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An Examination of Suicidal Ideation and PTSD Among First Responders

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An Examination of Suicidal Ideation and PTSD Among First Responders

First responders, including police officers, firefighters, and emergency medical personnel, are a group of people crucial to society's function. They aid with automobile accidents, fires, medical emergencies, and a variety of other situations that a typical civilian is not trained for, nor are they equipped to handle. First responders have a significant role in saving and protecting civilians; they uphold the law, rescue those in need, and are often the first to respond to and aid in recovery when disaster strikes. Though first responders provide emergency services daily, it does not come without consequences. First responders have a number of job-related duties and responsibilities that can be physically demanding. These include chasing perpetrators, carrying others, administering cardiopulmonary resuscitation (CPR), and running into burning buildings. However, many do not recognize the potential psychological toll that the duties of a first responder can also have on an individual.

Highly stressful, dangerous, and potentially life-threatening situations are all experiences that first responders endure as a part of their job-related duties. Shootings, running into a collapsing building, trying to save someone's life, and witnessing individuals die on gurneys, are all situations that can be faced by a first responder. These experiences have the potential to cause a first responder great distress and can lead to several mental health concerns. Mental health is not commonly discussed due to the stigma, negative attitudes or beliefs, and misconceptions associated with mental illness. Frequent experiences with, or exposures to, life-threatening situations, high-stress environments, and stigma, are all factors that first responders experience, putting them at an increased risk for suicidal ideation and posttraumatic stress disorder.

The Exploration of Trauma Among First Responders

Trauma is a term that is commonly used but has a variety of different meanings depending on the context. Many situations can be labeled as “traumatic,” but when one refers to Posttraumatic Stress Disorder, the “trauma” has a very specific definition. Posttraumatic stress disorder (PTSD) is a unique diagnosis in that it is the only diagnosis that requires the symptoms being experienced by an individual to be a direct result of the trauma(s) that they have endured. According to the American Psychiatric Association (2022) *Diagnostic and Statistical Manual of Mental Disorders* (5th ed. Text-revised; DSM-5-tr), a Criterion A trauma must include exposure to an actual or threatened death, injury, or sexual violence. This can occur directly witnessing the event, learning the trauma that happened to a loved one, or the individual experiencing repeated or “extreme exposure” to aversive details of a traumatic event. As a result of the experienced trauma, the DSM-V-tr criteria also require that the person experience intrusive symptoms relating to the traumatic event (DSM–5 -tr; American Psychiatric Association, 2022). These may include recurrent distressing memories, dreams, or dissociative reactions relating to traumatic events, commonly known as flashbacks or night terrors.

Avoidance of the stimuli an individual associates with the traumatic event(s) is also a symptom of PTSD and must occur after the trauma has been endured. This can be evidenced by the individual attempting to avoid distressing memories or external reminders that can cause memories of the trauma or thoughts and emotions that relate to the traumatic event to resurface. The symptom of avoidance is one reason that PTSD can be a challenging disorder to treat clinically. Treatment often means processing the trauma(s), which may mean discussing its impact on the person’s view of themselves or the world. This avoidance can make it challenging to reassociate new meanings with external cues, such as specific places, people, or things that

could help them process the event; this can reinforce negative views the individual has and can also be associated with PTSD and recovery (Sheynin et al., 2017). Individuals who engaged in more frequent avoidant behaviors were more likely to engage in increased avoidant behaviors making them less likely to recover from PTSD compared to those who engaged in exposure to external cues. Avoidance and alterations in an individual's mood are common symptoms of PTSD.

Similar to one's attempt to avoid external cues that can cause them to recall their traumatic experience, they may also engage in problematic thought patterns, experience negative alterations in their mood, and experience hyperarousal symptoms. According to the American Psychiatric Association (2022) *Diagnostic and Statistical Manual of Mental Disorders* (5th ed. Text-revised; DSM-5-tr), these are the last two symptom categories that must be met for an individual to meet a diagnosis of PTSD. Negative alterations in mood or thought patterns can be seen by an inability to recall important aspects of the event, "exaggerated" negative beliefs about oneself, or the world, and distorted cognitions regarding the traumatic event(s). This can lead to an individual having difficulty experiencing positive emotions, diminished interests, self-blame, and feeling detached from others (5th ed., text-revised; DSM–5 -tr; American Psychiatric Association, 2022). Often, people will have negative associations with events that caused them sadness or some negative emotion. But the symptoms of PTSD are often more intense and directly result from the traumatic event(s). Hyperarousal, as evidenced by hypervigilance, or having an exaggerated startle response, angry outbursts, difficulty concentrating, and disturbance in sleep patterns are also symptoms one must have to meet DSM-5-tr criteria for a PTSD diagnosis.

In addition to these criteria, to meet a diagnosis of PTSD, these symptoms must be present for more than one month, and must cause significant impairment in their social, occupational, or interpersonal functioning. These symptoms also cannot be attributable to another mental health condition. Once the criterion for PTSD is understood, a person must know how this may appear in clinical, social, and other settings. It should also be noted that Complex Posttraumatic Stress Disorder, or C-PTSD, is defined by all of the same symptom clusters of PTSD; however, it also includes three additional clusters of symptoms - difficulty with emotion regulation, negative views of oneself, and difficulty with interpersonal relationships (Giourou et al., 2018).

It is essential to understand that a person with a diagnosis of PTSD, as well as how they present and their symptoms manifest, may differ from person to person. Some may experience a symptom more intensely, and some not at all. Because so many symptoms can be present in someone diagnosed with PTSD, it can be easy to misdiagnose or diagnose other disorders besides PTSD when the symptoms may be solely related to their PTSD diagnosis. Though various symptoms can be experienced in individuals with PTSD, the symptoms can be broken down into four primary "clusters." These include re-experiencing symptoms related to the traumatic event(s), engaging in avoidance behaviors, numbing responsiveness, and hyperarousal symptoms.

When one thinks of first responders, one typically thinks of the firefighter who rescues cats out of trees, the police who give tickets to speeding people, and emergency medical personnel who respond and transport the ill. What does not always come to mind are the risks these individuals take. Running into burning buildings, deciding whom to save in seconds, responding to overdoses, witnessing people dying or those who have already died, and

continuously risking their lives for others are all everyday experiences a part of the job. Many of these experiences could fall under the classification of Criterion A trauma. Given the nature of a first responder's job and the frequency of exposure to these experiences, first responders are at an increased risk for developing PTSD (Geronazzo-Alman et al., 2017).

The exposure to violent, life-threatening, and traumatic visual material puts first responders at an increased risk of developing PTSD. Idiographic severity is more strongly related to PTSD symptoms experienced by first responders than nomothetic severity (Geronazzo-Alman et al., 2017). First responders who reported a critical incident individually as more severe were more likely to experience symptoms consistent with PTSD compared to those who rated the critical incident as less severe (Geronazzo-Alman et al., 2017). This indicates that not only does the frequency in which a first responder experiences a traumatic event matter but the severity level in which the individual perceives the event is also associated with developing PTSD symptoms. Though idiographic severity is more strongly related to PTSD symptoms, nomothetic severity was also associated with PTSD symptoms (Geronazzo-Alman et al., 2017). Specifically, the four critical events rated highest in nomothetic severity are "making a mistake that injures/kills a coworker, being present when a coworker was killed intentionally or accidentally, and being taken hostage" (Geronazzo-Alman et al., 2017, p. 139). This suggests that first responders exposed to the events, as mentioned earlier, are more likely to experience symptoms of PTSD compared to other work-related events.

