responders and civilians following the September 11th, 2001 disaster. For this study, participants were asked their relevant demographics, including their smoking history, education level, or if they had any pre-9/11 medical conditions. The participants were asked the yes or no question of if they had any pre-9/11 mental health conditions such as depression or anxiety, excluding PTSD. Participants were included for the study if they had been actively involved in rescue work either at the city in New York City or at the debris site in Staten Island for at least one shift between September 11th, 2001 and June 30th, 2002.

"6689 participants (10.8%) reported PTSD at baseline (responders: 2702 [9.5%]...During 13 years of mortality follow-up, a total of 2,349 deaths occurred among 63,666 enrollees. Of the 230 external-cause deaths, there 81 suicides [35.2%], 58 accidental poisonings [25.2%] were most common. Among 487 with cardiovascular-associated deaths, the majority of individuals (362 [74.3%]) died of ischemic heart diseases" (Giesinger, et al., p. 5, 2020). Interestingly, "responders with baseline PTSD had a 63% higher risk of all-cause mortality (AHR, 1.63; 95% CI, 1.36-1.95) and a 2-fold increase in the risk of cardiovascular mortality" (Giesinger, et al., p. 5, 2020). This shows that responding to an Incident of Mass Violence and being impacted to the point of receiving a Post Traumatic Stress Disorder diagnosis directly relates to all-cause mortality. The September 11th terrorist attacks were truly a turning point in our country. The loss of thousands of civilians and hundreds of first responders in such a violent and senseless way caused mental health impacts that will continue to endure.

Global Snapshot

Paris, France Terrorist Attacks

Around 9pm on the night of Friday, November 13, 2005 in Paris, France, a series of coordinated terrorist attacks began that would eventually kill 130 people. Suicide bombers struck outside a soccer stadium, other terrorists opened fire on restaurant patrons, and a third group took hundreds of people hostage in the Bataclan theatre. The Islamic State of Iraq and the Levant (ISIL) later claimed responsibility, saying the attacks were in response to French airstrikes in Syria. To that end, they said the Bataclan Theatre had been targeted because the owners were Jewish. 90 people were killed there that night. 45 medical teams, untold numbers of firefighters, and countless police officers responded to the attacks, dividing up between the sites. Medical examiners arrived to begin cataloging the bodies and Detectives gathered crime scene evidence. Images of knocked over bloodied tables and chairs, fleeing patrons, and scrambling first responders began to replay on the news.

8-12 months after the attacks, first responders who had responded during the night and/or the immediate aftermath of the terror attacks had the possibility of answering a web-based study about any impacts felt. In the end 663 first responders participated. This study was well done as it controlled for previous life trauma and previous mental health struggles, although it didn't delineate between types of difficult life events or types of mental health struggles. Participants were asked if they'd had any previous psychological interventions, if they'd received any previous training to deal with such an event, and if they'd been warned about the potential psychological impacts of responding to such an event. Interestingly, "59.1% of firefighters, 60.4% of police officers, and 30.9% of emergency medical workers said they had been warned of potential psychological impacts" (Motreff, et al., p. 146, 2020). Overall, this study is critically

important to the great conversation because of the specificity of the questions as it relates to the actions first responders took the night of the attack. This can provide important insight into what actions can lead to expected correlated psychological impacts.

For example, responders reported that "88.6% saw dead bodies, 91.1% touched dead or injured people, 65.0% heard gunshots, 68.3% provided psychosocial support to victims, 52.8% declared they had been shocked by the distress of victims, 47.3% had phoned to victims or relatives of victims, and 57.1% provided psychological support to victims" (Motreff, et al., p. 146, 2020). The results are important as it relates to traumatic impact. Very interestingly, gender was not affiliated with higher rates of PTSD, but only having a high school diploma vs. a higher degree and having a higher degree of social isolation was affiliated with higher rates of PTSD. "Prevalence of PTSD in our sample went from 3.4% among firefighters to 9.5% among police officers and prevalence of partial PTSD from 10.4% among health professionals to 23.2% among police officers" (Motreff, et al., p. 143, 2020).

It's interesting to consider why police officer rates of PTSD might be higher. The author doesn't believe this correlates with any mental health differences in the type of person who becomes a police officer vs. firefighter, but rather in a logistical difference in their method of transportation and therefore timing of their arrival on scene. Police officers spend their on shift time in their patrol cars, driving around in their coverage area, responding to calls as they come in. So when a call does come in, they are already in their cars and are able to quickly start moving to the incident location. Additionally, police officers in more densely populated areas have a smaller patrol area, sometimes only a few blocks, which allows them to be on the scene of an emergency almost instantly. Firefighters by contrast spend their time in their station. When an emergency is reported and the call comes in, each person has to hurry to their lockers from

wherever they are in the building, quickly get their gear on, and come together to respond. The author posits that due to the logistical circumstances police officers are simply arriving on the scene of these types of incidents faster than anyone else and therefore, are exposed to the trauma when it is at its most recent, raw, and unsecured. Police officers are also the ones directly dealing with the perpetrators of events like these, so their exposure and interaction with the person at fault is highest. This also means that their lives are extremely in danger when they first arrive. As stated previously, this factor has been reported from those working in combat theaters of war, and does correlate with higher instances of post-traumatic stress disorder.

