



Brief mindfulness training for Canadian public safety personnel well-being

Renaë M. Stevenson*

ABSTRACT

The body of research demonstrating the psychological and physiological benefits of mindfulness-based interventions (MBIs) is robust and spans decades, yet its adaptation for a population at significantly higher-than-average risk of negative health outcomes, operational stress injuries, moral injury, and burnout is in its infancy. Failing to address these risks has costs not just for the well-being of public safety professionals (PSPs), but for their families, their agencies, and their communities. Public safety work requires a high standard of ethical decision-making and compassionate contact with the communities served. The public safety oversight of agency, government, and training institutes must prepare its professionals to deliver exemplary levels of service as well as establish trauma-competent training and support frameworks that are evidence-based to protect PSP well-being. Remediating historically ineffective training with evidence-based models not only addresses the complexity of operational stress injuries (OSIs) but also the needs of social justice reform.

Canada's contribution to the body of research using evidence-based MBIs for PSP well-being is scarce. This literature review informs leaders, policymakers, change agents, and researchers not only of the need for such critical research in Canada, but of its current state and important considerations for its design. The efficacy of MBI is discussed, evaluating recent quantitative, qualitative, and mixed-methods studies towards charting a brief MBI (bMBI) logistically deliverable, attentive to the PSP cultural context needs and barriers, and which facilitates sustainable skill-building in attention, awareness, and compassion.

Key Words MBSR; MBRT; first responder; resilience; OSI; PTSD; wellness; decision-making.

BACKGROUND

Canadian public safety professionals (PSPs)—police, fire, paramedic, corrections, civilian support workers and dispatchers—are at the front lines of human suffering and often blamed as inadequate, or unprofessional, when services fall short. A PSP experiences significantly higher-than-average exposure to critical incidents and to trauma, exacerbated by high organizational stressors and cultural stigma inhibiting access to mental health support (Carleton et al., 2018; Carleton et al., 2020; Chopko et al., 2018; Fleischman et al., 2021; Ricciardelli et al., 2018, and Violanti et al., 2017). PSPs also suffer disproportionately from negative health outcomes such as depression, PTSD, cardiovascular disease, and autoimmune disease while being more vulnerable to suicide and moral injury (Carleton et al., 2017; Carleton et al., 2020; Fleischman et al., 2021; Papazoglou et al., 2020; Wilson et al., 2016, and Violanti et al., 2017). Furthermore, PSPs may be epigenetically exposing their children to increased risk for

anxiety, depression, and PTSD (Yehuda et al., 2005; Yehuda & Lehrner, 2018). Addressing these systemic issues requires a holistic approach and evidence-based training beyond the scope of researchers alone. It necessitates peeling back PSPs' guarded culture curtain, and collaborating *with* researchers to co-create solutions and healthier, sustainable paths forward.

Problem Statement

There is limited research in general populations regarding brief mindful-based interventions (bMBIs). To date, there is no peer reviewed research utilizing an evidence-based MBI with Canadian PSPs—brief or otherwise. This is due to the impracticality of its typical 8-week program format; the lack of Canadian subject matter experts (SMEs); the lack of culturally competent and certified professionals to teach these interventions to PSPs; resistance from management personnel, and poor participant enrolment due to the inherent PSP cultural stigma around seeking mental health supports. The purpose of this literature review is to evaluate recent studies to inform

Correspondence to: Renaë M. Stevenson, MA, CMT-P, BC Municipal Police Officer (ret.), 204-3550 Saanich Rd., Victoria, BC V8X 1X2, Canada.
E-mail: renae@mindfulbadge.com

To cite: Stevenson, R. M. (2022). Brief mindfulness training for Canadian public safety personnel well-being. *Journal of Community Safety and Well-Being*, 7(3), 88–92. <https://doi.org/10.35502/jcswb.263>

© Author(s) 2022. Open Access. This work is distributed under the Creative Commons BY-NC-ND license. For commercial re-use, please contact sales@sgpublishing.ca.

SG PUBLISHING Published by SG Publishing Inc. **CSKA** Official publication of the Community Safety Knowledge Alliance.

and encourage research development of bMBIs. Further, these bMBIs should target critical and efficacious components of established MBIs, be refined to logistically feasible formats, and address Canadian PSP agency-specific needs.

