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Behavioral Health Training for Fire Rescue Personnel

BY BRYAN L. STEINKOPF, VERA A. KLINOFF, VINCENT B. VAN HASSELT, TODD J. LEDUC, AND JUDY COUEWELS

First responders are considered a high-risk occupational group in that they experience a wide variety of physical and mental health-related conditions as a result of their occupational duties. Firefighters are exposed to unique stressors resulting from their diverse, dangerous, and potentially traumatic job-related responsibilities. Overall, firefighters experience more job stress than workers in nonemergency occupations. The specific job-related stressors reported by firefighters include shift work, managerial or organizational problems, inadequate equipment and insufficient resources, exposure to hazardous materials, a polarized work environment (i.e., shifting from mundane tasks to emergency responding), lack of control over their day-to-day schedules, the need for rapid and precise decision making, and having to convey tragic news. In addition to shifts of 10, 14, and 24 hours, many firefighters work more than 40 hours per week and routinely work on holidays and weekends. Such demanding workloads often limit their quality time spent with their loved ones. Additionally, the job of a firefighter has been expanded far beyond the sole task of fire suppression. As an example, recent improvements in fire suppression technology have added paramedic and emergency medical technician duties to their charge. Further, firefighters are exposed to a wide range of potentially traumatic events referred to as critical incidents, which may incite a stress response that impacts an individual’s emotional resources and sense of control. Possible critical incidents include accidents involving children, major fires, traffic accidents, burn victims, and violent incidents involving death. Critical incidents are often superimposed on long-term chronic stress experienced by firefighters, which often leads to a “spillover” effect that may not only decrease their work ability on the job but also negatively impact their home life. For example, many firefighters reported a lack of communication with their families.

Mental Health Disorders

Considering the link between occupational stress and mental health difficulties, it is not surprising that firefighters are at an elevated risk for a variety of mental health disorders. Indeed, it has been found that, compared to civilians, firefighters experience higher rates of psychiatric symptoms such as depression, alcohol abuse, sleep disturbances, and anxiety disorders, including post-traumatic stress disorder (PTSD). Further, these conditions may occur concurrently, which exacerbates the severity of symptoms.

Firefighters and other professionals often exposed to critical incidents have been found to be at a greater risk for depression than civilians. Lack of supervisory support is a factor commonly reported as a contributor to depressive symptoms. Also, it has been found that depressive symptoms among firefighters are associated with physical health symptoms (13) and diminished physical work ability.

Early studies found that the prevalence of problem drinking among first-responder workforces (30 percent) doubles that of the civilian population (15 percent) (3). A more recent study found that firefighters continue to regularly abuse alcohol. Alcohol abuse has the potential to impair cognitive and physical performance and, thus, translates quickly into diminished workplace productivity and safety risks. Moreover, alcohol abuse is particularly problematic for those who have experienced critical incidents, as drinking is used as self-medication. Psychiatric conditions, such as depression, substance use, and anxiety, increase the risk for suicidal ideation as well as actual fatal and nonfatal suicide attempts. There is evidence that suicidal ideation and behaviors are a significant issue among firefighters. Current estimates of firefighter suicides indicate that firefighters have some of the highest rates of workplace suicide fatalities. Additionally, Stanley, Horn, Hagan, and Joiner (2015) found a high prevalence of suicidal thoughts and behaviors in firefighters compared to the general population. Anecdotally, firefighters endorsed higher rates of suicidal ideation and attempts during their career and had made a suicide plan at some point in their lifetime. Exposure to dangerous or painful incidents intrinsic to firefighting may lower fear of death and elevate pain tolerance, thereby creating conditions that are more amenable to suicidal behaviors. A study of North Carolina firefighters found that suicide occurred three times more often than line-of-duty deaths. Of note, reported suicide rates among first responders are often reported because of inconsistent misclassification of deaths by suicide. Therefore, it is safe to assume that firefighter suicide rates may, in fact, be higher than what have been reported.

Given the nature of their shifts and job demands, impaired sleep quality is more common in firefighters than in civilians. Importantly, undiagnosed and untreated sleep disorders can lead to catastrophes, especially in occupations that require alertness and a rapid response time. According to Lowry (2008), firefighters reported feelings of disconnection and irritability toward their loved ones because of sleep irregularity.

Physical Conditions

In addition to the mental health difficulties often experienced by firefighters, firefighters are also at higher risk...
Behavioral Health Training

than the general population for certain medical problems, such as obesity, dyslipidemia; chronic musculoskeletal complaints; and cardiovascular disease risk factors, specifically body mass index (BMI) and systolic hypertension. Consequently, the fatality rate of firefighters is 4.5 times greater than the national average. The prevalence of these conditions in firefighters can be attributed to the physical dangers of the job; however, overwhelming evidence has identified mental health factors as highly influential in the onset of physical conditions.

