

## **MCCONNELL - *Unpacking the Sociocultural Characteristics of Operational Stress Injury Among Paramedics: a Mixed Methods Approach***

### **Authors:**

Meghan McConnell, Department of Innovation in Medical Education, the University of Ottawa; Elizabeth Donnelly, School of Social Work, the University of Windsor; Walter Tavares, Institute of Health Policy, Implementation, and Evaluation, the University of Toronto; Justin Mausz, Department of Health Research Methods, Evidence, and Impact, McMaster University.

**Priority Research Area:** (1) Incidence and Prevalence; (2) Biological, clinical, and social characteristics of PTSD; (3) Prevention of PTSD

**Relevant PSP Population(s):** Paramedics

**For more information, please contact:** Meghan McConnell, PhD, Department of Innovation in Medical Education, the University of Ottawa. PMC 102, 850 Peter Morand Cres, Ottawa, ON, K1G 5Z3. meghan.mcconnell@uottawa.ca. 613-562-5800, Ext 8295

**What is the issue?** Despite growing public, media, and scholarly interest in the mental health and wellbeing of paramedics, the issue remains poorly understood. Existing research into the prevalence and risk factors of post-traumatic stress illnesses (PTSD) among paramedics suffers from important methodological limitations that leave policymakers and mental health clinicians on uncertain footing when considering how to address this complex issue. Consequently, prevalence remains uncertain, contributing factors unclear, and the underpinning social and cultural issues largely unexplored. Robust research with a social science perspective is needed to more fully understand the problem.

**What was the aim of the study?** Our objective in this study was to develop a program of research that (1) obtained methodologically rigorous estimates of the prevalence of operational stress injury among paramedics; (2) quantified the relationship between theoretically plausible predictors and the risk of developing operational stress injury; and (3) unpacked the broader sociocultural context of the paramedic profession and the people working and living within it.

**How was the study conducted?** We used a convergent parallel mixed methods approach to simultaneously gather quantitative and qualitative data. Our research was situated in a single, large, urban paramedic service in Ontario. The quantitative component of the study involved the distribution of a paper survey during paramedic continuing medical education sessions to estimate PTSD prevalence and risk factors. The survey contained a battery of previously validated screening tools to assess for symptoms consistent with various forms of operational stress injury. The qualitative research used a constructivist grounded theory approach to explore underpinning social and cultural features of the profession that contribute to PTSD.

**What did the study find?** A total of 589 paramedics provided complete surveys for analysis out of 607 eligible participants for a response rate of 97%. Among our participants, 11% screened positive for post-traumatic stress disorder (PTSD), 15% for depression, 15% for anxiety, 45% for moderate perceived stress, and 5% for high perceived stress. 25% of participants met the screening criteria for any one of PTSD, anxiety, or depression, and 6% met the criteria for all three. 11% of our participants met the criteria for "low resilience" on a self-report measure, and we found that low self-reported resilience was associated (more than other demographic variables) with operational stress injury outcomes. For our qualitative study, we purposively recruited a carefully selected sample of 21 participants who provided 42 interviews. We identified a complex interaction between constructions of professional identity and wellbeing. The experience of PTSD is deeply disruptive to the participants' sense of self, and there are important opportunities in the organizational response to operational stress injury to enhance employee wellbeing and return to work.

**What are the implications of this study?** In contrast to much of the recent research in this area, our study used a carefully defined participant pool with a very high response rate. Our prevalence estimates for operational stress injury are less than half of those of recent studies using the same screening tools, suggesting selection bias may be an important issue in the extant research. Nevertheless, among current, active-duty paramedics in our study site, 1 in 5 met the screening criteria for some form of operational stress injury, with potentially-significant implications for workforce retention, employee mental health, and patient safety.

**What are the key messages?** PTSI may not be as common as previous studies have suggested, but rates are still concerningly high, with fully 25% of the paramedics in our study site currently working with diagnosable levels of symptoms of operational stress injuries. The interplay between paramedic work and the participants' sense of self is very complex, and the effects of operational stress injury are disruptive on both a professional and personal level. Chronic workplace stressors, and - in particular - the organizational response to 'critical incidents' play an important role in paramedic mental health and wellbeing.

**Provide a list of potential target audiences for this research:** We suggest our research is applicable and of interest to a number of target audiences, including: mental health clinicians (e.g., psychiatrists, psychologists, social workers, occupational therapists, etc.), paramedic services leadership and policy-makers, and researchers investigating paramedic mental health.