[MACDERMID] - Cross-jurisdiction and contextual evaluations of mental health resiliency training in firefighters

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Priority Research Area: Firefighters

Relevant PSP Population(s): Firefighters

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What is the issue? Firefighters are exposed to extremely traumatic events that result in elevated rates of post-traumatic stress injuries, depression, and suicide. Resilient Minds (RM) is a skill-building mental health program developed as a partnership between Vancouver Fire and Rescue Services and the Canadian Mental Health Association (CMHA) Vancouver-Fraser (VF) branch. It is a comprehensive, 4-module program designed specifically for firefighters to inform them on trauma, psychological distress, trauma-informed responses, and building resiliency. Although the initial experiences have been positive, rigorous data is needed to assess the health and work impacts, and to support scale-up.

What was the aim of the study? Immediate Goal: To evaluate the delivery and health/work impacts of a protective mental health intervention (RM) for firefighters; and determine if/how location, employment context, gender, age, and prior exposures mediate these.

Long-term Goals: Inform national scale-up of RM.

Research questions:

Q1. What are the differences in critical incident exposures, event impact, psychological stress, work lost, and at-work limitations between 300 firefighters in Vancouver who have completed the RM program and 300 who have not yet completed the training?

Q2. What are the differences between 300 career Vancouver firefighters and 300 volunteer Prince Edward Island (PEI) firefighters pre- and post-RM training?

Q3. What factors mediate training outcomes?

Q4. What are the experiences, perceived benefits, challenges, and ongoing needs of participants, trainers, program administrators, and fire services in optimizing the delivery and scale up of the RM program?

Q5. What are differences in program implementation across 2 unique jurisdictions?

How was the study conducted? We used concurrent triangulation mixed-methods:

QUANTITATIVE (Q1-Q3): Program evaluation forms and standardized measures on the impact of specific critical events, overall psychological distress, and general health were completed pre-training, immediate post-training, and 3 months post-training. Statistical comparisons will be made using ANOVA and regression.

QUALITATIVE (Q4-Q5): Interpretive description of qualitative interviews with peer trainers, firefighters, and chiefs described the initial experiences with program implementation, salient components, organization or individual barriers/facilitators to implementation, and perceptions of how the program can be optimized to address future needs.

What did the study find? Preliminary QUANTITATIVE findings: Data collection and analysis are still in progress. Our firefighter research champions were essential to data collection, but it was challenging to collect complete data, especially for long-term follow-up. So we have developed a national web-based data collection system that can be used for future research and program evaluations (pilot testing in progress). Early data indicate high rates of satisfaction with Resilient Minds modules and high rates of critical event exposures in volunteer (PEI) firefighters.

Preliminary QUALITATIVE findings: Resilient Minds increased firefighters' mental health awareness and communications, and reinforced coping strategies. A knowledgeable firefighter peer trainer who can be trusted and who had lived experience of the issues faced by firefighters, management support, and a local champion were crucial to successful implementation at both sites. Adaptations to the program context were needed in PEI. Scheduling was the major barrier to resiliency training. Both Vancouver and PEI firefighters expressed the need for refresher courses, family/partner training, and local mental health resources. We found differences in critical incident exposures, training priorities, health literacy, communication, leadership, technology access, and culture that affected implementation in these 2 dramatically different contexts: Vancouver (urban and career) and PEI (rural and volunteer).

What are the implications of this study? Given the diversity in firefighter roles, geography, and policy, adaptation to unique firefighting contexts (e.g., wildland) may be required. Our study findings will be used to tailor RM to firefighters' regional needs and develop resources (a national web-based evaluation platform; an electronic community of practice for RM trainers/participants; best practices guides) to support its national scale-up. The need for more attention to health literacy was identified. Our study produced new knowledge on how personal factors and regional contexts affect implementation which could be used in policy development (e.g., department; provincial/federal legislation on mandatory training) or applied to other firefighter mental health programs (e.g., Road to Mental Readiness).

What are the key messages? 1) Studying the complex realities of implementation is challenging, but critical to understanding how fire services adopt and adhere to a mental health program.

2) Successful implementation of mental health resiliency training in firefighters requires adaptation to employment/cultural context, health literacy, and personal factors.

Provide a list of potential target audiences for this research: Fire Chiefs, Firefighters, Unions, Health and Safety Committees; Mental Health Program Developers