Firefighter Behavioral Health Alliance White Paper Series No. 1

Wounds of the Spirit: Moral Injury in Firefighters

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February 2023

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Abstract

This paper explores the issue of Moral Injury in firefighters and how it can affect their mental and spiritual health, both in and out of the firehouse. Moral Injury (MI) refers to experiences/situations that go against an individual's internal moral compass such as lack of fairness or the inability to do what is right and just. Its symptoms are similar to those of Post-traumatic Stress Disorder (PTSD), and like PTSD, MI can be addressed and healed. We surveyed 479 firefighters across nine fire/EMS agencies using the Moral Injury Outcomes Scale (MIOS). Of our 479 responses, 276 (57.6%) reported having experienced a morally-injurious event such as mass shootings, car accidents, injured children, evidence of abuse, or their own failure to call out colleagues making mistakes on the job. Write-in comments indicated themes such as management/leadership failures, toxic organizational culture, lack of access to mental health resources, and adverse working conditions caused by personnel shortages, abuse of the 911 system for non-emergency medical calls, and department policies. A third of our sample responded affirmatively to items from *The Primary Care PTSD Screen for DSM-5* regarding nightmares, intrusive thoughts, avoidance, hypervigilance, and guilt. Almost half of our sample responded affirmatively to the question about detachment/isolation. Furthermore, our results suggest that firefighters may not understand the definition of Moral Injury, nor its distinction from PTSD. Regardless of the label, even though the fire service culture is changing, more attention needs to be paid to reducing the stigma of behavioral health, implementing mental wellness programs, and improving access to mental health treatment.

Keywords: moral injury, behavioral health, mental health, mental wellness, PTSD, burnout, compassion fatigue, cumulative stress overload

Introduction

Firefighters experience multiple sources of occupational stress in the line of duty. Repeated exposures to traumatic scenes (e.g., motor vehicle entrapment, infant drownings, suicides, homicides, cardiac arrests) can cause cumulative stress overload and post-traumatic stress disorder (PTSD). In addition to these traumatic scenes, firefighters may suffer the effects of shift work (e.g., sleep deprivation, long periods of time away from family), job dissatisfaction related to problems with others (e.g., co-workers, supervisors, command staff), and discontent with departmental policies and procedures (e.g., workload, shift schedule, mandatory vaccinations). Furthermore, there may be systemic problems with department morale and/or organizational culture. Many fire departments are comprised of multiple generations (i.e., Baby Boomer, Gen X, Millennial, Gen Z) and differences in expectations and communication styles can generate friction (e.g., perceived sense of entitlement, work ethic, texting vs. talking). An additional source of firefighter stress is the increasing volume of medical calls, many of which may not be true emergencies; dealing with these "frequent flyer" patients can become frustrating. All of these sources of occupational stress

can lead to anxiety, PTSD, substance abuse, marital/relationship problems, depression, and even suicide.

A relatively-new term, Moral Injury (MI), can capture all of the above reactions to cumulative stress without the problems of labeling these reactions as mental illness or disorders defined in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5, American Psychiatric Association, 2013). Moral Injury is the damage done to one's conscience or moral compass when that person perpetrates, witnesses, or fails to prevent acts that transgress one's own moral beliefs, values, or ethical codes of conduct. Litz et al., (2009), a seminal work on moral injury in war veterans, state:

> "…we argue that moral injury involves an act of transgression that creates dissonance and conflict because it violates assumptions and beliefs about right and wrong and personal goodness. How this dissonance or conflict is reconciled is one of the key determinants of injury. If individuals are unable to assimilate or accommodate (integrate) the event within existing self- and relational-schemas, they will experience guilt, shame, and anxiety about potential dire personal consequences (e.g., ostracization). Poor integration leads to lingering psychological distress, due to frequent intrusions, and avoidance behaviors tend to thwart successful accommodation." (Litz et al., 2009, p. 698)

Some examples of MI in fire/EMS are:

1. A firefighter witnesses bullying of a rookie on the job and says nothing. He is upset with himself the rest of the shift about why he didn't step up and say something. He continues to be ashamed even after his shift is over.

2. A paramedic is directed by a supervisor to provide treatment to a patient that goes against what she believes to medically appropriate. She feels betrayed by management.