In 2020, the prevalence rates of PTSD among law enforcement were higher than the international average for PTSD (Brewin et al., 2022). Exposure to traumatic events and distressing visual material such as graphic forensic images or online child sexual exploitation, which are a part of the job, can affect an officer's mental health. Brewin and colleagues (2022)

found that the PTSD and Complex PTSD (C-PTSD) rates among police officers could be predicted by how much exposure one had to traumatic events and distressing material and how long they have served in the police force. This indicates that the longer the individual has served as an officer, the more they have witnessed traumatic and distressing material, increasing the likelihood that they would experience post-traumatic stress symptoms or PTSD. Rank was also a predicting factor associated with PTSD, where officers who have a higher rank status are positively associated with PTSD, possibly a result of the length of service and experience required to move up the rank (Brewin et al., 2022). Exposure to humiliating behaviors and sexual harassment were also positively associated with PTSD. When compared to the international average for the diagnosis of PTSD, 20.6 percent of officers were found to meet the criteria for a PTSD diagnosis, whereas the international average was reported to be 14.2 percent (Brewin et al., 2022). These findings indicate that police officers, because of their job-related duties, are at an increased risk for PTSD.

Like police officers, firefighters also had a higher rate of PTSD diagnosis or CPTSD. Firefighters with high levels of service-related trauma were more at risk for meeting the criteria for PTSD (Langtry et al., 2020). When looking at CPTSD, firefighters with service-related and personal traumas unrelated to service were positively associated (Langtry et al., 2021). Those who were lower in rank were also found to be more likely to be diagnosed with PTSD, suggesting that the duties of a lower-ranking firefighter may be associated with experiencing more traumatic events, higher levels of stress, or more frequent exposure. Perceived threat is also associated with PTSD; the more severe the person perceives the threat, the more likely they are to experience PTSD/CPTSD symptoms (Pinto et al., 2015).

Emergency medical service personnel (EMS) are first responders whose job-related duties include providing medical services to the ill, wounded, or dying. This job is often fast-paced, unpredictable and can often expose EMS personnel to several “stressors” as a part of the job. There are two categories that these stressors can be divided into (Donnelly & Sibert, 2009). These include “chronic stressors” and “critical incident” stressors.

Chronic stressors are defined as problems, conflicts, and threats that one may face in daily life. In contrast, critical incident stressors are defined as a situation that an EMS provider endures that can produce strong emotional reactions making it difficult for them to tend to their job (Donnelly & Siebert, 2009). As a result of the strong emotional reactions, an EMS provider’s ability to tend to their job-related duties or to perform job responsibilities can be impacted. Examples of situations or encounters that often produce strong emotional reactions include encountering individuals with severe or life-threatening circumstances, the loss of a patient after a prolonged rescue effort, or being exposed to situations that may elicit profound emotional reactions, such as the death of an infant or child (Donnelly & Siebert, 2009). Other 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 (Donnelly & Siebert, 2009). Exposure to these “critical incidents” can put EMS personnel at risk for experiencing symptoms consistent with PTSD. Being exposed to dangerous and, or life-threatening situations themselves, as well as being exposed often to individuals who are severely ill, wounded, or in critical condition, can be considered a traumatic experience and can take a toll on an EMS personnel’s mental health, putting them at a higher risk for the development of mental health conditions, specifically, PTSD compared to the general population. Additionally,

ambulance workers were found to have higher rates of PTSD symptoms compared to the general population (Petrie et al., 2018). Compared to the general population, with the rate of PTSD being 1.3-2.9 percent, ambulance workers diagnosed with PTSD or experiencing PTSD-related symptoms were found to be 11% (Petrie et al., 2018).

The Exploration of Suicidal Ideation Among First Responders

When an individual has been through a traumatic event(s), it is not uncommon for the events to have some impact on one's mental health. Suicidal ideation, or thoughts of killing oneself, can be a thought that occurs in many. Those who have endured trauma(s) are no different. According to Thomas Joiner (2009), there are three experiences that, when in combination, can lead an individual to have thoughts of suicide. These include Perceived Burdensomeness, Thwarted Belongingness, and Acquired Capacity. Perceived Burdensomeness is the thought or belief that others would be better off without them or that others would be better off if the individual were dead. Essentially, the individual believes that their death would be worth more than their life in other people's eyes. According to Joiner, Thwarted Belongingness is a psychologically painful state where one experiences a low sense of belonging and feels alienated or detached from others (Joiner, 2009). These individuals often feel alone or as if they do not belong or fit in with a group of people. This can be expressed as feeling they do not belong within their family, a group setting, or a community. The third experience, according to Joiner, that, when combined with previous experiences, can lead an individual to suicidality is Acquired Capacity. Acquired Capacity is the experience of repeatedly being exposed to life-threatening events or repeated experience or exposure to dangerous objects such as firearms (Joiner, 2009). Behind this thought is humans' natural inclination towards self-preservation (Joiner, 2009).

When an individual attempts to take their own life, it is challenging because they are battling against the innate need for self-preservation (Joiner, 2009). However, if the individual has had more experience with dangerous, life-threatening events or experience with dangerous objects, they can become desensitized to this threat (Milner et al., 2017). The more experience one has in fighting this instinct, the higher their acquired capacity is; this also means their instinct for self-preservation decreases. Due to this decrease, the desensitization to threatening stimuli, and having more experience, the individual no longer has as strong of an innate need for self-preservation, making taking their own life more feasible.

The accessibility to means for suicide also may be associated with an increased risk of suicide attempt and completion. The greater the accessibility to lethal means during their work, such as firearms, medications, etc., and the more familiar the individual is with means, the more at risk they are for making a suicide attempt, and the more at risk they are for dying by suicide (Milner et al., 2017). Joiner's theory suggests that any single one of these experiences, Perceived Burdensomeness, Thwarted Belongingness, or Acquired Capacity, is sufficient to ensure that the desire to end their pain or suffering will lead to an attempt. Instead, Joiner (2009) argues that when all three of these experiences exist together for an individual, they are more at risk for making a suicide attempt or completion. Because first responders are more familiar with lethal means as a part of their job responsibilities, they are at an increased risk for suicide ideation.

First responders are at an increased risk of experiencing various mental health concerns, including suicidal ideation (Substance Abuse and Mental Health Services Administration, 2018). When looking at Emergency Medical Personnel specifically, the Substance Abuse and Mental Health Services Administration (SAMHSA) found that twenty-eight percent of responding first responders were found to feel that life is not worth living, 10.4 percent experienced intense

suicidal ideation, and 3.1 percent were found to have a past suicide attempt. When looking at Firefighters, SAMHSA found that 46.8 percent of a sample of 1,027 firefighters were found to experience suicidal ideation, 19.2 percent had a plan regarding their suicide, and 15.5 percent were found to have attempted. This is compared to the lifetime rates of the general U.S. population, where 13.9 percent have experienced suicidal ideation, 3.9 percent have planned, and 4.6 percent have attempted. Those with a current diagnosis of PTSD were found to have a 5.2 percent higher likelihood of attempting suicide. Individuals with both EMS and firefighting duties were found to be six times as likely to attempt suicide compared to those whose duties are firefighting alone (Substance Abuse and Mental Health Services Administration, 2018). Police Officers were found to be at an increased risk for suicidal ideation as well (Substance Abuse and Mental Health Services Administration, 2018). Police Officers and Safety Officers were found to be 54% more likely to die by suicide compared to other occupational workers (Violanti & Steege, 2021). Overall, being a first responder is associated with a greater risk of experiencing suicidal ideation, attempting suicide, or dying by suicide.

Posttraumatic stress disorder can be distressing for those who experience it. It can significantly impair one's interpersonal functioning, social functioning, occupational functioning, or a combination of the three (DSM–5 -tr; American Psychiatric Association, 2022). A positive correlation has been found between PTSD and suicidal ideation (Johnson et al., 2021). Individuals who have a PTSD diagnosis are more likely to experience suicidal ideation (Shor et al., 2021). Posttraumatic stress disorder symptom severity was found to predict suicidal ideation, with individuals who experience more severe symptoms of PTSD experiencing higher levels of suicidal ideation compared to those who experience less severe PTSD symptoms experiencing lower levels of suicidal ideation (Johnson et al., 2021). The more intense and

frequent the symptoms of PTSD are, the longer and more frequent the duration of the suicidal ideations.

