

[RICCIARDELLI] - *An interdisciplinary and mixed method analysis of the Correctional Services Canada National Training Academy's Correctional Training Program: Building a 'toolbox' for correctional officer mental health and occupational success by identifying ways to optimize the impact of training for public safety personnel.*

Authors: Rosemary Ricciardelli and Stephen Czarnuch, Memorial University of Newfoundland

Priority Research Area: Biological, clinical and social characteristics of PTSD, including differences that contribute to the risk for developing PTSD and measures/characteristics that may be associated with better treatment outcomes and resilience among PSP

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): Correctional Services

For more information, please contact: Rosemary Ricciardelli; rricciardell@mun.ca; 709.864.7446

What is the issue? Employees of Correctional Service Canada (CSC), Canada's federal prison service, screen positive for mental disorders at rates significantly higher than the general population. To prepare future correctional officers (COs) for an occupation that is complex, potentially traumatic and riddled with legal, social, physical, and psychological challenges, CSC provides a comprehensive three stage correctional training program. Yet, little research to date has looked explicitly at the program to understand if the training is meeting the health needs of COs, and whether discrepancies exist between the intended content (i.e., the curriculum) and received messages (i.e., learning) in the recruit training materials.

What was the aim of the study? Overall, we aimed to optimize the effectiveness and impact of CSC's CO recruit training program to better prepare COs for their experiences on the job and to positively impact CO health and well-being. Toward building a foundational understanding of the CSC correctional training program, we focused on three main research questions that evolved with time: 1) What messages are delivered in the modules of the CSC correctional training program? 2) How are the intended messages of the CSC correctional training program interpreted?, and 3) How can training instill the intended messages (including those tied to values and ethics) of the correctional training program?

How was the study conducted? the correctional training program, including spending 10-weeks in uniform for the in-person component (Stage 3). She will complete the final four weeks in the future and the primary worker training. We started conducting semi-structured interviews with the trainers. We will complete data collection when possible (due to COVID-19) and then synthesize and analyze our multimodal forms of data to create a training evaluation tool (a qualitative and quantitative survey) that we will be piloting on recruits.

What did the study find? Given that all components of our study are "paused" and not yet completed, our results remain preliminary. However, supported by both interviews and PI Ricciardelli's ethnographic data, is that CSC is committed to the recruitment and training of persons with integrity, and whose ethics and values align with those of the organization. Efforts are made during training to reinforce and confirm said values among recruits. Training materials are delivered with a focus on pedagogy and manual adherence, and modules focus proportionately on physical (e.g., use of force) versus non-physical (e.g., communication) skills in the context of public, personal, and institutional safety. However, recruits tend to direct their attention toward the competencies that are tested, which is often physical skills.

CSC works toward an environment conducive to positive mental health and well-being, including with efforts toward reducing the stigma around mental health, both for recruits and for trainers. Moreover, the vulnerabilities

inherent to the public safety role are acknowledged during training and efforts are made to ensure recruit actions align with best practices.

We note that modern technological innovations could be used to augment training (e.g., enhancing decision-based training modules) and to optimize components that are traditionally challenging for recruits or expensive (e.g., simulation for shooting range modules).

What are the implications of this study? Our study may help to inform the recruitment and retention of people with skills, values, and ethics that align with those required for the job, as well as those of CSC. We are still working toward creating a post-training evaluatory tool that includes everything from physical and mental health and well-being to organizational commitment, which will help CSC evaluate the outcomes of the training more comprehensively. Given the attention recruits dedicate to learning skills that are tested (possible "strikes"), all centrally important skills taught should be tested to ensure maximum recruit attention is directed toward learning said skills.

What are the key messages? Recruit learning tends to focus on the skills that are tested, specifically "strikes". Mental health training has been introduced into the correctional training program and efforts are underway to reduce the stigma tied to mental disorders. CSC training demonstrates the organization's commitment to the safety of society, prisoners, staff, and their institutions.

Provide a list of potential target audiences for this research: Correctional Services Canada, and correctional services in each province and territory in Canada as well as internationally. Correctional Services related Unions (UCCO-SACC-CSN, USJE), stakeholders, policy makers, and practitioners.

[KO] - Do cognitive behavioral therapy skills classes increase a resiliency-related brain connectivity pattern to posttraumatic stress disorder?

Authors: Dr. Ji Hyun Ko, Department of Human Anatomy and Cell Science, University of Manitoba
Dr. Natalie Mota, Department of Clinical Health Psychology, University of Manitoba

Priority Research Area: N/A

Relevant PSP Population(s): We are recruiting paramedics and firefighters but the study finding is likely generalizable to other PSPs.