3. A fire crew on a hose line is instructed to evacuate and go defensive, but the primary search team has not yet confirmed whether there are victims/patients in the structure. The Lieutenant, who is with a rookie firefighter on the hose line, disagrees with the call and feels conflicted.

4. An EMT is forced to work overtime and forego vacation days due to staffing shortages. She is already having marital problems, and now has to tell her husband they have to cancel their vacation plans yet again. She is burned out and resents management.

5. A firefighter feels guilty for having an affair, but he can't seem to end the relationship. His wife leaves him and takes the two young children. He feels betrayed by both his family and his own selfish actions.

6. A firefighter/paramedic suffers her sixth pediatric death this year. She begins to feel helpless and questions whether her training has been a waste of time.

Moral Injury is relevant to fire/EMS because it can impact the mental and spiritual health of firefighters, paramedics, EMTs and their co-workers.

> "Chronic collateral manifestations of moral injury may include: *self-harming behaviors*, such as poor self-care, alcohol and drug abuse, severe recklessness, and parasuicidal behavior, *self-handicapping behaviors*, such as retreating in the face of success or good feelings, and *demoralization*, which may entail confusion, bewilderment, futility, hopelessness, and self-loathing. Most damaging is the possibility of enduring changes in self and other beliefs that reflect regressive over-accommodation of moral violation, culpability, or expectations of injustice. This may occur because each reexperiencing and avoidance instance leads to new learning affecting the strength and accessibility of underlying schemas, which, over time, become ingrained and rigid and resistant to countervailing evidence." (Litz et al., 2009, p. 701)

Moral Injury can also affect their lives outside of the firehouse, especially relationships with spouses, if not addressed. The Firefighter Behavioral Health Alliance (FBHA), in discussions with family members and/or colleagues of firefighters who have died by suicide, has found that relationship issues, whether personal, family, or work-related, are one of the leading reasons for suicide.

Moral Injury is different from PTSD, although there are similarities in symptoms (i.e., re-experiencing and avoidance). PTSD has been viewed as involving life-threatening danger and/or victimization, which is more specific than MI (Litz & Kerig, 2019). Currier et al., (2019) found that PTSD was more related to self and shame, whereas MI was more related to others and betrayal of trust. Moral Injury can be difficult to describe; however, it is important to "name it to tame it" so that it can be treated. When we discuss MI, we use definitions that have been academically and clinically accepted. However, individuals who are impacted by MI are not necessarily familiar with the definitions, nor *how* those definitions affect them. It is vitally important to help individuals articulate what MI is to them personally. Education about MI and its effects is critical to help individuals normalize their own unique, personal reactions to morally-injurious events. This can be facilitated by spiritual and/or clinical practitioners, who can then know where and how to begin the process of MI repair and healing.

The fire service has a long history of a "Suck it up, Buttercup" culture in which mental wellness has not been addressed, nor even discussed (Anderson-Fletcher et al., 2017). This "cultural brainwashing" of sweeping things under the rug and failing to discuss one of the most important aspects of the job has impacted many firefighters, paramedics, EMTs, and their families and colleagues. To highlight the importance of cultural change in the fire service, it is noteworthy that from 2014-2020 more firefighters died by suicide than in the line of duty. LODDs increased markedly in 2021, reversing that trend, but a significant driver of this increase is attributed to COVID-19. To help battle this culture, VCOS published the Yellow Ribbon Report on Mental Wellness to increase awareness and start conversations about this critical problem in the fire service. The authors pointed out that many of the terms such as mental health, psychological health, behavioral health, and PTSD carry negative connotations or labels. PTSD, in particular, is a loaded term due to the presence of "disorder." Due to these labels, the authors proposed that "cumulative stress overload" be used as a better descriptor:

> "Cumulative Stress Overload is what happens when first responders, who start with the same everyday stressors as the rest of the world, add to their day an additional layer of extreme stress experienced in the line of duty…" (Anderson-Fletcher et al., 2017, p. 12)

Research has identified firefighters' repeated exposures to trauma as common over a career (Jahnke et al., 2016). Cumulative exposures to traumatic stress may not start out as Moral Injury, but if an adverse impact goes unaddressed, these events can "snowball" and lead to burnout, PTSD, and MI. Another problem in understanding PTSD and MI is that they can result from repeated exposures to traumatic events in the line of duty rather than one particular index trauma or event. Sometimes all it takes is one more exposure to push someone over the edge.

