

Introduction/Problem Statement

There were a total of 1,064,800 active career, volunteer, and paid per call firefighters representing nearly 87 percent of the registered departments' personnel (U.S. fire Administration, 2021). Firefighters represent a subgroup of medical and non-medical first responders that deal with different types of trauma because of the calls that they are required to respond too. Firefighters are not only exposed to 'somatic trauma' but also to 'psychological trauma' (Karsavina, Bebetsos, Malliou, & Beneka, 2015). They respond to fires (commercial, house, cars, wild, or brush), emergency medical calls, hazardous material spills, technical rescue, lift-assistance, lockouts, police assists, water removals, and gas investigations. Consistent exposure to traumatic events can lead to mental health problems. Empirical evidence has found elevated rates of the following mental health issues among firefighters: depression, substance abuse disorders, anxiety, sleep disorders, posttraumatic stress and posttraumatic stress disorder, and suicidality (Johnson et al., 2020). Due to the 'macho mentality' prevalent in the male-dominated occupation of firefighting, firefighters may be seen as weak if they report mental health issues. Firefighters may be worried about their reputation and see mental illness as a threat to their career, thus they

Research Question

What are the mental health effects of the first responders, especially firemen, after dealing with tragic events?



Methods

- o Sacred Heart Library database
- o Google Scholar
- o References from other articles
- o Keywords: first responder, firefighters, culture, calls, duty hours, mental health, mental illness, stigma, depression, PTSD, suicide, resources, prevention

Literature Review Findings

- o fire departments have increasingly taken on new responsibilities, including vehicle extrications, incidents involving hazardous materials, and medical aid calls. In 2013, 68% of the calls nationwide for firefighters were medical compared with only 25% of fire-related calls (National Fire Protection Association, Fire Analysis and Research Division, 2014).
- o Within the culture of firefighters, boundaries of acceptability of humor can be stretched because of the drastic conditions of critical events (Larry & Roth, 2013).
- o Firefighter culture is unique and those firefighters who endorse mental health concerns and treatments barriers vary by subpopulation (volunteer, career, wildland) and geographical factors (rural vs. urban) (Johnson et al., 2020).
- o For firefighters, intra-group bonds must be exceptionally strong because members' lives and the lives of the citizens whom they serve depend on their unity (Larry & Roth, 2013).
- o Emotional exhaustion represents an important protentional consequence related to shift work, as over time the stress associated with shift work leads to strain (Halbesleben, 2009).
- o 'Death or rescue of a child' was confirmed as the most traumatic event with other traumatic events being 'exposure to a mass fatality incident' and to 'serious injuries of families in car, bus, and train crashes' (Katsavouni, Bebetsos, Malliou, & Beneka, 2015).
- o The prevalence rate of PTSD ranges from 5.4% to 37% and depression ranges from 22% to 39.7% (Johnson et al., 2020).

Literature Review Findings Cont.

- It is estimated that 1.9% to 8.7% of the general adult population have attempted suicide at least once in their lifetime, whereas 15.5% of firefighters endorsed at least one suicide attempt during their career (Henderson, Hasselt, LeDuc, & Couwels, 2016).
- Suicide rates in firefighters suggest that death via completed suicide is more probable than a work-related injury (Johnson et al., 2020).
- One study found that firefighters reported notably high rates of suicidal ideation, plans, and attempts during their firefighting careers (46.8%, 19.2%, and 15.5% respectively) (Chu et al., 2016).
- Mindfulness is correlated with fewer symptoms of PTSD, depression, alcohol misuse, and physical symptoms (Johnson et al., 2020).
- Firefighters tend to prefer firefighter-specific resources for mental health help and suicide prevention, such as online resources, rather than general resources such as help hotlines (Killip, Kwong, MacDermid, Fletcher, & Carleton, 2020).



Conclusions

In conclusion, the stigma around mental health needs to be broken down. Firefighters should not feel as if they are going to be viewed as lesser, or that they are going to lose the reputation that they have. Also, there should be further research done into the types of resources that firefighters would rather have whether it be in-person therapy, helplines, committees, or through telehealth.

References

- National Fire Protection Association, Fire Analysis and Research Division. (2013). *U.S. fire department profile*. Retrieved from <http://www.nfpa.org/research/reports-andstatistics/the-fire-service/administration/us-fire-department-profile>
- U.S. Fire Administration. (2021). Retrieved March 29, 2021, from <https://apps.usfa.fema.gov/registry/summary>
- Katsavouni, F., Bebetos, E., Malliou, P., & Beneka, A. (2016). The relationship between burnout, PTSD symptoms and injuries in firefighters. *Occupational medicine*, 66(1), 32-37.
- Johnson, C. C., Vega, L., Kohalmi, A. L., Roth, J. C., Howell, B. R., & Van Hasselt, V. B. (2020). Enhancing mental health treatment for the firefighter population: Understanding fire culture, treatment barriers, practice implications, and research directions. *Professional Psychology: Research and Practice*, 51(3), 304-311. <https://doi.org/10.1037/pro0000266>
- Killip, S. C., Kwong, N., MacDermid, J. C., Fletcher, A. J., & Carleton, N. R. (2020). The Quality, Readability, Completeness, and Accuracy of PTSD Websites for Firefighters. *International journal of environmental research and public health*, 17(20), 7629. <https://doi.org/10.3390/ijerph17207629>
- Henderson, S. N., Van Hasselt, V. B., LeDuc, T. J., & Couwels, J. (2016). Firefighter suicide: Understanding cultural challenges for mental health professionals. *Professional Psychology: Research and Practice*, 47(3), 224-230. <https://doi.org/10.1037/pro0000072>
- Evarts, B., & Stein, G. P. (2020, February). U.S. Fire Department Profile. Retrieved May 02, 2021, from <https://www.nfpa.org/News-and-Research/Data-research-and-tools/Emergency-Responders/US-fire-department-profile>
- Moran, L., & Roth, G. (2013). Humor in context: Fire service and joking culture. *New Horizons in Adult Education & Human Resource Development*, 25(3), 14-26. <https://doi.org/10.1002/nha3.20028>
- Jonathon R.B. Halbesleben. (2009). The influence of shift work on emotional exhaustion in firefighters: The role of work-family conflict and social support. *International Journal of Workplace Health Management*, 2(2), 115-130. doi:<http://dx.doi.org/10.1108/17538350910970200>
- Chu, C., Buchman-Schmitt, J. M., Hom, M. A., Stanley, I. H., & Joiner Jr, T. E. (2016). A test of the interpersonal theory of suicide in a large sample of current firefighters. *Psychiatry research*, 240, 26-33.

Photos are from Michael Raymond Facebook Page