Conclusion

Incidents of Mass Violence have unique factors that can negatively and significantly impact the mental health of the first responders who respond to and mitigate them. The frequency of these types of incidents in the United States and abroad has allowed a breadth of research to be conducted on this population to determine the types of mental health impacts experienced. Perhaps even more importantly, the research conducted has allowed clinicians, doctors, and others in the human services profession to understand what specific types of exposure is correlated with what type of mental and physical health impacts. But the research cannot stop here. First responders and the mental health impacts they endure must be at the forefront of lawmakers, politicians, mental health professionals, and the larger society, so they can be met with understanding, acceptance, and most of all, effective and culturally competent care instead of judgment after such incidents take place.

Chapter 3: Implications, Recommendations, and Conclusions

First responders are prepared to face unknown challenges every time they show up for work and respond to an emergency call. They are prepared for these challenges through years of training, practice, and skill repetition. But they are often not prepared for the emotional and mental impacts they could face after a call, regardless of the scale of the incident. When the worst case scenario does occur and an incident of mass violence comes to their town, the culture that preceded the event was not trauma informed and is often highly stigmatized toward mental health conversations. Historically, the emergency services has not created a culture where talking about mental health is acceptable. Those in leadership positions were taught this way by their predecessors. They then perpetuate the toxic cycle until they are willing to recognize their role in it, break the pattern, and lead by example.

Practical Implications and Relevant Research

In one research study, the researchers focused on reintegrating Iraq and Afghanistan war veterans into society (Grill, et al., p. 1304, 2019). The researchers found that a cohort-based social framework, encouraged in their curriculum, provided an integrative support system that reduced hyperarousal and made use of "veteranism," or comradery, and trust (Grill, et al., p. 1304, 2019). The author finds this approach refreshing and believes it could be very helpful if adapted to be relevant in a first responder setting. The approach used with the combat veterans importantly does not pathologize a veteran's reintegration back into civilian life after experiencing war, but instead focuses on resiliency and education to practice positive adaptation in a non-clinical setting (Grill, et al., p. 1305, p, 1305, 2019). In other words, "this approach doesn't treat someone as psychologically unhealthy" (Grill, et al., p. 1305, 2019). The author believes this is a critical facet of a successful resiliency program. Labels like Post-Traumatic

Stress Disorder can be validating when someone has been struggling significantly and wondering why. The author herself found that label to be a relief when it was finally given to her many years ago. But over-pathologizing normal reactions to abnormal situations (like an incident of mass violence) or prescribing reactions to traumatic incidents (by telling a responder how they will feel) only further alienates the individual, can increase stigma, and ultimately decrease help seeking behavior. This can also increase the use of negative coping skills, in the absence of offering an explanation as to why negative coping skills do work, but only in the short term. Approaching negative coping skills this way is trauma-informed and provides a space for a non-judgmental conversation to take place.

Negative coping skills are prevalent in our society and in the microcosm that is the emergency services. “We use negative coping skills because they work…but only for a while. Then that negative coping skill becomes something else to overcome” (Rothrock, p. 101, 2022). The culture of the emergency services has historically been one that encourages responders keeping their feelings to themselves. This is why alcohol use has been found to be endemic study after study. The author truly has lost count of how many first responders have told her they drink themselves to sleep every night just so they can sleep and say that it’s what all first responders in their station do to “take care of themselves.” Decreasing the use of negative coping skills can only happen if the reasons why someone is coping with the stress that way are discussed and if they can learn to introduce a more positive coping skill in its place.

Moral Injury

Tom Voss, an infantry scout in a sniper platoon in the United States Army, came home from combat with an injury he couldn’t see. He called it a “moral injury.” As he put it, “Moral injury is a wound to the soul. It happens when you participate in or witness things that transgress

your deepest beliefs in right and wrong…bearing witness to the moral indifference of others, or the premeditation of violence is enough to warp your understanding of morality and make you question the moral character of everyone you meet" (Voss & Nguyen, p. 72, 2019). The concept of moral injury is an important piece of resilience and recovery when it comes to the first responder community.