The symptoms of PTSD can lead to various other mental health symptoms, including anxiety, paralyzing fear, stress, pain, etc. It is common for individuals with PTSD to avoid stimuli, including people, objects, or places, that remind them of a trauma they have endured, also known as “experiential avoidance” or “psychological inflexibility (DeBeer et al., 2017. P 629). Experiential avoidance is encompassed by a larger construct known as Psychological Inflexibility (DeBeer et al., 2017). Psychological inflexibility is when an individual wants to avoid undesired, distressing internal stimuli that precede their values' influence in guiding their behavior. This characteristic is associated with many mental health diagnoses, including PTSD, and puts an individual at an increased risk of experiencing suicidal ideation (DeBeer et al., 2017). Because individuals with PTSD are at a greater risk for experiencing psychological inflexibility, they are more like to experience suicidal ideation as a means to escape the psychological pain that is being experienced (DeBeer et al., 2017).

Not only does being psychologically inflexible put individuals at risk for PTSD, but specific symptoms that can be separated into clusters can place individuals at a higher risk for suicidal ideation. There are many characteristics and symptoms of PTSD that can make an individual more at risk for experiencing suicidal ideation. Panagioti (2017) breaks down PTSD symptoms into three main clusters. These include a hyperarousal symptom cluster, a re-experiencing symptoms cluster, and an avoidance/numbing symptom cluster, all associated with individuals at risk for suicidal ideation (Panagitoi, 2017). The hyperarousal cluster of PTSD includes anger, reckless or destructive behaviors, exaggerated startle response, sleep disturbance, and difficulty concentrating (DSM–5 -tr; American Psychiatric Association, 2022). Individuals

with sleep disturbance, symptoms of the hyperarousal symptom cluster, symptoms of PTSD, or a PTSD diagnosis were more likely to endorse suicidal ideation than those with no sleep disturbance and PTSD (Shor et al., 2021). This suggests that the symptoms in the hyper-arousal cluster, specifically sleep disturbances, are strongly associated with suicidal ideation in individuals with PTSD. When accounting for depressive symptoms, the hyperarousal cluster symptoms significantly predict suicidal ideation (Panagioti et al., 2017). Joiner's theory of suicide suggests that individuals who engage in dangerous or risky behaviors increase the individual's "acquired capacity," placing them at an increased risk for suicidal ideation and attempt (Joiner, 2009). The more severe the symptoms within the hyperarousal cluster are, the more at risk the individual is to experience suicidal ideation and attempts.

When an individual has difficulty sleeping, feeling on edge, or responding to external stimuli by experiencing anxiety or distress, their mental health can be impacted. The numbing cluster includes the avoidance of stimuli that may bring back distressing memories of the trauma and negative alterations in mood (DSM–5 -tr; American Psychiatric Association, 2022). According to the American Psychiatric Association, "numbing" symptoms can be explained by an inability to experience positive emotions, diminished interest in activities, and feeling detached from others. Boffa and colleagues (2021) found that both the re-experiencing and avoidance/numbing clusters were positively associated with suicidal ideation. The re-experiencing cluster predicted past suicide attempts, while the re-experiencing cluster and the avoidance/numbing cluster predicted suicidal ideation (Boffa et al., 2021). Those with more severe symptoms relating to the numbing and re-experiencing cluster were more likely to experience suicidal ideation than those with symptoms in these clusters being experienced to a lesser severity.

Diminished interest in activities one once enjoyed, an inability to experience positive emotions, and feelings of being detached from others are symptoms of the “numbing” cluster and can be isolating (Boffa et al., 2021). The individual may no longer participate in group activities or avoid being in group situations, further disconnecting them from friends and loved ones. These symptoms can cause significant social impairment, leading to feelings of loneliness and not belonging (Boffa et al., 2021). Thwarted Belongingness, or the feeling of not belonging or feeling alienated, puts individuals at an increased risk of experiencing thoughts of suicide (Joiner, 2009). Individuals with PTSD often experience feelings of guilt and shame, in addition to feeling detached from others, further increasing their levels of thwarted belongingness and increasing the likelihood of experiencing thoughts of suicide (Martin et al., 2021).

Individuals who have experienced trauma and are diagnosed with PTSD often encounter feelings of guilt and shame surrounding the traumatic experience (Bryan et al., 2013). According to Bannister and colleagues (2017), guilt and shame can be both a feeling and a cognition. Internalized shame and guilt-related distress are related to PTSD symptom severity, with higher levels of internalized shame and guilt-related distress associated with more severe symptoms of PTSD (Bannister et al., 2017). When an individual experiences a traumatic event, they can ruminate on the “what if” thoughts, causing them to feel guilty over the perceived outcome. Thoughts such as “what if I did this,” “if I called sooner,” etc., can come to mind, causing the individual to believe that the outcome could have been changed depending on what the person did (Sobel, A. A., Resick, P. A., & Rabalais, A. E. (2009). This can be a “stuck point” or a belief about oneself or the world that is often negative, impacting how the individual perceives and processes the traumatic event(s). This can further exacerbate guilt surrounding the traumatic event and cause significant distress (Sobel, A. A., Resick, P. A., & Rabalais, A. E. (2009). Guilt

can be experienced as guilt cognitions, distress, global guilt, or overall guilt. Not only is guilt associated with PTSD, but trauma-related guilt cognitions, distress, and global guilt can mediate a relationship between PTSD and suicidal ideation (Tripp & McDevitt-Murphy, 2016). This means that though suicidal ideation and PTSD are associated, guilt related to the traumatic experience can increase the likelihood that the individual with PTSD will experience suicidal ideation.

Guilt, shame, self-blame, and alienation are all symptoms that those with PTSD can experience. These experiences can be internalized, making the individuals more likely to have an increase in thwarted belongingness and perceived burdensomeness (Martin et al., 2021). Perceived burdensomeness, or the belief that one's existence is a burden on their family, friends, or others, which is often a distorted view, can cause an individual to pull away from their loved ones, further isolating themselves (Joiner, 2009). Individuals who suffer from PTSD symptoms such as self-blame or alienation have the potential to predispose individuals to heightened levels of perceived burdensomeness (Matin et al., 2021). When an individual believes that they are a burden on others or that their mental health symptoms cause them to become a burden, they are more likely to experience a lower sense of belonging (Bell et al., 2018). This increase in thwarted belongingness, combined with increased levels of perceived burdensomeness, increases the likelihood that the individual will have thoughts about suicide (Martin et al., 2021).

The Global Suicide Risk Index measures overall suicidal ideation, plans, and attempts. Greater PTSD symptoms severity was significantly related to higher levels of global suicide risk (Barlett et al., 2019). This suggests that the higher the level of severity of the symptoms of PTSD experienced, the more frequent the suicidal ideation and the more at risk for developing a plan and attempting suicide the individual is. Because of the nature of the job of first responders, and

their responsibilities, they are at an increased risk for PTSD and suicidal ideation (Vigil et al., 2021). When compared to the general population, firefighters were found to have an increased risk for more severe PTSD symptomology, which predicted lifetime suicidal ideation and suicide attempt (Boffa et al., 2017). This suggests that for firefighters, the more severe the PTSD symptom experienced, the more likely they are to experience suicidal ideation and the more likely they are to make a suicide attempt. Trauma is not the only experience that one endures that can put an individual, specifically a first responder, more at risk of having thoughts of suicide.

The American Foundation for Suicide Prevention identifies several risk factors for suicidal ideation. This includes exposure to another's suicide attempt/completion or graphic accounts of a suicide attempt or completion. Exposure to suicide has been found to profoundly impact an individual's personal life, professional life, and mental health (Lopes de Lyra et al., 2021). The impact can be profound, and responding to a suicide attempt or completion can be incredibly distressing. The experience of being exposed to suicide in some way (i.e., death, attempt, graphic descriptions) is common among many first responders.