Although several nationwide interventions have been launched to address the physical conditions (e.g., cancer) present in firefighters, there is a scarcity of programs designed to address the documented behavioral health issues. A lack of awareness and knowledge by both the firefighters and their administrators has increased their risk. Preventive efforts are needed to accurately identify at-risk firefighters and to determine how best to provide mental health resources that aid in reducing risk and increasing resilience.

Behavioral Health Training Program

Thus, there is a clear necessity for behavioral health programming geared toward the firefighter population. For this reason, we designed and implemented a preventive Behavioral Health Training (BHT) program to increase knowledge, awareness, self-efficacy, and resilience in fire personnel.

The BHT is presented with the intention of providing an example for departments to follow when collaborating with in-house and outside resources (e.g., mental health professionals) to provide the greatly needed education and awareness for our firefighters. An essential component of the BHT is not just what to present but also how to present the material to increase a positive outcome.

As other departments follow this program’s model, the content of the program should be adjusted to meet the needs of each department (e.g., higher rate of substance use or suicide). More importantly, however, the BHT provides a model for mental health professionals and training personnel of how to better customize the presentation of the material to increase the reception and application of it.

The BHT program was a series of psychoeducational presentations developed for the Broward Sheriff’s Office (BSO), Broward County (Fl) Department of Fire Rescue and Emergency Services. The presentations were held during the 2013 International Fire/EMS Safety and Health Week. BSO partnered with doctoral candidates in clinical psychology from Nova Southeastern University’s College of Psychology, under the supervision of Dr. Vincent Van Hasselt (professor of psychology), to develop and facilitate the 45-minute presentations. They were designed to address the abovementioned challenges faced by the firefighter/paramedic population.

In addition to explaining the dynamics of mental health-related obstacles, this component of the initiative provided more than 250 responders with internal and community resources to facilitate their access to behavioral health services. The presentation was divided into six sections: Introduction, Stress, Depression, Sleep, Substance Use, and Suicide.

Introduction

The introduction set the tone for the presentation. It focused on providing perspective to the attendees regarding the need for education on behavioral health issues. The presenters engaged the audience in a brief discussion regarding the mental health stigma in the fire rescue population and shared compelling statistics regarding the problems they faced.

The interrelation of the problems presented was emphasized—for example, high levels of stress increase the risk for abusing alcohol, which, in turn, contributes to sleep disturbances and consequent difficulty in mood regulation. Several videos featuring firefighters encountering similar challenges demonstrated the seriousness and impact of the issues.

Also, the presenters highlighted the importance for each firefighter to identify “tell signs” (i.e., risk factors) in their peers, emphasizing that this is one of the most important ways they can protect and help each other. Various behavioral health resources, including hotlines, Web sites, community mental health centers, and an overview of the firefighters’ Employee Assistance Program (EAP) were provided; business cards with EAP contact information were provided for portability and easy access.

Stress

The stress section was the first portion of the presentation, as stress highly influences the remainder of the areas covered. The fight-or-flight response and the physiological effects of this response were reviewed, and their connection to adverse health outcomes for firefighters was emphasized—for example, cardiac death accounts for 45 percent of all leading causes of firefighter deaths.

Next, myths associated with stress were discussed to correct common misperceptions, such as “stress keeps people motivated” and “to normalize the experience of stress.” Different manifestations of stress (e.g., physical, mental, emotional, behavioral) were explained. Positive coping techniques (e.g., seeking social support, self-care, engaging in hobbies) and effective behavioral health interventions (e.g., relaxation techniques, behavioral activation, cognitive restructuring) were suggested at the end of the session. Time constraints did not allow us to focus on the application of coping strategies. It is recommended that training that focuses on coping techniques follow awareness-oriented training.

Depression

It was stressed that depression is an illness and not a weakness. Information on the biological/physiological basis of clinical depression was illustrated by displaying electroencephalogram (EEG) brain scan images. A description of how depression is manifested in different individuals was presented to reveal the wide range of signs often present in this illness. Specific effort was taken to discuss how depression may manifest differently in firefighters compared with members of the general population (e.g.,
increased irritability and sexually acting out as opposed to depressed mood and social withdrawal. Additionally, risk factors for depression were reviewed (e.g., relationship problems, money problems, pregnancy, alcohol, loss), along with other common myths related to depression, such as "medication is the only treatment for depression," and "depression will go away without treatment." This section concluded with strategies to help depressed peers, such as listening rather than feeling the need to problem solve. Mental health treatment, including what may deter seeking treatment and how proper mental health treatment should look, was also reviewed.