In summary, PTSD is grounded in fear-based events, whereas Moral Injury is rooted in emotions and beliefs. When decisions or actions do not meet individuals' expected emotions or beliefs, internal conflict can occur, which can then lead to Moral Injury. The purpose of this research is to examine how firefighters perceive Moral Injury relative to their experiences with traumatic stress, job satisfaction, burnout, and relationships.

Pilot Survey Methodology

The Firefighter Behavioral Health Alliance administered a pilot survey in January 2022 to nine fire departments across five states. Departments ranged in size from 60 to over 1,000 personnel. Seven were career departments and two were combination. Two departments run their own EMS, three have a combination of their own and contract medics, and four use contract medics exclusively. Although several volunteer fire departments and third-party EMS organizations were invited to participate in the study, there were none in our sample.

Letters were sent to fire chiefs with a link to the survey to distribute to their personnel. Chiefs (and respondents) were informed that data collected from the survey would be used to educate mental health professionals on recognizing and treating Moral Injury, plus bring an awareness that MI could play as large a role as PTSD in first-responder behavioral health issues, including suicide. They were also informed that survey results would be used to develop a white paper for FBHA, highlighting key findings to spread awareness of the effects of Moral Injury in first responders. Respondents' confidentiality was ensured by having their results submitted through a confidential link with only the FBHA White Paper Committee reviewing the responses. Respondents were assured that the survey would be a safe place to share their experiences and make recommendations to improve the moral health of their organizations. Respondents were also assured that in developing the white paper, individual fire departments would be given only their department's aggregate results, and any names within the open-ended comments would be removed.

The survey instrument was the *Moral Injury Outcome Scale* (MIOS), obtained directly from Dr. Brett Litz (Litz et al., 2022). We added six demographic questions at the beginning: age, race, gender, years in the fire service, job title, and primary fire department. We also added an open-ended question at the end asking respondents to provide any feedback on the moral health of their organization, as well as any suggestions and/or recommendations for improvement in the future. The resulting survey instrument contained 40 questions.

After answering the demographic questions, respondents were asked specifically about experiences they may have had after a very stressful experience in which:

1. You did something (or failed to do something) that went against your moral code or values (e.g., you harmed someone or failed to protect someone from harm), or

2. You saw someone (or people) do something or fail to do something that went against your moral code or values (e.g., you witnessed cruel behavior), or

3. You were directly affected by someone doing something or failing to do something that went against your moral code or values (e.g., being betrayed by someone you trusted).

Respondents were asked to reply "Yes" or "No" if they had an experience such as described above. If they replied "Yes" they were instructed to continue with the survey; if they replied "No" they were instructed to stop and submit. Those who replied "Yes" were then asked a series of questions about the event(s) regarding when the event happened, and whether there was a threat of death, serious injury, or sexual violence. They were then asked (if they were comfortable doing so) to briefly describe the event (worst one if several) to which they were referring in the survey. They were then asked five questions regarding nightmares, intrusive thoughts, avoidance, hypervigilance, detachment/isolation, and guilt; these questions came from *The Primary Care PTSD Screen for DSM-5* (Prins et al., 2016). They were then asked 14 questions on Moral Injury (Litz et al., 2022) and eight questions from *The Brief Inventory of Psychosocial Functioning* (Kleiman et al., 2020). These three sets of questions are all included in the MIOS instrument (Litz et al., 2022).

Results

A total of 479 responses were received over the course of five months from nine fire departments across five states. Of the total 479 respondents, there were 203 (42.4%) who replied "No" to the question: "Have you had an experience with moral injury (or experiences) as described above?" These respondents were then directed to stop taking the survey and hit submit. The remaining 276 (57.6%) who answered "Yes" were asked to continue with the survey. Of those 276 respondents, 151 included responses describing the index trauma ("If you feel comfortable, please briefly describe the (worst) event you are referencing in this survey") and 130 included responses to the final open-ended question: "Please provide any feedback on the moral health of your organization, as well as any suggestions and/or recommendations for improvement in the future."