Literature Review

The Canadian Public Safety Personnel Mental Health Landscape

The Canadian federal government mandated an action plan and the creation of the Canadian Institute for Public Safety Research and Treatment (CIPSRT) to address operational stress injuries (OSIs) amongst PSPs (Oliphant, 2016). Cultural stigma is an identified barrier exacerbating the problem, as is the need for evidence-based research, federal leadership and oversight, and shared best practices between all levels of government and stakeholder agencies (Oliphant, 2016).

One of the CIPSRT's first initiatives was to survey Canadian PSPs using self-report and validated tools to screen for mental disorder symptoms (Carleton et al., 2017). This study provides the first widespread data capture for a Canadian PSP sample and stresses the need for epidemiological study (Carleton et al., 2017). Carleton et al. found significantly higher rates of mental disorders in PSPs compared with the general population, and they found higher rates for federal police and paramedics than municipal police or fire agencies. Carleton et al. (2020) also examined causative stressors of PSPs using self-report validated instruments and they found that both traumatic events and stressors were associated with higher positive screening for mental disorders.

Ricciardelli et al. (2018) inductively analyzed themes from participants surveyed by Carleton et al. (2017). The derived themes paint a picture of compromised physical and psychological health, negative effects on family and relationships, and fatalistic attitudes such as *helplessness*, *worthlessness*, and being *disposable* (Ricciardelli et al., 2018). Ricciardelli et al.'s phenomenological examination points to systemic issues around a lack of evidence-based resourcing supports, PSP mental health cultural stigma, treatment-seeking barriers, and being over-scrutinized when taking needed leave.

There is a void in Canadian PSP research examining correlations associated with cultural stigma and accessing mental health supports and trainings. Understanding the *DNA* of this cultural stigma may provide clues on its mitigation. Krakauer et al. (2020) correlated stigma, service intentions, and mental health literacy and they found theoretical support for the notion that *resilience training* helps to minimize stigma and reduces other barriers to treatment support. Casas and Benuto (2022) linguistically analyzed trauma narratives from an online PSP support website in the United States identifying several themes: *idealization and disillusionment of the job*, *accumulated trauma exposure*, *trauma sequelae*, and *mental health stigma*. Casas and Benuto's findings align with other PSP research around empathetic distress, burnout, and high rates of mental disorders and underscores the need and desire amongst PSPs for peer support and top-down modelling for destigmatization (Carleton et al., 2017; Carleton et al., 2020; Krakauer et al., 2020; Ricciardelli et al., 2018).

Canadian Public Safety Personnel Mindfulness Research

There is a near void of published data with Canadian PSPs on mindfulness measures and the use of MBI interventions

due to a lack of SMEs in this research field and a lack of stakeholder buy-in and coordination. Stevenson (2018) used purposive sampling to measure mindfulness using the FFMQ-15 (Five Facet Mindfulness Questionnaire-15; Christopher et al., 2016) in a British Columbia municipal police force from each recruit and experienced member samples. Fleischmann et al. (2021) critically contribute to MBI research in Canada by building on Kaplan et al.'s (2018) research regarding the correlational relationship of mindfulness and self-compassion facets with occupational stressors. Unlike Kaplan et al., who noted that non-reactivity moderated the perception of stress with operational stressors in a US sample, Fleischmann et al. did not. Fleischmann et al. found that non-*judging* moderated operational stressors in a Canadian PSP sample. Fleischmann et al.'s ongoing research will likely contribute as the first peer-reviewed published data of an MBI with a Canadian PSP sample. Sylvan (2021) is currently exploring contemplative practice amongst Royal Canadian Mounted Police (RCMP) senior police leaders through an exploratory phenomenological approach. One of the aims of Sylvan's research is to identify actionable priorities for policing regarding mindfulness and meditation training.

Public Safety Personnel Mindfulness-Based Intervention Research

Mindfulness-Based Stress Reduction (MBSR) was developed by Jon Kabat-Zinn and is an evidence-based group intervention combining meditation practices, experiential exercises, and psychoeducation that has demonstrated efficacy spanning decades (Boyd et al., 2018; Grossman et al., 2004; Khoury et al., 2015). The majority of PSP and similar occupation mindfulness-based research is in American populations using MBSR-based frameworks but adapted for high-demand professions.

