

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

Authors:

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

Relevant PSP Population(s): Paramedics

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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.

[ANDERSON] - Development and validation of a mental health screening tool for public safety professionals

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Priority Research Area: Neuroscience, Mental Health and Addiction

Relevant PSP Population(s): All

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What is the issue? The prevalence of mental health issues and PTSD in public Safety Personnel (PSP) is higher than that of the average population. About 44% of PSP experience at least one mental health disorder as a result of their occupations. In this context, there is an important need for a mental health screening tool specifically designed to identify at risk individuals within PSP and encourage them to seek medical follow up for post traumatic stress injury (PTSI) or for providing clearance prior to participation in a program that may trigger or exacerbate existing symptoms. This has the potential to increase access and the effectiveness of mental health services and programming.

What was the aim of the study? The project was designed to develop a brief mental health screening tool specifically for PSP. Screening refers to a procedure in which a standardized instrument or protocol helps to identify individuals who may be at risk for mental health disorders and suicide. Screening is generally brief, narrow in scope, and may be self-administered, administered by support staff with appropriate training and an electronic device (e.g., computer), or administered by clinicians. Screening is neither definitively diagnostic nor a definite indication of a specific condition or disorder; however, screening can be used for early identification of individuals at potentially high risk. The screening tool is intended for use by clinicians in interviewing PSP, or by PSP themselves to self-identify a potential mental health challenges related to a PTSI. The screening tool might also

serve as a pre-screen for participation in mental health programming (e.g., training) to identify PSP who might benefit from first seeking treatment.

How was the study conducted? Using data collected from the CIPSRT prevalence study (i.e., 5,813) we developed and validated a short mental health screening tool designed specifically for PSP. The current study used half of the prevalence survey data to develop a brief screening tool for generalized anxiety disorder, major depressive disorder, posttraumatic stress disorder, panic disorder, social anxiety, and risky alcohol use. Validity was assessed with the second half of the PSP data, and again in a second dataset of 1,155 correctional officers. Feasibility and acceptability was assessed with novel sample of 20 PSP with PTSD.

What did the study find? Using various statistical approaches, six self-report, scientifically validated measures were reduced to their 2-3 most predictive items. That is, the items that together best predicted total questionnaire scores were identified. The result is a 18-item screening tool with 6 subscales; generalized anxiety, major depressive, post-traumatic stress, panic, social anxiety disorders, and risky alcohol use. The 18-item screening tool was initially validated within the PSP population and in an independent population of correctional officers. A series of linear and logistics models show strong correspondence between the predicted and actual questionnaire scores, indicating that the reduced screening items do an excellent job capturing the variability in the full questionnaire scores.

Recommendations include: Assessment of the concurrent and discriminant validity of the screening tool by comparing individual results with structured interview assessments and other diagnostic measures conducted by clinical psychologists or psychiatrists; Assessment of the test-retest stability of the assessment tool over a two-week period in a patient population where extreme short-term change in illness severity is not expected (to become significantly better or worse); assess the functional utility (feasibility and acceptability) of the screening tool with administrators' feedback; and establish preliminary cut-off scores to identify individuals with elevated screening scores on any of the six items.

What are the implications of this study? Having access to a brief screening tool that is specific to PSP and can provide indications regarding several mental disorders (i.e., generalized anxiety disorder, major depressive disorder, posttraumatic stress disorder, panic disorder, social anxiety, and risky alcohol use) has several potential benefits including, but not limited to: 1) PSP can quickly self-assess and decide whether a more detailed assessment is warranted; 2) PSP who screen positive for one or more mental disorders may ultimately be more likely to access evidence-based care early; and 3) a brief screening tool can support ongoing assessments of mental health and proactive self-care behaviours among PSP.

What are the key messages? PSP are regularly exposed to potentially psychologically traumatic events that may slowly or suddenly compromise their mental health. A brief screening tool specifically for PSP to assess their mental health may be beneficial for early access to care. The current tool, derived from existing well-validated tools, appears to be a promising option for such PSP mental health assessments.

Provide a list of potential target audiences for this research: Researchers, clinicians, policy makers, PSP leadership, membership, and PSP stakeholder organizations

[SUAREZ] - Mapping resilience pathways and preferences for help-seeking of public safety personnel in the context of post-traumatic stress injuries: A community engaged research project in Ontario

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Collaborator: Dr. Frank Sirotych (CMHA Toronto, Social Work-University of Toronto)

Collaborator: Dr. Abdel Elkchirid (Social Work, WLU)

Priority Research Area: Mental health awareness, stigma reduction, anti-discrimination, and/or literacy programs that have the potential to improve mental wellness among PSP

Relevant PSP Population(s): Police members in Ontario

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What is the issue? Police have incredible responsibility for and power over our communities. Equally, they are exposed to some extremely complex traumatic situations and are regularly expected, to continue serving without difficulty. However, despite the availability of mental health services, the prevalence of Post-Traumatic Stress Injuries (PTSI) among Public Safety Personnel in Canada, including members of Police Services, continues to be significantly higher (40%) than for the general population (12%).

What was the aim of the study? This study's purpose was to identify sources of strength and resilience for those police service members in Ontario who remain functioning well despite similar exposure to occupational stress, and whether their help seeking preferences are enhancing or hindering such resilience.

How was the study conducted? This cross sectional study uses an online survey design and purposeful sampling strategies to recruit current and former members of police services in Ontario. The final sample included 241 participants from more than ten different police services. Resilience was measured by the Connor-Davidson Resilience Scale (CD-RISC). M PLUS was used to test a structural equation modeling (SEM) analysis examining the relationship between resilience, individual and social context factors, attitudes towards mental health, and help seeking preferences.

Qualitative interviews have recently been completed and are undergoing analysis.

What did the study find? Participants were asked about what things in their life helped them the most to cope with the stresses of their job, with the most common responses being the people in one's life: family, friends, and supportive colleagues. Similarly, participants were asked to indicate by which method they prefer to get information or help regarding their mental health and the top two preferred methods were from a trusted colleague and by searching the internet. Peer support groups were selected by far fewer participants, indicating a preference for informal relationships with peers rather than formalized peer support groups.

Self-rated mental health, life satisfaction, sense of community belonging, and attitudes towards mental health treatment directly predicted resilience ($R^2 = .58$, $p < .001$). Individual predictors, self-rated mental health and life stress, significantly indirectly predicted resilience via life satisfaction ($\beta = 0.19$, $SE = 0.04$; $\beta = 0.06$, $SE = 0.03$, respectively), and self-rated mental health and attitudes toward mental health treatment significantly indirectly predicted resilience via community belonging ($\beta = 0.06$, $SE = 0.02$; $\beta = 0.03$, $SE = 0.01$, respectively).

What are the implications of this study? - Police services should continue to offer self-service such as online portals for accessing helpful information as well as reducing stigma around help-seeking
- Police services should help foster good peer relationships among their members so that members can help each other as needed in informal ways
- Police services should look at ways to support their members' overall wellbeing outside of work, since life satisfaction and sense of community belonging were direct predictors of resilience

What are the key messages? Preferred methods of coping are through relationships, not activities
- Preferred ways of accessing help are informal (peers and the internet), not formal (e.g. professionals or

formalized peer support groups)

- Resilience is influenced by factors directly related to work as well as overall wellbeing outside of work

Provide a list of potential target audiences for this research: - Researchers

- Mental health professionals

- Chiefs of Police or other management positions related to policing

- Employee Assistance Programs