Due to a problem with how the survey was administered, of the 203 respondents who replied "No" to the gatekeeper question of "Have you had an experience with moral injury (or experiences) as described above?," 40 continued with the survey rather than stopping as instructed. Of these, there were 5 descriptions of an index trauma. To be inclusive, we analyzed these responses and determined that 4 described a morally-injurious event. We therefore included these 4 in our sample. Similarly, of the 203 "No" respondents to the gatekeeper question, 21 provided write-in comments for the final question of the survey. We only considered these write-in comments if they also described (in response to the previous write-in question about the index trauma) what we

determined to be a morally-injurious event. There were only 3 responses that met this criterion; therefore, a total of 133 write-in responses to the last question were analyzed for themes.

We first examined the 156 responses describing the index trauma in order to determine which responses met the below definition of Moral Injury.

> "Moral injury is the damage done to one's conscience or moral compass when that person perpetrates, witnesses, or fails to prevent acts that transgress one's own moral beliefs, values, or ethical codes of conduct." (Litz et al., 2009)

The index traumas listed covered a wide range of examples, including the 2017 mass shooting in Las Vegas, car accidents, injured children, evidence of abuse, as well as not calling out colleagues who made mistakes on the job.

We also examined the 133 open-ended responses to the final survey question to shed more light on prevalent themes, as well as any suggestions for improvement in their departments. Some of these comments are included in our discussion below. It is important to point out that Litz et al., (2022) noted that much of the previous research has failed to include *qualitative* analysis of "lived experiences" of exposure to potentially morally-injurious events.

In our analysis, 54 of the 156 respondents who described the index trauma reported a Moral Injury that conformed to the definition above (34.6%). The majority of these responses could be described as related to witnessing a morally-injurious event. Twenty-four (44.4%) of the 54 responses indicated that leadership and their actions had a direct effect on the respondent and/or their colleagues.

> "Choices made by management make it impossible to have a life outside of work when you are constantly forced to work on your days off, when approved vacation no longer protects you from having to come in - because you can be forced to work four hours before or after your approved vacation hours. Work becomes a nightmare." (Dispatcher)

> "It is my opinion that the message of health and wellness that is presented to the organization is in direct conflict with the actions of the organization. While there are individuals who are working hard and advocating for total wellness and moral/ethical support, the organization seems to only support the members if there is no real financial investment required or particular effort on behalf of the organization. Suicide specifically had been a major organizational problem, seemingly more so than surrounding agencies, but these events are rarely even discussed much less acted against. Again, small groups of wonderful people are working hard for us, but they are fighting an administration that has been riddled with controversy and misconduct, and has been documented expressing how little the members working on the front lines mean to them. I feel grateful for my amazing brothers and sisters on the job, but feel completely unheard and unsupported by the administration." (Firefighter)

> "The moral health of my organization is in complete disarray because their moral values are based on decreasing their financial liability and mine is based around being safe and

> efficient. These moral compasses do not align and are often contradictory." (Firefighter/Paramedic)

Thirteen (24.1%) of the respondents felt that they "failed to act" in various situations, both in the field and at the station. Of these 13, the overwhelming majority (11, or 85.1%) felt this was due to being overworked, and issues with management caused them to fail to intervene. These respondents reported feeling guilt and/or shame associated with the failure to act. Management was criticized in multiple comments regarding workload.

> "Having better rule in place to help protect the employees from having so much mandatory overtime. We have zero personal life because we're expected to be in call all the time. Even having 1 day off a week is unreasonable to out [*sic*] mgmt some days. Our vacation time too is no longer protected. How are we supposed to have a positive out look on life and good relationships with our loved ones if our management doesn't allow us any time off. We've been told to use our sick time or apply for FMLA for any mental health issues which isn't healing our current situation. I've never been as unhappy at any job as I am now." (Dispatcher)

> "When there is time between calls and the chance for sleep at night (not getting calls all night) I feel much better about past calls and can better process the new calls, even calls with terrible outcomes. When I am exhausted with no relief in site, with increased call volume, being forced to work on my days off, it becomes difficult to process stressful calls in a healthy way. Sleep is huge. Call reduction is huge. Staffing up so my brothers and sisters and I don't get force hired all the time would be huge." (Firefighter/Paramedic)

> "The moral fiber of each individual on the department is valuable information I'm sure however the current morale on the job is a bigger issue. The current morale issues along with the increase in tragic calls, mandatory overtime and the doing more with less attitude the department currently has is contributing to the increase in PTSD among personnel. As an older individual (Generation X) I'm noticing that the younger members are not able to cope with and turn negative issues (calls) into positive learning events. These negative situations on the job are causing bad attitudes, increased alcohol consumption, poor morale, short tempers, marital/family issues and a negative outlook towards the department. I believe a survey on this issue would benefit the future of the department. It should be a mandatory survey." (Officer)