Mindfulness-Based Resilience Training (MBRT) has a strong research foundation specific to PSP populations but is limited to US populations. Several pilot and feasibility studies utilized MBRT and demonstrated promising results (related to resilience, well-being, aggression, psychological flexibility, distress tolerance, alcohol use, sleep improvement, and burnout) and its researchers are now developing and replicating MBRT in larger, randomized control trial (RCT) samples (Christopher et al., 2016; 2018; 2020; Eddy et al., 2021; Grupe et al., 2021; Kaplan et al., 2020; Trombka et al., 2018). Eddy et al. (2021) used grounded theory methodology to assess MBRT in a US municipal police sample aimed at improving resilience to combat chronic occupational stressors. Participant experiences aligned with quantitative findings related to the beneficial effects of the body scan and mindful movement (Colgan et al., 2016) but also with Canadian PSP research findings around cultural stigma as a hindrance to treatment-seeking (Carleton et al., 2018; Carleton et al., 2020; Krakauer et al., 2020; Ricciardelli et al., 2018). Although thematic saturation wasn't reached, Eddy et al.'s findings are consistent with other research on the mechanics correlating the mindfulness facet of non-reactivity with improved interpersonal relations, the PSP health benefits of increased mindful awareness for distress tolerance, and the need for ongoing booster sessions for improved functioning and emotional regulation (Kaplan et al., 2020; McDonald et al., 2022).

Grupe et al. (2021) conducted an RCT utilizing validated instruments and measured cortisol awakening response (CAR)

with a PSP sample. In addition to improvements in mental health, distress tolerance, and sleep quality, Grupe et al. found reduced CAR, which was maintained at a 3-month follow-up. Grupe et al. also found evidence of PTSD symptom reduction. In an RCT using psychometric instruments, Trombka et al. (2018) used Mindfulness-Based Health Promotion (MBHP) with Brazilian PSPs and found empirical evidence across both quality of life and psychological domains which was consistent with Christopher et al. (2016), Grupe et al. (2021), and Fitzhugh et al.'s (2019) findings. The professional demands of the military are like PSP occupations in both trauma exposure and their need for cognitive resilience. As such, research in these populations helps inform PSP research. Jha et al. compared Mindfulness-Based Mind Fitness Training (MMFT) to a positivity training program (PT) of a military personnel sample pre-deployment to Afghanistan. Jha et al. found the MMFT group sustained significantly less degradation in working memory than the PT group and they maintained better task performance (Jha et al., 2020). Jha et al. suggest MBIs should be considered for other high reliability/high stress professions to promote cognitive resilience.

Delivery Modes and the Efficacy of Brief Mindfulness-Based Interventions

Wahbeh et al. (2014) qualitatively analyzed data from a US cross-sectional online survey of 500 participants to assess preference types for meditation programs. Recruiting included purposive sampling to capture more PTSD-diagnosed individuals (Wahbeh et al., 2014). Internet was the preferred delivery mode (43%), followed by individual (38%), and group intervention at 20% (Wahbeh et al., 2014). Research is limited for bMBIs—whether in-person or online. Colgan et al. (2016) qualitatively assessed data from 102 PTSD-diagnosed US military veterans who participated in an RCT including bMBIs of a 20-minute body scan and a 20-minute mindful breathing practice over 6 weeks. Of note, PTSD symptom improvement was reported more in the bMBI groups than in the non, and the breathing-specific interventions were endorsed by participants to improve sleep quality (Colgan et al., 2016). These findings highlight key areas to target in the development of bMBIs—namely a focus on *attentional* breath practices and *interoceptive* practices like the body scan. Sleep deprivation and disruption is an occupational hazard and an unavoidable reality of the 24-hour nature of PSP work. Colgan et al.'s correlational finding between breath practices and improved sleep is an area for future PSP research focus. The Resilience@ Work Mindfulness Program (R@W) was a cluster RCT with Australian fire and hazmat personnel. The protocol used six online, self-paced sessions over 3.5–6 weeks combining Acceptance and Commitment Therapy (ACT), Mindfulness-Based Cognitive Therapy (MBCT), and compassion training with participants primarily recruited by peer support teams (Joyce et al., 2019). Joyce et al. measured several domains using validated psychometric tools and saw moderate to large effect sizes for resilience scales, which were maintained at a 6-month follow-up. Also using an online delivery model, Fitzhugh et al. (2019) conducted an RCT from five UK police agencies assigned to a wait control group, Headspace, or Mindfit Cop (MC) intervention groups. Fitzhugh et al. assessed well-being, resilience, mindfulness, absenteeism, and job control using validated psychometric

tools. Improved sleep, distress tolerance, focus and feeling supported were noted while barriers identified were scheduling, lack of quiet rooms, unit assignments, cultural stigma, and technical issues (Fitzhugh et al., 2019). Fitzhugh et al. follow-up interviews were also conducted with the MBI groups, and findings highlighted participant increases in awareness, reflection, and recognizing autopilot behaviour.

