

Executive Summary for the study entitled: **“Mental Health Status for Emergency Services Workers within the Winnipeg Fire Paramedic Service”**.

Principle Investigator: Jennifer Setlack

Advisor: Dr. Edward Johnson

This study was conducted between December 2018 and March 2019 within the Winnipeg Fire Paramedic Service. My honours thesis, which examined a sub-section of all of the variables measured, was completed in April 2019. The rest of the variables are going to be analyzed this summer with the goal of publishing within the next year. The following is a short summary of the research performed thus far.

Overview

Paramedics and firefighters are at a higher risk for developing psychopathology due to frequent exposure to traumatic incidents inherent within their work. In addition, current research shows that this population also experiences high levels of workplace violence due to their often unpredictable and dangerous work environments. The purpose of this study was to examine the relationship of workplace violence and traumatic events to psychopathology in emergency services workers. The secondary aim was to investigate how coping styles and self-compassion may moderate this relationship. A convenience sample of ($N = 117$) firefighters and ($N = 129$) paramedics were recruited from the Winnipeg Fire Paramedic Service via work memos, posters, and recruitment sessions out of a possible 883 firefighters and 285 paramedics. Participants completed a series of online self-report questionnaires on Qualtrics. The study used a cross-sectional design to determine the influence of workplace violence on psychopathology (PTSD, depression, anxiety, stress) and burnout.

Findings

The equivalence of the firefighter and paramedic subgroups was compared, these two groups differed significantly on all of the study variables, so a decision was made to analyze these groups separately. The degree of self-reported psychopathology and burnout was measured to identify the percentage within our sample that met or exceeded cutoff values (indicating clinically significant levels of distress or dysfunction) for psychopathology. Note that these cutoff values are not necessarily indicative of a clinical diagnosis, which is established through professional judgment. Our study found that 10.3% of firefighters and 19.4% of paramedics obtained scores above the cutoff value for PTSD, indicating significant difficulties with PTSD symptoms. Furthermore, the study found that 17.9 to 18.8% of firefighters indicated moderate to extreme levels of depression, anxiety and stress. On the other hand, 26.4 to 27.9% of paramedics indicated moderate to extreme levels of depression, anxiety and stress. Burnout can be defined as a long-term reaction to work-related stress, characterized by physical, affective and cognitive exhaustion and disengagement that individuals experience in relation to their work. Burnout was measured in this study using the two subscales of disengagement and exhaustion. Using cutoff values established in the literature, we found that 58.1% of firefighters and 86% of paramedic's experiences exhaustion related burnout. Furthermore, 67.5% of firefighters and 87.6% of paramedic's experiences disengagement related burnout. These findings confirm and extend what others have presented in the literature that firefighters and paramedics report high levels of psychopathology and burnout.

We also asked participants about their experiences with workplace violence using two measures. The first was an objective measure asking participants to indicate if they had experienced various types of workplace violence in the past month (see figure below). The second was a two-part subjective measure in which participants were asked: “How often in the past year have you been engaged in the line of duty and felt that your life was at risk?” In our sample, 59.8% of firefighters and 68.7% of paramedics responded that they had felt this way at least once in the past year. Finally, participants were asked: “How often in the past year have

you been engaged in the line of duty and have felt that you have been at risk for serious physical injury?” Here, 83.8% of firefighters and 85.3% of paramedics have felt this way at least once within the last year.

There were significant associations found between years of experience and psychopathology for firefighters only. Specifically, moderately experienced staff (16-20yrs) scored higher on the PTSD, depression anxiety and stress scales than newer staff (0-5yrs). There were no significant associations found between psychopathology and the demographic variables measured for paramedics. Workplace violence was shown to have pervasive impacts on psychopathology and burnout in paramedics, but not in firefighters. Workplace violence was measured in two ways: exposure to workplace violence, which is the amount of workplace violence experienced in the past month, and past-year exposure to trauma, which is the amount of times in the past year the participant felt their life was at risk or they were at risk of serious physical injury. Paramedics reported significantly higher levels of exposure to workplace violence than firefighters, suggesting that workplace violence is more of a chronic concern for them than it is for firefighters. This higher level of exposure appears to result in greater psychopathology and burnout, perhaps indicating that in order for these relatively smaller forms of violence to have an impact, they must occur often enough to have a cumulative impact. This explanation does not account for the relationship of past-year exposure to trauma and psychopathology in paramedics because firefighters and paramedics had roughly similar levels of past-year exposure to trauma. For past-year exposure to trauma, it may be that the forms of trauma that paramedics are exposed to leave them feeling more anxious and vulnerable than is the case for firefighters.

Self-compassion and coping skills were also measured and tested in hypotheses which looked at the association of these variables with levels of psychopathology and burnout. Higher levels of self-compassion were associated with lower levels of psychopathology and burnout for both firefighters and paramedics. For firefighters, self-compassion did not moderate the relationship of exposure to workplace violence or past-year exposure to trauma on psychopathology or burnout. But for paramedics, self-compassion was shown to moderate the relationship in exposure to workplace violence on PTSD and anxiety, and the relationship of past-year frequency of trauma exposure on anxiety. That is, at higher levels of workplace violence, paramedics with higher levels of self-compassion show less of an increase in psychopathology and burnout. The results indicate that although self-compassion is generally protective for both firefighters and paramedics, it is particularly helpful for paramedics who have experienced greater exposure to workplace violence. For coping skills, behavioral disengagement and self-blame, which are considered maladaptive coping strategies, were both shown to have a significant main effect on PTSD, meaning that higher levels of behavioral disengagement and self-blame were associated with higher levels of PTSD for firefighters and paramedics.

Implications

The main findings of this study are that firefighters and paramedics both demonstrate high levels of psychopathology and burnout, with paramedics showing slightly higher levels of both. These differences may in part be due to the different types and magnitude of workplace violence experienced by both groups and the greater association of workplace violence on mental health found for paramedics. Due to these differences, there may be some value in exploring strategies and services to be tailored to assist firefighters and paramedics in the workplace. These findings can help to inform emergency services departmental policies, which may act to protect current firefighters and paramedics and may have the potential to improve working conditions and career longevity for future practitioners in this field not only in Winnipeg, but globally.

This is just a short summary of my research thus far. If you would like to read my full thesis, a PDF copy can be emailed to you. To request a copy, please send me an email at: jsetlack@yahoo.com.

Percentage of Firefighters and Paramedics that have Experienced Workplace Violence in the Past MONTH