Put yourself in the position of the first responders who walked into the Sandy Hook Elementary school. Based on the 9-1-1 calls they knew that there was a shooting, that's all. Someone needed to follow the path the murderer took, take stock of the situation, and act quickly. Resolution of these events can only come by law enforcement and medical professionals arriving on scene, taking control, and treating the wounded. This requires human beings to walk into a scenario that some have described as "the depths of hell" and try to make sense out of the chaos. This involves them being up close and personal with the most tragic of tragedies. Seeing the children hurt in the way they were, seeing the bodies of the adults who tried to save the children's lives, seeing the horror on the faces of the survivors, the author doubts anyone would be the same. This is what can cause a moral injury, when a person is forced to witness people being hurt and they are powerless to stop it. Veteran Tom Voss found a meditation practice to be key in returning to himself. Further studies could be done to determine what individuals have found as a remedy for moral injury.

Self-Compassion

Self-compassion was interestingly studied as it relates to a potential protective factor that could bolster first responders ability to be resilient in response to work-related stressors. "Greater self-compassion and compassionate love both independently predicted less depersonalization. Greater self-compassion predicted less general psychological distress, post-traumatic stress,

secondary traumatic stress, and emotional exhaustion, as well as greater resilience and life satisfaction" (McDonald, et al., p. 659, 2021). This study provides a fascinating look at what simply having compassion for oneself can do. The concept of life satisfaction is an important factor as well. "Life satisfaction is the ability to be content with life circumstances and have a sense of peace no matter what occurs in life (Bartels, 2015)...research has shown that a greater level of life satisfaction is associated with a higher level of resilience to stress, higher self-esteem, lower burnout, and overall better physical and mental health (Lala et al., 2016; Maslach & Leiter, 2016; Tas & Iskender, 2018)" (Garza, 2021).

First responders do not do their jobs in a vacuum. The stress impacts affect not only them, but their families as well. One study identified family members as a potential mental health resource for first responders. While the author doesn't believe this will make a situation better in every case, more education is always a positive thing. "We need more accessible routes to crisis intervention to ensure first responder resilience and wellbeing, so they may continue to function in the service of public safety. By training family members in psychological first aid, we may strengthen existing social support for first responders, providing more options for, and potentially breaking down stigma associated with help-seeking" (O'Toole, et al., p. 4, 2022).

Resources and Barriers

Receiving effective and specialized mental health training should not be seen as a luxury nor should it be thought of as a last resort when it comes to budgeting. All first responders must train on ways to recognize when their health and well-being are being adversely affected by the traumatic events they witness. This training should not be seen as a focus one will take after a critical incident, or a skill one should be expected to hone independent of their work

environment. Lastly, first responders are not weak or unfit for the job for needing help. They are simply human beings who deserve support after witnessing what they are called to witness.

The importance of and need for tailored resources is finally being recognized and understood. The National Volunteer Fire Council (NVFC) further supports the importance of tailored interventions. “In one of their surveys (NVFC, 2008), more than 75% of firefighters (*n* = 849) indicated greater willingness to utilize a program that was tailored to their needs compared to a national suicide hotline” (Jones, et al., p. 44, 2020). Additionally, the mental health and resilience for first responders organization On the Job and Off (founded by the author) offers the First Responder Assistance Program (F.R.A.P.). F.R.A.P. provides first responders a clear and immediate path to culturally competent clinical care at no charge to the responder. Rather than funneling responders to a traditional Employee Assistance Program that is not set up for them, F.R.A.P. provides highly-effective and highly-specialized care. The program is set up so responders will have their intake screening within 24 hours after requesting services. The average time between that intake screening and their first session is within 36 hours or sooner, if the responder is in or approaching crisis. On average responders in F.R.A.P. report that it takes them only 3-4 sessions for them to see noticeable progress. The author posits this is due to the speed in which they are able to see a clinician and the highly specialized care they receive from them. The F.R.A.P clinicians are expecting first responder clients, they have been trained through On the Job and Off’s ‘Gearing Up’ program to understand their training, stressors, and calls, and are prepared to emotionally engage with the stories they have to share. Additionally, FRAP usage is confidential. On the Job and Off reports usage hours to the county or state paying for responders to have access to the program, but no identifying information. The author posits this is another reason the program is so successful. Responders do not have to be concerned that

their leadership will be made aware that they are seeking services. In a group counseling setting or crisis defusing / debriefing, sharing one's experiences can be powerful. But when it comes to seeking mental health help, this degree of confidentiality is important. The lack of it can become a real barrier for first responders.

It's not as simple as blindly encouraging first responders to seek mental health support. Stakeholders must understand what is preventing them from doing so. If mental health professionals truly want to meet first responders where they are, all efforts need to be made to understand what keeps them from accessing care. One study found five such reasons. "Barriers included five subthemes: 1) Can't show weakness, 2) Fear of confidentiality breach, 3) Negative experience with Therapist, 4) Lack of access and availability, and 5) Family burden" (Jones et al., p. 43, 2020). Each of those facets can be addressed by providing trauma-informed education, culturally competent confidential clinical care, and by including the responders family in the treatment plan.