The COVID-19 pandemic transitioned a lot of training and mental health programs to online formats both for the general population and for PSPs. McCall et al. (2021) thematically analyzed why PSPs access specific online programs, and they found that most participants learned of programs from PSP professional affiliations; they accessed them due to convenience, affordability, and to mitigate cultural stigma barriers; and they were motivated to learn coping strategies to manage symptoms. These findings highlight why PSP skills-based resilience training is a *vital* need in a variety of delivery formats. Stelnicki et al. (2021) used a mixed-methods design of a cognitive behavioural therapy (CBT)-based intervention to longitudinally measure outcomes related to mental health disorders, social support, resilience, emotional function, shame, and stigma in early career PSPs. Stelnicki et al. then analyzed qualitative data using NVivo software, finding the program was well-received, enhanced awareness and resilience, and improved social connections, which was consistent with the study's quantitative findings. A suppressed social engagement system is a facet of PTSD and OSIs. Improving social connections is a foundational component in Polyvagal Theory and it is critical for a regulated autonomic nervous system (Porges, 2021).

Future Implications

Based on CIPSRT research of well-being need, Canadian MBI research should prioritize higher-risk groups such as paramedics and the RCMP. MBIs should be ethically informed by best practices, include *trauma-competent* mindfulness practices, and be delivered by culturally informed and qualified trainers in logistically accessible formats. RCT recruitment may improve, and cultural stigma be mitigated by purposive sampling of cluster-randomized peer and leadership participant populations to help build program champions—which in turn will enhance future PSP participant enrolment.

Future PSP research should endeavour to replicate MBRT in randomized clustered samples, targeting recruit academies, provincial and federal PSP agencies, and varying delivery methods from in-person immersion, to hybrid immersion/virtual boosters, to purely online but under 6 weeks in duration. These studies can extend beyond quasi-experimental to RCT designs and include both phenomenological and grounded theory qualitative designs to truly refine the intervention to best serve diverse Canadian PSP populations.

CONCLUSION

The efficacy of MBIs with general populations is well established. A strong research foundation now exists with PSPs and the much-needed application of MBIs for Canadian PSPs to improve well-being and to protect against inherent occupational stressors. The well-being of PSPs is critical not just for public safety but for a sustainable workforce. The landscape of Canadian PSP health and well-being is better

informed by the centralized efforts of the CIPSRT and its deficit of research is shrinking. But Canada is still falling short of *implementing* evidence-based programs to protect PSPs. This is exacerbated by the toll taken by the COVID-19 pandemic, which further diminished already limited staffing resources. MBIs are feasible, scalable, and efficacious solutions to protect and strengthen PSP well-being, to enhance ethical decision-making, and to address a social justice crisis that needs disarming.

ACKNOWLEDGEMENTS

Dr. Jill Rettinger, Yorkville University Clinical Psychology Graduate Studies; Richard Goerling, MBA, Mindful Badge Initiative & Pacific University; Les Sylvan, MA, BC Municipal Police Chief (ret.), University of Victoria; Jill Parker, MEd, RCC, RSW, Jill Parker Counselling Inc.

CONFLICT OF INTEREST DISCLOSURES

Rena Stevenson is a retired British Columbia municipal police officer and an IMTA Certified Mindfulness Teacher (CMT-P) who consults for Mindful Badge Initiative, Jill Parker Counselling Inc., and First Water Performance. She is also a Board Member with the Canadian Mental Health Association in the Cowichan Valley.

AUTHOR AFFILIATIONS

*Municipal Police Officer (ret.), Victoria, BC, Canada.