**Sleep**

Both the short- (e.g., decreased alertness, memory impairment, occupational injury, driving accidents/injury) and long-term (e.g., increased cardiovascular disease risk, decreased immune system functioning, obesity) consequences of sleep disturbance were presented. Signs of insufficient sleep, as well as common causes for insufficient sleep, were reviewed. Several avenues for intervention were suggested, including seeing a physician or a sleep specialist (e.g., sleep studies were included as part of their insurance plans), lifestyle changes, and improved sleep hygiene. Sleep hygiene was discussed with an emphasis on the individuality of sleep needs and that what may work for one person may not work for another.

Sleep hygiene was presented as a list of suggestions that they could employ to assist with sleep disturbance. If one suggestion did not work, they were instructed to try another or several others. Sleep hygiene suggestions included restricting the use of the bedroom for sleep, sexual activity, and sickness; adjusting lighting and temperature; appropriate timing for naps; caffeine and alcohol use; when to go to bed; and how to handle nightly awakenings.

**Substance Abuse**

After presenting research documenting the higher rates of substance abuse in fire rescue personnel compared with the general population (29 percent and 5.5 percent, respectively), common myths of substance use were covered in an interactive "True or False" fashion. Such myths included "Alcohol will help you sleep better," and "You are only an alcoholic if you have a beer belly." Additionally, the signs of alcohol abuse were presented (e.g., redness of the nose or cheeks, impaired memory, absenteeism) to help them recognize those signs in their peers.

Steroid use was also covered. Particular attention was directed to the motivation for steroid use and the harmful consequences (e.g., acne, gynecomastia, risk of cardiac difficulties).

**Suicide**

The section on suicide focused on the common risk factors, signs, symptoms, and interventions of suicide. Warning signs (e.g., depression, giving away possessions, talking about suicide, sudden mood changes) were emphasized to assist participants in recognizing
prolonged patterns in their peers. Given the common myths surrounding suicide—specifically, "If a person is suicidal, there is nothing we can do to stop them"—instructions were provided for how to approach their peers and what to do to prevent a tragedy. Recommendations included not leaving them alone, asking them directly about suspected suicidality, not keeping secrets, taking any discussion of suicide seriously, and providing necessary resources.

Although there are many community and nationwide resources for someone with suicidal thoughts, plan, or intent, such as 1-800-SUICIDE and 1-800-273TALK, emphasis was placed on resources whose personnel were better prepared to assist first responders. For example, Safe Call Now (www.safecallnow.org) is a hotline staffed by first responders trained to work with their specific situations and has been helpful to emergency response personnel nationwide.

**Preliminary Results**

All of the 250 participants were provided a short 10-item "True or False" questionnaire about the main topics covered before and after the presentation to assess attention and knowledge acquisition. The average scores on the post-test were higher than the average scores on the pre-test, indicating that participants paid attention to the presentation and learned new information with which they can better assist themselves and their peers. Further, throughout each presentation, participants were attentive, were responsive to questions, and appeared to enjoy the material. After almost every presentation, attendees stayed to further discuss the material with instructors and among themselves. This supports one of the goals of the training: to increase attention this material is receiving by firefighters as a whole, thus increasing the ability for peers to assist one another in times of difficulty. Evaluations completed by the participants indicated that the majority found the presentation practical to their job performance and beneficial. Some excerpts included the following:

- "I thought the presenters did great. Kept my interest on the topic and made it enjoyable. Thank you for the research, informative lecture, and your time."

- "Excellent course; shows realization of stress factors, signs of depression that are true and out there."

**Discussion**

Following our experience in the design, implementation, and response to the BHT program, we suggest that similar training be introduced to all fire rescue departments. It is essential that such training programs be a part of a comprehensive continuum of care that covers physical and mental health domains. (17) (13) Essential to this may be a perspective change where emphasis is placed on the identification, assessment, and prevention of difficulties before they develop. (6) Although there are many effective interventions, a greater focus is needed on prevention efforts. With a greater focus on prevention, a culture change that fosters resiliency can take place.