> "A person can only take so much. How much can one person see before it actually hurts them? A shit ton, but it will wear on your family and you, especially if you don't have a positive outlet or the support of home. When support lacks on the "home front" it will drag you down faster then a parachute in water. The Op-tempo of my organization is beyond what a person can handle in the time span we are going to be in the career. While this falls on deaf ears most of the time, someone needs to bring this to the forefront of the bosses and realized "more with less" is a bullshit anachronism." (Engineer)

Several comments discussed a perception of abuse of the 911 system for non-emergency medical calls.

> "Have Fire Administration and/or County/Public Officials collaborate intently to come up with a policy to prevent the flagrant abuse the 911 system and allowing it to be used as a means for primary health care/physician, personal transportation to the hospital and personal alarm response company by certain citizens, businesses etc. Educate/reeducate the public on what 911 should be and should Not be used for. The consistent anticipation of going on what are supposed to be life threatening ems and fire emergency calls only to find out that 80% of those call are not emergencies at all, along with a decrease in personnel and increase of those non-emergency calls for budgetary reasons and to sustain or increase funding, in addition to the "Do More With Less" attitude/Mission Statement of many Fire Administration and/or County/Public Officials has had and will continue to have negative detrimental effects on the physical and mental health of fire suppression/line personnel." (Engineer)

> "I believe it's linked more to the decisions first responders are forced to make because of the policies and decisions of higher leadership. When resources are low and first responders are told to send everyone to the hospital regardless of the situation, meanwhile resources for traumatic calls are delayed that creates moral injury. When a first responder is sitting on scene of shooting with a critical patient and the closest rescue is 3-4 stations over because all the rescues in their area are transporting cough, and diarrhea calls think about the strain that places on that first responder. He is the one that was taught to treat and immediate transport that patient but is instead looking that patient in the eyes as he dies. Our department went to a priority based system in order to direct the resources to the calls that need them the most yet, nothing has changed." (Firefighter)

> "Allowing EMS to be treated as primary care is a disservice to the patients and providers. This is how you lose compassion from a generation of EMS providers and increase distrust of patients; all resulting in poor or less than optimal outcomes." (Officer)

Several comments focused on cultural problems.

> "Unfortunately we have a culture of abuse, and we are distrustful of others." (Officer)

> "Moral health is not something that has been recognized much less really takes [*sic*] about. Out [*sic*] culture is that of a bully mentality. The meaner you are, the more you are recognized and celebrated. Those who just try and treat others with common decency and respect are vilified and bullied into submission. I have no voice, much less the ability to make suggestions or try to get help, I am invisible unless they need a target, then they want me so I can be blamed or humiliated to make them look better. I just keep my head down, and my mouth shut. I am just a worker bee." (Officer)

> "The culture makes it difficult to show emotion." (Firefighter)

Lack of access to mental health resources was also listed as a significant problem.

> "Wish we had better/quicker access to mental health professionals. I have tried to find a counselor on multiple occasions, and the hoops you have to jump through with insurance

> and trying to get an appointment is enough to make anyone give up and write the process off. I understand having access to a mental health professional is a logistics and financial problem, but if we are trying to truly put our members mental health and longevity at the forefront we need to have better avenues." (Officer)
>
> "There is no guidance to the right path for mental health. I try to get help and requested health through the fire department and I felt it was a generic type of help. I found help by going out and talking to other people about mental help. I found my own therapy without the help of the fire department. I make better decision in life. I'm financially responsible. I'm living life. My health improved. I lost weight and running half marathon races." (Firefighter/Paramedic)

Nine (16.7%) of the 54 respondents felt that they were perpetrators of MI, in that their actions directly affected the work of the perpetrator and colleague(s) in the department. In all of these responses, their actions were not discovered, and they reported experiencing subsequent guilt and shame because they "got away with it." Three of these respondents cited combat-related experiences while in military service in Iraq or Afghanistan rather than fire department experiences.

Five (9.3%) of the 54 respondents reported they suffered MI because of the policies of the department regarding mandatory vaccinations and their required reporting to management.