REFERENCES

- Boyd, J. E., Lanius, R. A., & McKinnon, M. C. (2018). Mindfulness-based treatments for posttraumatic stress disorder: a review of the treatment literature and neurobiological evidence. *Journal of Psychiatry & Neuroscience*, 43(1), 7–25. <https://doi.org/10.1503/jpn.170021>
- Carleton, R. N., Afifi, T. O., Turner, S., Taillieu, T., Duranceau, S., LeBouthillier, D. M., Sareen, J., Ricciardelli, R., MacPhee, R. S., Groll, D., Hozempa, K., Brunet, A., Weekes, J. R., Griffiths, C. T., Abrams, K. J., Jones, N. A., Beshai, S., Cramm, H. A., Dobson, K. S., ... Asmundson, G. J. G. (2017). Mental disorder symptoms among public safety personnel in Canada. *The Canadian Journal of Psychiatry*, 63(1), 54–64. <https://doi.org/10.1177/0706743717723825>
- Carleton, R. N., Korol, S., Mason, J. E., Hozempa, K., Anderson, G. S., Jones, N. A., Dobson, K. S., Szeto, A., & Bailey, S. (2018). A longitudinal assessment of the road to mental readiness training among municipal police. *Cognitive Behaviour Therapy*, 47(6), 508–528. <https://doi.org/10.1080/16506073.2018.1475504>
- Carleton, R. N., Afifi, T. O., Taillieu, T., Turner, S., Mason, J. E., Ricciardelli, R., McCreary, D. R., Vaughan, A., Anderson, G. S., Krakauer, R., Donnelly, E. A., Camp, R. D. II, Groll, D., Cramm, H. A., MacPhee, R. S., & Griffiths, C. T. (2020). Assessing the relative impact of diverse stressors among public safety personnel. *International Journal of Environmental Research and Public Health*, 17. <https://doi.org/10.3390/ijerph17041234>
- Casas, J. B., & Benuto, L. T. (2022). Breaking the silence: A qualitative analysis of trauma narratives submitted online by first responders. *Psychological Trauma: Theory, Research, Practice, and Policy*, 14(2), 190–198. <https://doi.org/10.1037/tra0001072>
- Chopko, B. A., Papazoglou, K., & Schwartz, R. C. (2018). Mindfulness-based psychotherapy approaches for first responders: from research to clinical practice. *American Journal of Psychotherapy*, 71(2), 55–64. <https://doi.org/10.1176/appi.psychotherapy.20180015>
- Christopher, M. S., Goerling, R. J., Rogers, B. S., Hunsinger, M., Baron, G., Bergman, A., & Zava, D. T. (2016). A pilot study evaluating the effectiveness of a mindfulness-based intervention on cortisol awakening response and health outcomes among law enforcement officers. *Journal of Police and Criminal Psychology*, 31, 15–28. <https://doi.org/10.1007/s11896-015-9161-x>
- Christopher, M., Hunsinger, M., Goerling, L., Bowen, S., Rogers, B., Gross, C., Dapolonia, E., & Pruessner, J. (2018). Mindfulness-based resilience training to reduce health risk, stress reactivity, and aggression among law enforcement officers: A feasibility and preliminary efficacy trial. *Psychiatry Research*, 264, 104–115. <https://doi.org/10.1016/j.psychres.2018.03.059>
- Christopher, M., Bowen, S., & Witkiewitz, K. (2020). Mindfulness-based resilience training for aggression, stress and health in law enforcement officers: Study protocol for a multisite, randomized, single-blind clinical feasibility trial. *Trials*, 21, 236. <https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-020-4165-y>
- Colgan, D., Christopher, M., Michael, P., & Wahbeh, H. (2016). The body scan and mindful breathing among veterans with PTSD: Type of intervention moderates the relationship between changes in mindfulness and post-treatment depression. *Mindfulness (NY)*, 7(2), 372–383. <https://doi.org/10.1007/s12671-015-0453-0>
- Eddy, A., Bergman, A., Kaplan, J., Goerling, R., & Christopher, M. (2021). A qualitative investigation of the experience of mindfulness training among police officers. *Journal of Police and Criminal Psychology*, 36(1), 63–71. <https://doi.org/10.1007/s11896-019-09340-7>
- Fitzhugh, H., Michaelides, G., Anglia, E., Connolly, S., & Daniels, K. (2019). Mindfulness in policing: A randomised controlled trial of two online mindfulness resources across five forces in England and Wales. Coventry: UK College of Policing Report.
- Fleischmann, M. H., Manova, V., Wisener, M., & Khoury, B. (2021). Mindfulness facets and self-compassion as moderators of the relationship between occupational stressors and mental health symptoms in Canadian police officers. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*. Advance online publication. <https://doi.org/10.1037/cbs0000290>
- Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits. A meta-analysis. *Journal of psychosomatic research*, 57(1), 35–43. [https://doi.org/10.1016/S0022-3999\(03\)00573-7](https://doi.org/10.1016/S0022-3999(03)00573-7)
- Grupe, D., McGehee, C., Smith, C., Francis, A., Mumford, J., & Davidson, R. (2021). Mindfulness training reduces PTSD symptoms and improves stress-related health outcomes in police officers. *Journal of Police and Criminal Psychology*, 36(1), 72–85. <https://doi.org/10.1007/s11896-019-09351-4>
- Jha, A., Zanesco, A., Denkova, E., Rooks, J., Morrison, A., & Stanley, E. (2020). Comparing mindfulness and positivity trainings in high-demand cohorts. *Cognitive Therapy & Research*, 44(2), 311–326. <https://doi.org/10.1007/s10608-020-10076-6>
- Joyce, S., Shand, F., Lal, T. J., Mott, B., Bryant, R. A., & Harvey, S. B. (2019). Resilience@Work mindfulness program: Results from a cluster randomized controlled trial with first responders. *Journal of Medical Internet Research*, 21(2), e12894. <https://doi.org/10.2196/12894>
- Kaplan, J. B., Christopher, M., & Bowen, S. (2018). Dispositional mindfulness moderates the relationship between occupational stressors and perceived stress among law enforcement personnel. *Journal of Police and Criminal Psychology*, 33(3), 227–232. <https://doi.org/10.1007/s11896-017-9246-9>
- Kaplan, J., Bergman, A. L., Green, K., Dapolonia, E., & Christopher, M. (2020). Relative impact of mindfulness, self-compassion, and psychological flexibility on alcohol use and burnout among law enforcement officers. *Journal of Alternative and Complementary Medicine (NY)*, 26(12), 1190–1194. <https://doi.org/10.1089/acm.2020.0178>
- Khoury, B., Sharma, M., Rush, S. E., & Fournier, C. (2015). Mindfulness-based stress reduction for healthy individuals: A meta-analysis. *Journal of Psychosomatic Research*, 78(6), 519–528. <https://doi.org/10.1016/j.jpsychores.2015.03.009>
- Krakauer R., Stelnicki, A., & Carleton R. N. (2020). Examining mental health knowledge, stigma, and service use intentions among public