Further, in each stage of this training, modifications were made to better fit the firefighter culture. This was achieved in the way content was described, presentation style, selection of presenters, inclusion of media (e.g., videos, pictures, memes), and the use of humor throughout. Most of the topics covered are inherently negative in nature; through the use of humor, the material had a higher likelihood of a favorable response. Additionally, all presenters worked to gain a better understanding of the firefighter culture by reviewing relevant research and interacting with firefighters through ride-alongs, which were very helpful in having presenters gain a greater appreciation of the firefighter culture and occupation. They allowed presenters to "customize" their material to enhance applicability and relevance for the audience. Further, ride-along experiences provided familiarity with individuals in the firefighter community, which fostered discussion and interaction. If a department were to collaborate with outside mental health professionals to provide behavioral health training, it is recommended that these professionals familiarize themselves with firefighter culture before creating a training program; this will maximize the efficiency of the training.

It is our belief that BHT should become part of the standard curriculum from the academy to annual mandatory training.

Repeated presentations would assist firefighters by reducing the stigma of the stress-related issues, thus increasing the opportunity for peer recognition of difficulties and peer support, keeping personnel up to date on the current research of these domains; and increasing the likelihood that firefighters will seek help from mental health professionals when it is needed. There are indications that greater knowledge of the signs and symptoms of occupational stress in fire rescue personnel will reduce sick time, turnover, early termination, mistakes on the job, and internal problems such as poor administrative communication and discord among peers. (38)

However, providing a basic BHT will not be enough. The BHT "opens the door" for follow-up training based on the needs of the agency. These programs should cover specific topics in greater detail (e.g., PTSD, depression) and interventions (e.g., progressive muscle relaxation, problem solving, positive coping strategies) that have proved helpful to firefighters. (60, 42) Many departments have also found it useful to implement peer-support/counseling programs in which peers are provided with in-depth training on how to recognize signs and symptoms and effectively respond. (41) Peer interventions have also proven beneficial for nutrition behavior and physical activity. (43) Being able to consult with a peer may reduce the resistance to and stigma associated with seeking help for a psychological problem and improve the ability to reduce burnout from critical incident-related stress. (44)

With small changes and administrative support, the stigma surrounding mental health can be reduced, which will ultimately increase the well-being and effectiveness of our first responders.

**REFERENCES**


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www.FireEngineering.com
Improving Your Fireground Performance: Firefighter Functional Fitness

BY DAN KERRIGAN AND JIM MOSS

"We are what we repeatedly do. Excellence, therefore, is not an act but a habit."—Aristotle

For decades upon decades, most firefighters have agreed that their own health and fitness are key factors not only in improving fireground performance but also in increasing the chances for a long and healthy career and retirement.

We couldn’t agree more. In fact, health and fitness are more than key factors; they are requirements, and there’s good reason for this. For decades and decades, the number-one killer of firefighters has been and continues to be heart disease.

Much like fireground success, for our fitness efforts to be successful, we must also apply the correct strategies and tactics to our approach. In this article, we outline the strategy of the Four Pillars of Firefighter Functional Fitness, describe their components, and tell you how you can turn this strategy into a tactical approach to improving your functional fitness.

The Four Pillars of Firefighter Functional Fitness

If we are to truly improve our overall health and fitness, we must develop a comprehensive approach. Focusing specifically on strength training or cardiovascular capacity alone will not yield the results we want. By using the Four Pillars of Firefighter Functional Fitness, we can develop a strategy for success.

Pillar #1: Physical Fitness

If you can raise a ground ladder with a high level of skill but it takes you 10 minutes to do it, you are not performing optimally. If you can expertly stretch a hoseline from the engine to the third floor at a working fire but you do not have the endurance to use it to extinguish the fire, you are deficient in your abilities as a firefighter. Simply put, our physical fitness provides the foundation for our ability to carry out the fireground tasks demanded of us.

But, when it comes to physical fitness, what is really important? It’s our strong belief that firefighters must be functionally fit—in other words, directly relate our fitness activities to what we do on the fireground.

To help you do this, we have developed The Big 8 of Firefighter Functional Fitness: core strength, cardiovascular capacity, flexibility, push, pull, lift, carry, and drag. The Big 8 is based on the philosophy that our core is our center and the base from which we work. A strong core supports every other component of the fireground while doing so. We must also be able to work hard, rest, work hard again, and continue this process until the job is done. For these reasons, firefighter functional fitness emphasizes both high-intensity interval training (HIIT) and moderate-intensity endurance training for our cardiovascular system.

Incorporating both approaches into our workout routines will be of the most benefit, both from a work output and endurance standpoint. Both will improve

1 A high level of cardiovascular capacity is essential. We can go "from zero to 100" in the blink of an eye, often pushing our bodies beyond theoretical maximum heart rate. (Photo by Jim Moss.)