For more information, please contact: Dr. Ji Hyun Ko: ji.ko@umanitoba.ca; 204-219-0104
Dr. Natalie Mota: Natalie.Mota@umanitoba.ca; 204-831-3490

What is the issue? Cognitive behavioral therapy (CBT) is commonly prescribed to treat PTSD, and recent studies suggest that it may be effective in preventing the condition. We have developed a 5-session class focused on teaching introductory CBT skills and mindfulness training (CBTm) to prevent and manage psychological distress. A clinical trial to test its efficacy in preventing PTSD and related conditions in PSP is now on-going, and the preliminary data suggests very promising results. However the neurophysiological underpinnings of increased resiliency is yet to be understood.

What was the aim of the study? The objective of our study is to develop quantifiable imaging-based biomarkers and to broaden our understanding on the neural underpinnings of CBTm effects. We will identify the brain connectivity patterns that are specifically involved with therapeutic benefits associated with the CBTm class. This may help us to understand why some individuals benefit from CBTm classes while others do not. For example, three different brain connectivity patterns have been identified to be related with PTSD, namely, the central

executive network, salience network, and default mode network (related with resting state). We will test which of these network connectivity are strengthened or weakened by CBTm classes, and investigate whether there is a new brain connectivity pattern (other than those three networks) that is responsible for CBTm-related resilience-building. To our knowledge, this will be the first study to demonstrate the neural underpinnings of a proposed, preventive psychological intervention for PTSD.

How was the study conducted? The plan was to recruit 40 PSPs without PTSD from our on-going clinical trial that involves 120 PSPs. In the parent study, three blocks of CBTm classes were to be offered to ~40 PSPs per block, and two blocks of classes were completed before COVID-19 pandemic in March 2020. Before COVID-19, 30 PSPs were enrolled in our brain imaging study. Fourteen of these individuals underwent CBTm classes and 16 were waitlisted. Participants had been assessed by psychiatric diagnostic assessments and MRI at baseline, after 5-week CBTm (or waitlist) and at 3-month follow-up.

What did the study find? The study is still on-going, and it will be resumed when we are allowed to assess our participants. At the moment, all MRI studies that involve healthy volunteers are suspended at University of Manitoba.

What are the implications of this study? In the proposed brain imaging study, we will characterize the brain connectivity profile that is specific to the resilience of PTSD. Understanding the neural underpinnings and developing an objective imaging-based biomarker will aid novel therapeutic approach discovery. The proposed project's potential application includes development of imaging-based biomarkers for clinical trials targeting the prevention of PTSD. While comprehensive psychodiagnostics assessment will remain the gold standard for a treatment biomarker, changes in imaging-based variables will help in the objective assessment of the effect of experimental interventions (such as online CBTm) as well as providing direct or indirect evidence of the underlying neural mechanisms. We will also be able to examine how well MRI findings converge with scores on self-report measures of PTSD symptoms and psychological resilience.

What are the key messages? The study is still on-going and we have not completed data collection which is interrupted by COVID-19 crisis. This will be updated after the study is completed.

Provide a list of potential target audiences for this research: Researchers and clinicians in the field of PTSD and brain imaging; PSP personnel involved in recruiting and training new members.

[MALLOY] - *Compromise Conscience: Towards Managing Moral Injuries in Public Safety Personnel*

Authors: Dr. David Cruise Malloy, PhD. is the Principal at King's University College at Western University. Dr. Malloy's research focuses on the influence of religion, ethics, and culture on leadership and administration in health, government, and sport contexts. Dr. Malloy is the Principal Investigator for this study.

Dr. R. Nicholas Carleton, PhD., is a Professor of Psychology at the University of Regina and Scientific Director for the Canadian Institute of Public Safety Research and Treatment (CIPSRT). Carleton is a registered clinical psychologist in the province of Saskatchewan with extensive experience in providing evidence-based treatments for PSP, primarily for PTSD, but has worked with patients reporting problematic moral injuries.

Dr. Gregory Anderson PhD., is the Dean of Science at Thompson Rivers University. Dr. Anderson's personal research interests include occupational stress, fitness and physiology of physically demanding occupations, presumptive legislation, and the building of personal resilience and coping strategies for

improved mental health in public safety personnel. He has been actively involved in occupational physiology, working primarily with police and law enforcement agencies.

Dr. Rosemary [Rose] Ricciardelli, Ph.D., is a Professor of Sociology, the Coordinator for Criminology, and Co-Coordinator for Police Studies at Memorial University of Newfoundland. Elected to the Royal Society of Canada, she is also the Vice Chair of the ARC-NAC of the Canadian Institute for Public Safety Research and Treatment (CIPSRT). Her research is centered on evolving understandings of gender, vulnerabilities, risk, and experiences and issues within different facets of the criminal justice system.

Dr. Suzette Brémault-Phillips, PhD. is an Associate Professor in the Department of Occupational Therapy, and Director of HiMARC (Heroes in Mind Advocacy and Research Consortium) at the University of Alberta. She conducts research in rehabilitation medicine, mental and spiritual well-being and health, ageing and implementation of best practices. Current research relates to resilience and growth among military members, veterans, public safety personnel, and their families, civilians and trauma-affected populations; decision-making capacity assessments; and managing responsive behaviours.