Law enforcement officers are one of many personnel that are considered when discussing "first responders." About 95% of officers responded to at least one suicide death or attempted, with, on average, law enforcement personnel responding to about thirty suicides throughout their career (Cerel et al., 2019). About one in five law enforcement officers reported responding to a scene that bothered them or that they had nightmares about, and about three-fourths knew someone personally who had died by suicide (Cerel et al., 2019). According to Cerel and colleagues, occupational exposure to suicide, specifically experiencing persistent thoughts regarding the scene and an inability to escape the thoughts relating to the scene, put law enforcement officers at an increased risk for symptoms of depression, anxiety, PTSD, and

suicidal ideation. Another study by Kimbrel and colleagues (2016) found that cumulative exposure to suicide attempts and suicide deaths were positively correlated with suicidal behavior in firefighters. Because emergency medical service personnel (EMS) must respond to accidents, crises, and life and threatening situations, they are one of many first responders that arrive on the scene following a suicide attempt. About 98% of EMS personnel reported being exposed to suicide as a part of their occupation, with nearly half reporting this experience as "distressing" (Witczack-Bloszyk, 2022, p. 10). Emergency medical service personnel are more likely to die from suicide compared to the general population (vigil et al., 2020).

Dispositional capacity refers to the relevant factors driven primarily by genetics, including low sensitivity to pain and blood. As a result, some evidence suggests that a portion of the capability for suicide is genetic (Smith et al., 2021). Higher levels of dispositional capacity combined with symptoms consistent with PTSD put first responders at a greater risk for suicidal ideation (Ringer et al., 2021). Guilt is also found to be a contributor to maladaptive feelings of disgust or repulsion with oneself, which are accompanied by a desire to withdraw and distance from oneself, a symptom that those with PTSD may experience; this has been seen in individuals who have PTSD and have died by suicide (Ringer et al., 2021).

Working for a prolonged period to save a patient, making calls on when to quit resuscitation efforts, and search and rescue missions can be difficult for many. Often, these calls are made in a matter of seconds, not leaving the personnel much time to weigh the options of whom to save, increasing the risk of feeling guilty following making judgment calls that result in death or individuals ending up in critical condition (Ringer et al., 2021). These situations are all situations that first responders experience, and can leave a first responder feeling guilty, seeing themselves through a negative lens, and can lead to internalization and self-blame. This can put

the first responder, especially one with PTSD, at higher risk for suicidal ideation, suicidal attempt, or death by suicide (Ringer et. al., 2021).

The Impact of COVID-19 on Suicidal Ideation and PTSD in First Responders

When assessing for risk of suicide attempt or suicidal ideation, a mental health provider examines an individual's risk factors and protective factors. Risk factors can be described as an event or situation that puts the person at a greater risk for suicidal ideation, suicide attempt, or death by suicide (American Foundation for Suicide Prevention, n.d). Protective factors, according to the American Foundation for Suicide Prevention, are factors that reduce the risk of the individual engaging in suicidal thoughts or making attempts. As a result of the COVID-19 Pandemic, it is expected by the World Health Organization (WHO) that the Coronavirus will impact an individual's protective and risk factors. Wasserman and colleagues (2020) anticipate that protective factors will be reduced, and risk factors will increase. Some of the protective factors that have been seen to decrease during the COVID-19 pandemic are a reduction in mental health services, not prioritizing mental health, decreased emphasis on prevention programs, and limited opportunities for community experiences (Wasserman. D., Iosue. M., Wuestefeld. A., & Carli. V., 2020). Some of the risk factors that have been found to increase during the pandemic for many include, but are not limited to, financial stressors, isolation, lack of social support, relational conflicts, grief, and interpersonal violence or abuse (Wasserman. D., Iosue. M., Wuestefeld. A., & Carli. V., 2020). The COVID-19 pandemic was an unpredictable time and exposed many to potentially traumatic experiences like being placed on life support, witnessing individuals die, and being exposed through media sources to graphic images such as "mass graves" (Wasserman. D., Iosue. M., Wuestefeld. A., & Carli. V., 2020). Not only did civilians

see first-hand what was happening in person or via news channels, but first responders were actively exposed to the effects of the Coronavirus on people, and their loved ones.

A study that looked at the impact of exposure to the Coronavirus found that exposed first responders reported significantly greater alcohol use severity than first responders who were not COVID-19 exposed (Vujanovic, Lebeaut, & Leonard. 2021). Medical professionals, in particular, nurses, doctors, hospital staff, and EMS personnel that were exposed to COVID-19, were found to be at a higher risk of suicidal ideation compared to those who were not exposed (Jahan, Ullah, & Griffith, 2020). The reasons stated by these individuals as to why they were experiencing suicidal ideation were reported to be the fact that they were infected, work-related stress, the understaffing with the number of people coming in sick, and fear concerning the COVID-19 infection and the unknown (Jahan, Ullah, & Griffith, 2020). Some other reasons that were not as common were fear of transmitting to others, witnessing deaths, and being unable to save those infected with COVID-19.

Though the research is limited and relatively new, the research coming out suggests that COVID-19 has a positive correlation with first responders, specifically medical personnel developing PTSD (Lai et al., 2020). The more exposure first responders had to the Coronavirus, either by having it or working on the front lines, the more likely they were to develop PTSD. The first responders were on the frontline, trying to save people from dying and witnessing many die regardless of their continued efforts. Large amounts of people dying can be taxing on an individual, especially if they have to quarantine away from their support systems (i.e., protective factors) (Lai et al., 2020). However, COVID-19 also poses a unique challenge due to the limited resources across the nation for personal protective equipment. These unique challenges pose an

increased risk for first responders in regard to the development of PTSD and place first responders at an increased risk for experiencing thoughts of suicide.

Furthermore, a study that looked at first responders and COVID-19 Occupational Related Stress found that the CROS score was most strongly correlated with the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5), as well as the Patient Health Questionnaire (PHQ-9). This indicates that first responders who reported higher levels of CROS reported experiencing more symptoms of PTSD and depression (Hendrickson et al., 2021). Hendrickson and colleagues (2021) also found that CROS score totals were significantly associated with the Generalized Anxiety Disorder-7 (GAD-7) measure and suicidal thoughts, indicating that the more stress the COVID-19 pandemic placed on the job duties and experiences of first responders, the more likely they were to experience anxiety and have thoughts of suicide.

PTSD symptom outcomes were found to be most strongly associated with adverse occupational outcomes (Hendrickson et al., 2021). Adverse occupational outcomes include lack of protection (personal protective equipment), lack of support, increased occupational demands, and emotional impact of work-related duties. First responders who reported a lack of support from leadership, increased workloads including longer scheduled hours and being called in on days off due to staffing shortage, as well as witnessing many in critical condition and die increased the likelihood of an individual developing symptoms of mental health issues, particularly, PTSD (Hendrickson et al., 2021). Hendrickson and colleagues (2021) also found that PTSD symptoms severity was associated with thoughts of self-harm and suicide.

The Exploration of Stigma and Mental Healthcare

Stigma is a pervasive problem in society, particularly regarding mental health. Despite growing awareness and significant progress made in recent years, there is still a barrier created

by the stigmatization of mental health for individuals who experiences symptoms of mental illness. This stigma can be broken down into three domains: public stigma, self-stigma, and institutional stigma (Borenstein, 2020).

Public stigma is defined as negative attitudes that others have regarding mental illness. Often, individuals with mental illness are aware of the public's views of mental health concerns, making it difficult for them to feel comfortable reaching out for support or seeking treatment (Corrigan & Watson, 2002). As a result, the more prominent and severe the social stigma surrounding mental health is, the less likely it is for an individual to seek mental health treatment. Self-stigma refers to negative attitudes toward themselves regarding their mental illness, including internalized shame (Borenstein, 2020). Self-stigma is partially related to the internalization of the stigma and stereotypes the general public has regarding mental health, resulting in the individual feeling ashamed for struggling with their mental health (Corrigan & Watson, 2002). Institutional stigma is more complex and operates systematically; it can include policies that may leave individuals without or with limited opportunities for mental healthcare or policies that discriminate against individuals with specific mental health difficulties.