> "My employer threatened me with forced injection or termination. I have a right to decide what goes in my body. for my employer to threaten me in this manor is not ok and I have felt very dissatisfied and disillusioned with my job after. This has impacted me much more then any call I have been on, or the horrible things I have had to witness, and that is saying a lot. Then I get silly surveys about my moral code? my moral code says this is very very wrong. and the moral code of our 'eeoc' and 'zero tolerance for bulling' policy us [*sic*] now laughable. I can sue my employer if I get my feelings hurt, or if I am called the wrong 'pronoun' but I do not have the right to decide what gene altering chemical gets put into me? Yes, I have had to witness a lot of things that go against my moral code." (Other)

Finally, several respondents expressed hope or offered constructive suggestions for improvement.

> "We are slowly changing cultural norms and understanding that being influenced by tragic events is not a sign of weakness or failure." (Officer)
>
> "As a new recruit I wish that I had been warned about the possible effects this job could have on me and my family. I believe that this kind of information could have prevented me from making mistakes in my personal life that almost destroyed my marriage." (Firefighter)
>
> "Rather then being forced to seek help in every scenario, I feel that it would be better to advise our brothers and sisters that we are here for them and are open to talk. I also feel that if our members knew some of the people that have received help with their troubles maybe more members would see that as a real person and go get help as well." (Officer)

> "Outsource counselors from different fire departments." (Firefighter).
>
> "The fix to moral injury isn't inspirational e-mails being sent out weekly. It's policies, and procedure changes. It's putting systems in place to help first responders who are suffering physically and mentally." (Firefighter)
>
> "Follow through communication with the individual members involved has appeared to be dropped at times. Fire service members are notorious for trying to cope with issues by themselves. Sometimes a member needs to know that management is paying attention to the welfare of its members! Training for all members in recognition of mental health issues may improve self awareness of distress but more so help improve recognition of coworkers in distress. As a member of the crew, it would be good for every member to understand what actions they may be able to take in helping coworkers." (Officer)

Of the 276 respondents who answered "Yes" to the question about experiencing MI, only 155 (56.2%) described the index event. Of these 155, 54 met our definition of MI; these themes were discussed above. Of the 125 who did *not* describe the event(s), we were obviously unable to determine if these events met the definition; however, by answering "Yes" these individuals *perceived* they met the criteria of experiencing a morally-injurious event.

The Moral Injury Outcome Scale (MIOS) instrument (Litz et al., 2022) contains five questions about experiencing PTSD-like symptoms that come from *The Primary Care PTSD Screen for DSM-5* (Prins et al., 2016). Table 1, below, shows the number and percentage of affirmative responses to these questions, respectively, from the 276 respondents who answered "Yes" to the question about experiencing MI.

Table 1. Affirmative Responses to PTSD Symptoms

	PTSD Symptom Questions	**Yes**	**%**
1	In the past month have you had nightmares about the event or thought about the event when you did not want to?	101	36.59%
2	In the past month have you tried hard not to think about the event or went out of your way to avoid situations that reminded you of the event(s)?	102	36.96%
3	In the past month have you been constantly on guard, watchful, or easily startled?	88	32.00%
4	In the past month have you felt detached from people, activities, or your surroundings?	137	49.82%
5	In the past month felt guilty or unable to stop blaming yourself or others for the event(s) or any problems the event(s) may have caused?	100	36.23%

Discussion

The findings reported in Table 1 are noteworthy regarding the percentages of respondents endorsing PTSD symptoms. Although they did not necessarily describe a morally-injurious event by our definition (only 54 met our definition of MI), they answered the PTSD questions affirmatively. This could be an important indicator to clinicians that patients may be under-reporting symptoms of both PTSD and MI.

Additionally, these numbers may represent individuals who perhaps are not at the level of MI, but are showing the effects of cumulative stress, which can certainly lead to PTSD and MI. The stressors described in the write-in comments included lack of personnel, being overworked and underpaid, fear for personal safety, and no opportunity for self-care, among others. The target of the anger and frustration was overwhelmingly the command structure or management.