Dr. Liana Lentz, PhD., is a Postdoctoral Fellow at Western University and the Canadian Institute of Public Safety Research and Treatment (CIPSRT). She brings with her the lived experience of 15 years of municipal policing as well as an academic background in injury prevention and public health. Her research has focused on physical and psychological injury in public safety providers.

Dr. Lorraine Smith-Macdonald, PhD., is a Postdoctoral Fellow at the University of Alberta in the Heros in Mind Advocacy and Research Consortium (HiMARC). Her clinical/academic career has focused on the intersectionality between mental and spiritual health and wellbeing within military and Veteran populations, with a specialization in moral injury, spiritual fitness, posttraumatic growth and military-to-civilian transition. She is also experienced conducting qualitative research and program evaluation.

Priority Research Area: Neuroscience, Mental Health and Addiction

Relevant PSP Population(s):

This particular project focuses on PSP broadly defined.

For more information, please contact:

Dr. Malloy - Principal King's University College, King's University College, 266 Epworth Ave, London, ON, N6H3P1, david.malloy@kings.uwo.ca, (519) 495-0484.

Dr. Lentz - postdoctoral Fellow, Western University and CIPSRT, llentz2@uwo.ca.

What is the issue? Moral Injury (MI) can occur when a person has a PMIE - experiences or witnesses something, or acts in a way that contradicts their personal values and beliefs. If the contradictory behaviour(s) are inconsistent with external moral, social, or legal expectations, this leads to;

- 1) cognitive, emotional and existential distress,
- 2) mental health challenges - including symptoms consistent with one or more posttraumatic stress injuries,
- 3) problematic levels of emotions (e.g., shame, guilt, anger) and,
- 4) compromises to other areas of well-being (e.g., relationship breakdowns, spiritual or existential suffering).

Unfortunately, intervention research to manage MI is limited.

What was the aim of the study?

The current study is designed to accomplish three tasks:

1. Conduct a scoping review to examine the existing empirical research related to ethical dilemmas, ethical decision making, moral injury, and potentially morally injurious experiences among PSP.
2. To Identify which elements, if any, of the PMIE PSP encounter are shared among PSP, which elements differ between the across PSP groups and to understand the mechanism(s) by which such elements are injurious.
3. To engage PSP and collaboratively develop a didactic training program consisting of a combination of psychoeducational concepts and exercises introducing the concepts of MI and moral decision-making to a PSP cohort, which we hope will be a helpful step towards proactive and responsive solutions for reducing MI symptoms.

How was the study conducted?

1. A scoping review was conducted to examine what empirical research existed on MI and PSP.
2. Focus groups will be used to assess the extent of knowledge on MI and to identify PMIEs specific to each of the PSP groups:
3. Psychoeducational content will be developed using the information gained from the scoping review, focus groups and consultation with experts in MI to inform a proactive and responsive solution for PSP experiencing MI.

What did the study find? While we aimed to conduct a literature review exploring empirical research examining the occurrence of MI among PSP, the MI literature on PSP populations was primarily theoretical leaving an empirical knowledge gap. Presumably, PSP suffer MI and moral distress at a greater prevalence and frequency and have greater impairment compared to the general population. There is evidence, for instance, that police officers encounter moral dilemmas in situations of use of force. Unfortunately, the effects or morally injurious experiences on PSP are not understood. No research examining ethical experiences of PSP were found.

We expect the results of the focus groups and engagement with stakeholders to help fill a critical knowledge gap by outlining the experiences of MI and MIE in PSP, foreseeably, to inform programs that can help to mitigate MI symptoms. Additionally, we expect to identify elements shared and unique among PSP.

What are the implications of this study? E.g. for policy development, health care practice, etc.

PSP are frequently faced with moral/ethical dilemmas that appear associated with mental health challenges, and a sense of organizational betrayal. The psychological distress commonly associated with PTSI may impact different domains of PSP well-being. Additional support to effectively address the PMIE experienced by PSP through their occupational duties. Results from the PSP focus groups will seek to develop a more nuanced understanding of PSP specific PMIEs and MI outcomes. Once identified, specific tools can be created to effectively intervene after a PMIE and stimulate further development for MI treatment and preventative education.

What are the key messages?

1. Anecdotal evidence indicates PSP may be harmed by the moral dimensions of their work. Empirical research regarding MI in PSP is virtually nonexistent and little research exists regarding associated constructs (e.g., ethical decision-making).
2. Research is required to identify the MI elements of PSP work, the frequency and prevalence of PMIEs, and how PMIE exposures affects PSP mental health and wellbeing.
3. MI appears to perpetuate and intensify mental health challenges for military and healthcare personnel; accordingly, effectively addressing MI may also help to recalcitrant PTSD symptoms and mitigate complex PTSIs in PSP.

Provide a list of potential target audiences for this research:

- Researchers
- Policy makers
- PSP organizations
- Frontline PSP
- Mental health clinicians and healthcare professionals
- Stakeholders
- Employee assistance groups