Stigma can have several harmful effects on individuals who suffer from mental health concerns. This includes reducing the likelihood that they will seek treatment, stay in treatment, experience difficulties in the workplace/social settings, or experience increased psychiatric symptoms (Oexle et al., 2018). Kaffara and Kock (2016) found that individuals reported feeling embarrassed if their friends or coworkers knew they were seeking mental health services.

Pluralistic Ignorance is another phenomenon that can lead to increased stigma (Karaffa & Kock, 2015). Pluralistic Ignorance is an experience where group members reject beliefs, feelings, or behaviors even if the group accepts it. When an individual has mental illness, they may

believe they are the only one, especially in a group that reports not believing in mental illness (Karaffa & Kock, 2015). Because of this, they often suffer in silence, not reaching out to those in the group, and often not seeking treatment.

Stigma within the workplace can also create a barrier to individuals who would like to seek out mental health services. Workplace hostility, lower satisfaction towards leaders and coworkers, and lower satisfaction towards one's work are all significant predictors of the greater stigma associated with seeking mental health services (Yamawaki et al., 2016). Suppose an individual is in a place where mentally and emotionally, they are struggling and need mental health services but are also working in an environment that stigmatizes mental health treatment. In that case, the individual is less likely to seek services (Yamawaki, et al., 2016). Moreover, as opposed to physical health concerns, the stigma associated with mental health creates a barrier for those seeking treatment, making it difficult to ask for time off for mental health appointments.

Not only is mental illness generally stigmatized amongst the public, but certain professions are more likely to have an increased and more severe stigma regarding mental health. This includes, though not limited to, police, firefighters, doctors, nurses, medical personnel, and EMT's. Among first responders, four common themes associated with stigma were reported as creating a barrier to seeking treatment (Jones, Agud and McSweeny, 2020). These include the concept of not showing "weakness," fearing that their confidentiality will be breached, having experienced "negative interactions" with mental health providers, and feeling like a burden to their family and friends (Jones, Agud, and McSweeny, 2020).

The culture of first responders is one of strength and resiliency, and the attitude toward mental health concerns is one of personal weakness and safety risk (Jones, Agud, and

McSweeny, 2020). The expectation is for first responders to provide no evidence of a mental health struggle, as they have to be brave, responsible, and attentive. In the culture of a first responder, strength is valued; anyone seen as being less than strong may be viewed as a safety risk or as not competent (Jones, Agud, and McSweeny, 2020). First responders also tend to be apprehensive about seeking mental health providers. When they do, they are hesitant when disclosing their mental health concerns due to the fear of being seen as “weak” or “incompetent” (Jones, Agud, and McSweeny, 2020).

Negative experiences with mental health providers also impact first responders seeking treatment. First responders who sought treatment but had a negative experience, such as feeling the provider could not understand their trauma, discounted the culture of being a first responder, or the nature of the job as a first responder, were more likely to stop treatment. They were also less likely to seek treatment later on. Jones and colleagues (2020) also found that first responders were concerned that they would burden their families with their traumas relating to their job and felt they needed to protect their families from the knowledge of the trauma(s). “If this happened to me and I feel this bad about this, I do not want to put that on them” (Jones, Agud, and McSweeny, 2020, p. 49). Lastly, if first responders reached out to their loved ones and perceived the interaction as negative or judgmental or found the experience invalidating, they were less likely to seek support from loved ones later (Jones, Agud, and McSweeny, 2020). This reinforces the notion that a first responder has to be “strong”. The connotation that often comes from this experience is that one should not speak about their struggle or keep it to themselves.

Additionally, a lack of mental health knowledge and awareness makes it difficult for first responders to seek treatment. When asked for reasons as to why first responders do not talk about mental health or seek treatment, they reported that they are unsure of what services are

available or where to go. They also reported a lack of knowledge regarding how treatment could alleviate symptoms and the job's impact on the individual, so they do not talk about or seek treatment (Jones, Agud, & McSweeny, 2020). This continued ignorance regarding mental health services and treatment and not talking about the experiences of mental health concerns further reinforces the stigma surrounding mental health (Jones, Agud, & McSweeny, 2020). By not having programs to educate and bring awareness of what mental health is, what services are offered, and how they can help someone, the stigma is further perpetuated, and the cycle of the stigma continues. When mental health, mental health treatment, and mental illness are discussed, it helps spread awareness and clear up misconceptions about mental illness. This can help bring awareness and decrease the stigma (American Foundation for Suicide Prevention, n.d). However, when one’s mental health goes untreated, it can have vast repercussions for the individual including being at an increased risk for unemployment, substance abuse, homelessness, suicide, and poor quality of life (American Foundation for Suicide Prevention, n.d).

The stigma regarding mental illness not only creates barriers for individuals to seek out treatment but also increases their risk for suicidal ideation (Wastler et al., 2020). Negative stereotypes from the public surrounding mental illness can be internalized by some, creating a self-stigmatization of their mental health difficulties (Oexle et al., 2017). This self-stigma has been found to significantly impact an individual’s mental health, explicitly increasing thoughts of suicidality (Oexle et al., 2017). Self-stigmatization can have lasting effects on one’s mental health, making it more likely for individuals to experience suicidal ideation. Oxele and colleagues (2017) found that at a two-year follow-up, individuals were more likely to have suicidal ideation relating to their self-stigma and how they view themselves about their mental health than those with lower self-stigma. Internalized stigma and a low sense of belonging were

also statistically significant with suicidal ideation experienced. The stigma surrounding the symptoms and the diagnosis of PTSD are also associated with suicidal ideation. Those who have more severe levels of stigma surrounding a PTSD diagnosis, the more likely the individual will experience suicidal ideation (Wang et al., 2019). The Stigmatization of mental health treatment seeking, and mental illness can significantly affect individuals who experience mental illness. Professions, where the stigma associated with mental health treatment and illness is higher, are more likely to see an increase in the severity of mental health symptoms experienced, a decrease in treatment-seeking, and an increase in suicidal ideation.

Discussion

The job of a first responder is one of the most challenging and demanding professions, as they are frequently exposed to traumatic events and are often in life-threatening situations. While these individuals are trained to handle crises, the mental and emotional toll of their workplace and the duties that come with the job put them at an increased risk for a range of mental health challenges, including experiencing symptoms of post-traumatic stress disorder (PTSD) and suicidal ideation. The repeated exposure to dangerous, risky, life-threatening situations and repeated exposure to death and individuals in critical condition can be emotionally taxing. This puts first responders at an increased risk of developing Posttraumatic Stress Disorder compared to the civilian population. Specifically, these experiences have the potential to be considered a criterion A trauma, the first criterion that must be met in order for an individual to have a PTSD diagnosis. Not only are they regularly exposed to traumatic and distressing events as a part of their job, but they are also working in highly stressful situations where they are making difficult, sometimes lifesaving, or life-threatening decisions without much time to process what is happening around them. A first responder's environment is fast-paced and does not allow much

time between calls, leaving them to respond to call after call without having time to process the outcomes of the initial calls. Not only can the duties and responsibilities of a first responder be traumatic, challenging, and stressful, all of which can have an impact on one's mental health, but the stigma surrounding mental health and mental illness causes individuals to be less likely to seek out treatment for their mental health concerns, or, less likely to stay in treatment. Not seeking treatment or staying in treatment can further exacerbate individuals' symptoms of mental illness. For the general public, mental health is heavily stigmatized. However, within the culture of first responders, mental health is even more stigmatized and has even more negative attitudes and beliefs surrounding those who seek treatment.

The culture of first responders is that of being strong. Often, seeking mental health treatment is seen as showing "weakness" and incompetence. Coworkers may see the individual as a "safety risk" while on the job and view their coworkers differently. This can be an isolating experience for the first responder suffering in silence; this often results in a belief that they cannot seek treatment due to a fear of judgment. Not only does this belief lead to a decrease in mental health treatment seeking, but first responders also are unlikely to speak about their struggles with their loved ones as a means of protection. This further exacerbates a feeling of isolation and reinforces that the first responders must struggle alone. Perceived burdensomeness and thwarted belongingness are experienced by many first responders, relating to the stigma and the pluralistic ignorance that is ingrained in the culture of a first responder. It is due to these reasons, combined with having more familiarity with lethal means and more exposure to suicide attempts and completion, that also puts first responders at an increased risk for suicidal ideation, suicide attempts, and death by suicide.