Over time, the cumulative effect of these incidents can lead to the conditions discussed in this paper. Although the nature of the experiences and their interpretation is subjective to the individual, there is almost always a specific event that has the most negative effect. This could be a specific "index trauma" or an "x-factor" defined by the cumulative effect of various working conditions described by the respondents. Firefighters and EMS personnel in our pilot study reported working conditions that can lead to cumulative stress overload, compassion fatigue, and burnout. The perception of being overworked in an understaffed environment with increasing demand for services may drive personnel over the edge into experiencing PTSD and MI symptoms.

Of particular note in Table 1 is that almost *half* of our sample of those who answered "Yes" to the question about experiencing MI responded affirmatively to "In the past month have you felt detached from people, activities, or your surroundings?" This is disturbing given that social isolation is a known risk factor for suicide. This, combined with evidence that suicidal behavior in firefighters may be higher than that in the general adult population (Stanley et al., 2015), highlights the need for cultural change and improved access to mental health treatment in the fire service. Fire service leadership should be proactive in developing strategies to address mental wellness, provide more education on PTSD and Moral Injury, improve working conditions that may have an adverse impact on mental health, and endorse and implement programs for self-care. Perhaps holding management accountable for the mental wellness of department personnel might go a long way toward changing the culture.

FBHA is formulating plans for a follow-up white paper discussing best practices for treatment of moral injury in clinical settings. Over the past few years, the behavioral health movement in the fire service has been rapidly improving, especially with the increasing number of culturally-competent counselors, psychologists, and psychiatrists. The follow-up paper will give insight to those treating moral injury in first responders as well as some evidenced-based treatments currently used in clinical practice.

There were several limitations to our pilot study. First, the way in which the survey was administered (Google Docs) did not "force submit" if respondents answered "No" to the gatekeeper question of "Have you had an experience with moral injury (or experiences) as described above?" Initially, we thought this was a weakness that should be addressed in future

studies using the MIOS instrument. However, upon reflection, we would not have captured the five respondents who went on to describe a potentially-morally injurious event, of which four met our definition of MI, if the survey platform did not allow them to continue.

A second limitation of our study is that the MIOS instrument focuses on one morally-injurious experience, or on the worst experience if there are more than one, rather than repeated exposures to traumatic stress, which is the nature of the job. Respondents may have gotten frustrated with the survey if they could not identify a single morally-injurious experience.

> "Forcing a person to choose one event does not account for the cumulative effect of PTSD, the discrimination, micro-aggressions, retaliation, micro-retaliation and administrative betrayal throughout a firefighter's career. The answers would be much different if not forced to choose one event." (Firefighter)

> "Terrible survey the way it is worded. It doesn't take into account any other stressers associated with the job. (Engineer)

The latter comment came from a respondent who continued to take the survey after replying "No" to the gatekeeper question asking if they had experienced a morally-injurious event.

A final limitation of our study is that the data set contains responses from a small number of career and combination fire departments in primarily the western U.S.; volunteer departments were not included in our sample. While research has shown that career firefighters may face a greater number of exposures to traumatic events over a career, volunteer firefighters in rural communities are more likely to know their victims (Stanley et al., 2017). We plan to replicate this study using a nation-wide sample of firefighters.

Conclusions

The purpose of this pilot study was to explore how firefighters perceive Moral Injury relative to their experiences with traumatic stress, job satisfaction, burnout, and relationships. Our results suggest that firefighters may not understand the definition of Moral Injury, nor its distinction from PTSD. Regardless of the label, about one third of our sample responded affirmatively to items on the MIOS taken from *The Primary Care PTSD Screen for DSM-5* regarding nightmares, intrusive thoughts, avoidance, hypervigilance, and guilt. Almost half of our sample responded affirmatively to the question about detachment/isolation. Given that social isolation is a risk factor for suicide, and that firefighters may be more prone to suicidal behavior than the general adult population, these results are disturbing. Whether the label is PTSD, Moral Injury, or Cumulative Stress Overload, our brothers and sisters in fire/EMS are suffering. Although the fire service culture is changing, there needs to be less stigma around behavioral health, wide-spread implementation of mental wellness programs in departments, and better access to mental health treatment.

Acknowledgements

The authors would like to thank Dr. Brett Litz for providing us with the MIOS instrument and helpful guidance. The authors would also like to thank Eric Cahill, Firefighter/Paramedic, Levi

Zimbelman, Firefighter, and Alexis Jones, Dispatcher, Las Vegas Fire & Rescue for helpful comments, suggestions, and formatting the MIOS survey.

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