Resilience

The word resilience has become popular in the last several years and has become a buzzword in the self-help and mental health communities. The concept of resilience can be hard to quantify and can be confused with "never letting things get you down" or "having a stiff upper lip." Real resilience, however, is not about numbing away or ignoring our stress reactions but has to do with a concerted effort to know oneself better to be able to meet stressors with intentional action instead of dysregulated reaction. It's about being a formidable yet flexible force that can evolve with change. In short, resilience is a series of choices made both in the moment and post-adversity, choices bolstered by a deep resolve that life is still worth living to its fullest extent and

that in the end, one is simply bigger than anything bad that can happen to them. Being resilient is a skill first responders can hone like anything else they've learned how to do.

Dr. Kate Rocklein Kemplin provided a study of resilience and suicide in the military's Special Operations Forces community. Her study includes members of US Army Green Berets, US Army Rangers, Navy SEALS, and Air Force Pararescuemen ("PJs") (Rockelin Kemplin, et al., 2019). Dr. Rocklein Kemplin provides an additional perspective, arguing that since resilience is hard to define and hard to control for, "it cannot responsibly be offered as a solution to mitigating post-traumatic stress disorder nor suicide…from a clinical perspective, overemphasis on resilience could be denying resources needed to investigate the multifaceted natures of Post-Traumatic Stress Disorder and suicide" (Rockelin Kemplin, et al., p. 57, 2019). The author agrees that vague "resilience factors" should not be relied on to bolster an individual or community after an incident of mass violence. Simply instructing first responders to "be more resilient" is ineffective, inappropriate, and can cause a feeling of shame. However, first responders are looking for a way forward after a major incident, even in the face of the most tragic and personal ones. They want to find a way through.

The author argues that "be more resilient" isn't an undefinable platitude. Resilience happens when a person decides to metaphorically walk through the hardest parts of what has happened to them or around them, not by shying away or dismissing any reactions or realities, because they want to know what kind of life is on the other side. They hope for better, for a day without the nightmares and triggers. Ideally, they will have company from friends, family, and mental health professionals while on their way through. Instead of a prescriptive and unhelpful "be more resilient," first responders could most benefit from mental health professionals who discuss the "how." What does it look like to actually practice resilience in our daily lives? Being

resilient is a destination no one can ever fully arrive at. The desire to be more flexible in response to life's adversities is a journey we are all always walking on.

Recommendations for Further Research

It is critical to remember that when the media forgets about a major incident and moves on, the impacted first responders and the community as a whole does not. As noted by the previous studies, specifically about the responders from Hurricane Katrina, responders may still need support years after a major incident occurs. "Studies of firefighters have generally found rates of PTSD ranging from 13% to 18% 1–4 years following large-scale response events…the investigators found that a high level of hostility and a low level of self-efficacy accounted for 42% of the variance in posttraumatic stress symptoms after 2 years" (Benedek, et al., p. 59, 2017). Further research could include what sort of resources could be put in place prior to a major incident occurring that helps first responders come back to baseline through resilience factors.

Additionally, a study could be done on brand new firefighters as they enter their city's fire academy. An entire resilience program could be integrated into their initial training, including training on emotional intelligence, post-traumatic stress symptoms, and how to integrate healthy coping skills into their daily lives. Then as the firefighters progress through their career, they will have follow up studies to learn how their resilience factors are faring when coupled with the stressors of the job. This will allow data to be gathered about what can be done before the job-related stressors pile up, before an incident of mass violence, and before the negative coping skills have a chance to become habitual. It would be a challenge to control for previous life factors that could impact one's resilience outside of what they are taught in the program, but it would be an important study nonetheless.

Conclusion

First responders can have a range of reactions after they respond to an incident of mass violence. These responses can range from subclinical reactions like temporary sleep disturbances and altered concentration. They can also look like behavioral changes in the high stress environment like an increase in negative coping skills (Benedek, et al., p. 69, 2017). But for most responders most of the time, these reactions are transient and resolve, allowing the responder to return to their baseline. Efforts by all stakeholders should be made to ensure after an incident of mass violence first responders are met with understanding and relevant resources. A paramedic of twenty years stated, “Just like a cockroach, sometimes they [mental health problems] only come out at night or when it’s dark. If you can expose them to the light, they scurry and they leave. Similarly, I think if you can expose some of this [mental health problems] and bring it to the surface, then you can remove some of the darkness” (Jones, et al., p. 47, 2020).

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