Recognizing these issues has led to creating various organizations and programs that are now available to assist first responders with their mental health. Some programs exist within the individual's retrospective department, while non-profit organizations create others. Many of these services focus on providing support for first responders and psychoeducation regarding mental health and spreading awareness. The National Suicide Prevention Lifeline is a service available to anyone experiencing a mental health crisis, including first responders, by providing confidential support. The National Alliance on Mental Illness is another organization that offers psychoeducation and support programs for first responders and their families. The International Association of Fire Fighters offers resources and support through peer support programs and behavioral health services to firefighters and paramedics. At the same time, Badge of Life focuses on providing psychoeducation, training, and advocacy for police officers, specifically surrounding the topic of suicide. Other nonprofit organizations, such as the Code Green Campaign, specifically on raising awareness regarding mental health issues, specifically among first responders, while also providing resources and support to those in need. Additionally, there has been legislation passed in some states, as well as within local governments, to provide workers' compensation for first responders who have experienced PTSD or other mental health conditions as a result of their job-related duties. While these are just a few examples of many possible resources now available to first responders and their families, it is also vital that they know these various resources.

Though there has been more of a push to spread awareness and provide resources for first responders and their mental health, much work still needs to be done. Resources available without knowledge of the possible resources are redundant. Continued efforts in spreading awareness must occur at a local, state, and federal level and within departments. It is simply not

enough for the resources to be available. The resources must also be discussed, and first responders and their families must be aware that these resources exist. Continued discussion surrounding mental health in general and providing psychoeducation is also an area of awareness that needs to occur.

Other strategies that programs can implement to improve the usage of these resources include reducing the stigma surrounding mental health. While discussing mental health and psychoeducation can help reduce stigma, more must be done. Discussion specifically around Posttraumatic Stress Disorder, symptoms of PTSD, and trauma reactions needs to occur. Discussion surrounding risk factors related to suicidality and the increased risk for individuals with PTSD to experience suicidal ideation needs to happen while providing specific education and normalization surrounding suicidality. Programs should also promote a culture of whole health and wellness, including mental health, by providing psychoeducation about the importance of mental health, self-care, and peer support. Peer support programs can also effectively reduce stigma and increase the usage of mental health services, as they provide a safe and supportive environment for first responders to discuss their mental health concerns with colleagues who understand their experiences.

Another crucial strategy is for departments and organizations to improve access to these resources while collaborating with department leadership. Ensuring that mental health services are available, affordable, and flexible with time availability is vital as first responders often have limited availability due to their work schedules. Mental health programs should collaborate with department leaders to foster a culture of support and awareness around mental health issues. This can include providing training and resources for supervisors and managers to support their employees' mental health better. Confidentiality is also crucial, as many first responders are

hesitant to reach out or seek mental health treatment because they fear their confidentiality will be broken. Furthermore, departments and organizations can promote the availability of mental health resources through multiple channels, such as social media, email, department newsletters, etc., to increase and encourage the usage of these resources.

Having mental health services specifically tailored to the unique needs and experiences of first responders and having mental health providers trained in trauma treatment and suicidality is critical. As mentioned, the culture and experience of being a first responder differ from that of a civilian. A specialized program that addresses the specific stressors and challenges these individuals face, such as repeated exposure to trauma can be beneficial. Lastly, the validation and normalization of utilizing mental health treatment can help reduce stigma, and emphasizing this as a sign of strengths and resilience rather than weakness can make first responders more likely to seek resources and treatment while also helping to break the stigma associated with mental health treatment seeking. By implementing these strategies, programs can improve the usage of mental health services among first responders and help to ensure that these individuals receive the support they need to maintain their mental health and well-being.

References

American Foundation for Suicidal Prevention (n.d) Risk factors, protective factors, and warning signs. https://afsp.org/risk-factors-protective-factors-and-warning-signs.

Bannister, J. A., Colvonen, P. J., Angkaw, A. C., & Norman, S. B. (2019). Differential relationships of guilt and shame on posttraumatic stress disorder among veterans. Psychological Trauma: Theory, Research, Practice, and Policy, 11(1), 35–42. https://doi-org.libproxy.eku.edu/10.1037/tra0000392

Bartlett, B. A., Jardin, C., Martin, C., Tran, J. K., Buser, S., Anestis, M. D., & Vujanovic, A. A. (2018). Posttraumatic Stress and Suicidality Among Firefighters: The Moderating Role of Distress Tolerance. Cognitive Therapy & Research, 42(4), 483–496. https://doi-org.libproxy.eku.edu/10.1007/s10608-018-9892-y

Bell, C. M., Ridley, J. A., Overholser, J. C., Young, K., Athey, A., Lehmann, J., & Phillips, K. (2018). The role of perceived burden and social support in suicide and depression. Suicide and Life-Threatening Behavior, 48(1), 87–94. https://doi-org.libproxy.eku.edu/10.1111/sltb.12327

Boffa, J., Stanley, I., Hom, M., Norr, A., Joiner, T., Schmidt, N . (2017) PTSD symptoms and suicidal thoughts and behaviors among firefighters, Journal of Psychiatric Research, Volume 84, 2017, Pages 277-283, ISSN 0022-3956, https://doi.org/10.1016/j.jpsychires.2016.10.014.

Bogucki, O. E., & Sawchuk, C. N. (2022). Cognitive processing therapy for posttraumatic stress disorder due to COVID-19-related traumas: A case study. Psychological Services. https://doi-org.libproxy.eku.edu/10.1037/ser0000630

Borenstein, J. (2020) Stigma, Prejudice and Discrimination Against People with Mental Illness. https://www.psychiatry.org/patients-families/stigma-and-discrimination

Brewin, C. R., Miller, J. K., Soffia, M., Peart, A., & Burchell, B. (2022). Posttraumatic stress disorder and complex posttraumatic stress disorder in UK police officers. Psychological Medicine, 52(7), 1287-1295. doi:https://doi.org/10.1017/S0033291720003025

Bryan, C. J., Ray-Sannerud, B., Morrow, C. E., & Etienne, N. (2013). Guilt is more strongly associated with suicidal ideation among military per- sonnel with direct combat exposure. Journal of Affective Disorders, 148(1), 37–41. https://doi.org/10.1016/j.jad.2012.11.044

Calabrese. J., Prescott. M., Tamburrino. M., Liberzon. I., Slembarski. R., Goldmann. E., Shirley. E., Fine. T., Goto. T., Wilson. K., Ganocy. S., Chan. P., Serrano. M., Sizemore. J., Galea. S., (2011). PTSD Comorbidity and Suicidal Ideation Associated With PTSD Within the Ohio Army National Guard. *The Journal of Clinical Psychology.* 72(8):1072-1078

Cerel, J., Jones, B., Brown, M., Weisenhorn, D. A., & Patel, K. (2019). Suicide exposure in law enforcement officers. Suicide and Life-Threatening Behavior, 49(5), 1281–1289. https://doi-org.libproxy.eku.edu/10.1111/sltb.12516

DeBeer, B. B., Meyer, E. C., Kimbrel, N. A., Kittel, J. A., Gulliver, S. B., & Morissette, S. B (2018). Psychological Inflexibility Predicts of Suicidal Ideation Over Time in Veterans of the Conflicts in Iraq and Afghanistan. Suicide & Life-Threatening Behavior, 48(6), 627–641. https://doi-org.libproxy.eku.edu/10.1111/sltb.12388

Donnelly E, Siebert D, Donnelly, E., & Siebert, D. (2009). Occupational risk factors in the emergency medical services. Prehospital & Disaster Medicine, 24(5), 422–429. https://doi-org.libproxy.eku.edu/10.1017/s1049023x00007251

Foster, S., Carvallo, M., Lee, J., & Bernier, I. (2021). Honor and Seeking Mental Health Services: The Roles of Stigma and Reputation Concerns. Journal of Cross-Cultural Psychology, 52(2), 178–183. https://doi-org.libproxy.eku.edu/10.1177/0022022120982070

Giourou E, Skokou M, Andrew SP, Alexopoulou K, Gourzis P, Jelastopulu E. (2018) Complex posttraumatic stress disorder: The need to consolidate a distinct clinical syndrome or to reevaluate features of psychiatric disorders following interpersonal trauma? *World J Psychiatry*;8(1):12-19. doi: 10.5498/wjp.v8.i1.12. PMID: 29568727; PMCID: PMC5862650.

Hack, S. M., Muralidharan, A., Brown, C. H., Drapalski, A. L., & Lucksted, A. A. (2020). Stigma and discrimination as correlates of mental health treatment engagement among adults with serious mental illness. Psychiatric Rehabilitation Journal, 43(2), 106–110. https://doi-org.libproxy.eku.edu/10.1037/prj0000385

Holliday, R. , Holder, N., Monteith, L. & Surís, A. (2018). Decreases in Suicide Cognitions After Cognitive Processing Therapy Among Veterans With Posttraumatic Stress Disorder Due to Military Sexual Trauma. The Journal of Nervous and Mental Disease, 206 (7), 575-578. doi: 10.1097/NMD.0000000000000840.

Huggett, C., Birtel, M. D., Awenat, Y. F., Fleming, P., Wilkes, S., Williams, S., & Haddock, G. (2018). A qualitative study: Experiences of stigma by people with mental health

problems. Psychology and Psychotherapy: Theory, Research, and Practice, 91(3), 380–397. https://doi-org.libproxy.eku.edu/10.1111/papt.12167

Joiner, T. (2009, June 1). The interpersonal-psychological theory of suicidal behavior: Current empirical status. Psychological Science Agenda. https://www.apa.org/science/about/psa/2009/06/sci-brief

Geronazzo-Alman, L., Eisenberg, R., Shen, S., Duarte, C. S., Musa, G. J., Wicks, J., Fan, B., Doan, T., Guffanti, G., Bresnahan, M., & Hoven, C. W. (2017). Cumulative exposure to work-related traumatic events and current post-traumatic stress disorder in New York City's first responders. Comprehensive Psychiatry, 74, 134–143. https://doi-org.libproxy.eku.edu/10.1016/j.comppsych.2016.12.003

Helm, P. J., Medrano, M. R., Allen, J. J. B., & Greenberg, J. (2020). Existential isolation, loneliness, depression, and suicide ideation in young adults. Journal of Social and Clinical Psychology, 39(8), 641–674. https://doi-org.libproxy.ek

Hendrickson R.C, Slevin R.A, Hoerster K.D, Chang B.P, Sano E, McCall C.A, Monty G.R, Thomas R.G, Raskind M.A. The Impact of the COVID-19 Pandemic on Mental Health, Occupational Functioning, and Professional Retention Among Health Care Workers and First Responders. J Gen Intern Med. 2022 Feb;37(2):397-408. doi: 10.1007/s11606-021-07252-z. Epub 2021 Dec 16. PMID: 34918181; PMCID: PMC8675543.

Holliday, R., Hoffmire, C. A., Martin, W. B., Hoff, R. A., & Monteith, L. L. (2021). Associations between justice involvement and PTSD and depressive symptoms, suicidal ideation, and suicide attempt among post-9/11 veterans. Psychological Trauma: Theory, Research, Practice, and Policy, 13(7), 730–739. https://doi-org.libproxy.eku.edu/10.1037/tra0001038

Holliday, R. , Holder, N., Monteith, L. & Surís, A. (2018). Decreases in Suicide Cognitions After Cognitive Processing Therapy Among Veterans With Posttraumatic Stress Disorder Due to Military Sexual Trauma. The Journal of Nervous and Mental Disease, 206 (7), 575-578. doi: 10.1097/NMD.0000000000000840.

Jahan, I., Ullah, I., Griffiths, M. D., & Mamun, M. A. (2021). COVID-19 suicide and its causative factors among the healthcare professionals: Case study evidence from press reports. Perspectives in Psychiatric Care, 57(4), 1707–1711. https://doi-org.libproxy.eku.edu/10.1111/ppc.12739

Joiner, T (2009) The interpersonal-psychological theory of suicidal behavior: Current empirical status. https://www.apa.org/science/about/psa/2009/06/sci-brief#:~:text=The%20interpersonal%2Dpsychological%20theory%20of%20suicidal%20behavior%20(Joiner%2C%202005,the%20ability%20to%20do%20so.

Jones, S., Agud, K., & McSweeney, J. (2020). Barriers and facilitators to seeking mental health care among first responders: "Removing the Darkness." Journal of the American Psychiatric Nurses Association, 26(1), 43–54. https://doi-org.libproxy.eku.edu/10.1177/1078390319871997

Karaffa, K. M., & Koch, J. M. (2016). Stigma, pluralistic ignorance, and attitudes toward seeking mental health services among police officers. Criminal Justice and Behavior, 43(6), 759–777. https://doi-org.libproxy.eku.edu/10.1177/0093854815613103

Kimbrel, N. A., Pennington, M. L., Cammarata, C. M., Leto, F., Ostiguy, W. J., & Gulliver, S. B. (2016). Is cumulative exposure to suicide attempts and deaths a risk factor for suicidal behavior among firefighters? A preliminary study. Suicide and Life-Threatening Behavior, 46(6), 669–677. https://doi-org.libproxy.eku.edu/10.1111/sltb.12248

Kolnogorova, K., Allan, N. P., Moradi, S., & Stecker, T. (2021). Perceived burdensomeness, but not thwarted belongingness, mediates the impact of PTSD symptom clusters on suicidal ideation modeled longitudinally. Journal of Affective Disorders, 282, 133–140. https://doi-org.libproxy.eku.edu/10.1016/j.jad.2020.12.079

Lai J., Ma S., Wang Y., Cai Z., Hu J., Wei N., et al. (2020). Factors associated with mental health outcomes among health care workers exposed to Coronavirus Disease 2019. JAMA Netw. Open 3:e203976. 10.1001/jamanetworkopen.2020.3976, PMID:

Laura E. Stayton, Colleen E. Martin, James L. Pease & Kathleen M. Chard (2019) Changes in suicidal ideation following cognitive processing therapy in a VA residential treatment program, Military Psychology, 31:4, 326-334, DOI: 10.1080/08995605.2019.1630230

Langtry, J., Owczarek, M., McAteer, D., Taggart, L., Gleeson, C., Walshe, C., & Shevlin, M. (2021). Predictors of PTSD and CPTSD in UK firefighters. European Journal of Psychotraumatology, 12(1). https://doi-org.libproxy.eku.edu/10.1080/20008198.2020.1849524

Lyra, R. L. de, McKenzie, S. K., Every-Palmer, S., & Jenkin, G. (2021). Occupational exposure to suicide: A review of research on the experiences of mental health professionals and first responders. PLoS ONE, 16(4). https://doi-org.libproxy.eku.edu/10.1371/journal.pone.0251038

Maria Panagioti, Patricia Gooding, & Nicholas Tarrier (2009) Post-traumatic stress disorder and suicidal behavior: A narrative review, Clinical Psychology Review, Volume 29, Issue 6, Pages 471-482, ISSN 0272-7358,https://doi.org/10.1016/j.cpr.2009.05.001.

Martin, C. E., Pukay, M. N. D., Blain, R. C., Dutton, C. C., & Chard, K. M. (2021). Suicidal ideation in a Veterans Affairs residential posttraumatic stress disorder treatment setting:

The roles of thwarted belongingness and perceived burdensomeness. Journal of Traumatic Stress, 34(6), 1188–1198. https://doi-org.libproxy.eku.edu/10.1002/jts.22540

Morabito, D. M., Boffa, J. W., Bedford, C. E., Chen, J. P., & Schmidt, N. B. (2020). Hyperarousal symptoms and perceived burdensomeness interact to predict suicidal ideation among trauma-exposed individuals. Journal of Psychiatric Research, 130, 218–223. https://doi-org.libproxy.eku.edu/10.1016/j.jpsychires.2020.07.029

National Alliance on Mental Illness (2014). Mental health facts. Retrieved from https://www.nami.org/getattachment/Learn-More/Mental-Health-by-theNumbers/childrenmhfacts.pdf

National Institute of Mental Health (2017). Major depression. Retrieved from https://www.nimh.nih.gov/health/statistics/major-depression.shtml

National Institute of Mental Health (2017). Suicide. Retrieved from https://www.nimh.nih.gov/health/statistics/suicide.shtml National Law Enforcement

Officers Memorial Fund (2018). Officer fatality data. Retrieved from http://www.nleomf.org/facts/officer-fatalities-data/year.html

Niwako Yamawaki, Kelly, C., Dresden, B. E., Busath, G. L., & Riley, C. E. (2016). The Predictive Effects of Work Environment on Stigma Toward and Practical Concerns for Seeking Mental Health Services. Military Medicine, 181

Nock, M. K., Hwang, I., Sampson, N., Kessler, R. C., Angermeyer, M., Beautrais, A., Borges, G., Bromet, E., Bruffaerts, R., de Girolamo, G., de Graaf, R., Florescu, S., Gureje, O., Haro, J. M., Hu, C., Huang, Y., Karam, E. G., Kawakami, N., Kovess, V., Williams, D. R. (2009). Cross-national analysis of the associations among mental disorders and suicidal behavior: Findings from the WHO World Mental Health Surveys. Political

Science Medicine, 6(8), Article e1000123. https://doi.org/10.1371/journal.pmed.1000123

Tripp, J. C., & McDevitt, M. M. E. (2017). Trauma-related guilt mediates the relationship between posttraumatic stress disorder and suicidal ideation in OEF/OIF/OND veterans. Suicide and Life-Threatening Behavior, 47(1), 78–85. https://doi-org.libproxy.eku.edu/10.1111/sltb.12266

Oexle, N., Rüsch, N., Viering, S., Wyss, C., Seifritz, E., Xu, Z., & Kawohl, W. (2017). Self-stigma and suicidality: a longitudinal study. European Archives of Psychiatry & Clinical Neuroscience, 267(4), 359–361. https://doi-org.libproxy.eku.edu/10.1007/s00406-016-0698-1s://doi-org.libproxy.eku.edu/10.1186/s12888-019-2353-7

Panagioti, M., Angelakis, I., Tarrier, N., & Gooding, P. (2021). “A prospective investigation of the impact of distinct posttraumatic (PTSD) symptom clusters on suicidal ideation”: Correction. Cognitive Therapy and Research, 45(5), 1004–1005. https://doi-org.libproxy.eku.edu/10.1007/s10608-020-10199-w

Roberge, E. M., Weinstein, H. R., & Bryan, C. J. (2022). Predicting response to cognitive processing therapy: Does trauma history matter? Psychological Trauma: Theory, Research, Practice, and Policy, 14(5), 871–882. https://doi-org.libproxy.eku.edu/10.1037/tra0000530

The Rutermen Family Foundation (2018). https://rudermanfoundation.org/white_papers/police-officers-and-firefighters-are-more-likely-to-die-by-suicide-than-in-line-of-duty/

Sheynin, J., Shind, C., Radell, M., Ebanks-Williams, Y., Gilbertson, M. W., Beck, K. D., & Myers, C. E. (2017). Greater avoidance behavior in individuals with posttraumatic stress

disorder symptoms. Stress: The International Journal on the Biology of Stress, 20(3), 285–293. https://doi-org.libproxy.eku.edu/10.1080/10253890.2017.1309523

Shor R, Borowski S, Zelkowitz RL, Pineles SL, Copeland LA, Finley EP, Perkins DF, Vogt D. (2022) The transition to civilian life: Impact of comorbid PTSD, chronic pain, and sleep disturbance on veterans' social functioning and suicidal ideation. Psychol Trauma. doi: 10.1037/tra0001271.

Sobel, A. A., Resick, P. A., & Rabalais, A. E. (2009). The effect of cognitive processing therapy on cognitions: Impact statement coding. Journal of Traumatic Stress, 22(3), 205–211. https://doi.org/10.1002/jts.20408

Substance Abuse and Mental Health Services Administration (2018) Disaster Technical Assistance Center Supplemental Research Bulletin. First Responders: Behavioral Health Concerns, Emergency Response, and Trauma

Tedeschi RG, Calhoun LG. (1996) The Posttraumatic Growth Inventory: measuring the positive legacy of trauma. J Trauma Stress. 1996 Jul;9(3):455-71. doi 10.1007/BF02103658. PMID: 8827649.

Tripp, J. C., & McDevitt, M. M. E. (2017). Trauma-related guilt mediates the relationship between posttraumatic stress disorder and suicidal ideation in OEF/OIF/OND veterans. Suicide and Life-Threatening Behavior, 47(1), 78–85. https://doi-org.libproxy.eku.edu/10.1111/sltb.12266

Van Orden, K. A., Lynam, M. E., Hollar, D., & Joiner, T. E., Jr. (2006). Perceived Burdensomeness as an Indicator of Suicidal Symptoms. Cognitive Therapy and Research, 30, 457-467.

Van Orden, K.A., Witte, T.K., Gordon, K.H., Bender, T.W., & Joiner, T.E. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. Journal of Consulting and Clinical Psychology, 76, 72-83.

Van Orden, K., Witte, T., James, L., Castro, Y., Gordon, K., Braithwaite, S., et al. (2008). Suicidal ideation in college students varies across semesters: The mediating role of belongingness. Suicide & Life-Threatening Behavior, 38, 427-435.

Vigil, N. H., Beger, S., Gochenour, K. S., Frazier, W. H., Vadeboncoeur, T. F., & Bobrow, B. J. (2021). Suicide Among the Emergency Medical Systems Occupation in the United States. Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 22(2), 326–332. https://doiorg.libproxy.eku.edu/10.5811/westjem.2020.10.48742

Violanti JM, Steege A. Law enforcement worker suicide: an updated national assessment. Policing. 2021;44(1):18-31. doi: 10.1108/PIJPSM-09-2019-0157. Epub 2020 Oct 21. PMID: 33883970; PMCID: PMC8056254.u.edu/10.1521/jscp.2020.39.8.641

Vujanovic, A. A., Lebeaut, A., & Leonard, S. (2021). Exploring the impact of the COVID-19 pandemic on the mental health of first responders. Cognitive Behaviour Therapy, 50(4), 320–335. https://doi-org.libproxy.eku.edu/10.1080/16506073.2021.1874506

Wang, Q., Ren, L., Wang, W., Xu, W., & Wang, Y. (2019). The relationship between post-traumatic stress disorder and suicidal ideation among shidu parents: The role of stigma and social support. BMC Psychiatry, 19. HTTP

Wastler, H., Lucksted, A., Phalen, P., & Drapalski, A. (2020). Internalized stigma, sense of belonging, and suicidal ideation among veterans with serious mental illness. Psychiatric Rehabilitation Journal, 43(2), 91–96.https://doi.org.libproxy.eku.edu/10.1037/prj0000386

Witczak-Błoszyk K, Krysińska K, Andriessen K, Stańdo J, Czabański A. Work-Related Suicide Exposure, Occupational Burnout, and Coping in Emergency Medical Services Personnel in Poland. Int J Environ Res Public Health. 2022 Jan 20;19(3):1156. doi: 10.3390/ijerph19031156

Yazici, H., Ozdemir, M., & Koca, F. (2021). Impact of Posttraumatic Stress Disorder Symptoms on Posttraumatic Growth. Journal of Loss & Trauma, 26(4), 389–400. https://doi-org.libproxy.eku.edu/10.1080/15325024.2020.1801240