- safety personnel. *Frontiers in Psychology*, *11*, 949. <https://doi.org/10.3389/fpsyg.2020.00949>
- McCall, H. C., Beahm, J. D., Fournier, A. K., Burnett, J. L., Carleton, R. N., & Hadjistavropoulos, H. D. (2021). Stakeholder perspectives on internet-delivered cognitive behavioural therapy for public safety personnel: A qualitative analysis. *Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement*, *53*(3), 232–242. <https://doi.org/10.1037/cbs0000242>
- McDonald, M. A., Yang, Y., & Lancaster, C. L. (2022). The association of distress tolerance and mindful awareness with mental health in first responders. *Psychological Services*, *19*(Suppl 1), 34–44. <https://doi.org/10.1037/ser0000588>
- Oliphant, R. C. (2016). *Healthy minds, safe communities: Supporting our public safety officers through a national strategy for operational stress injuries*. Standing Committee on Public Safety and National Security. Ottawa, Canada. <https://www.ourcommons.ca/Content/Committee/421/SECU/Reports/RP8457704/sercp05/sercp05-e.pdf>
- Papazoglou, K., Blumberg, D. M., Chiongbian, V. B., Tuttle, B. M., Kamkar, K., Chopko, B., Milliard, B., Aukhojee, P., & Koskelainen, M. (2020). The role of moral injury in PTSD among law enforcement officers: A brief report. *Frontiers in Psychology*, *11*, 310. <https://doi.org/10.3389/fpsyg.2020.00310>
- Porges, S. (2021). Polyvagal theory: A biobehavioral journey to sociality. *Comprehensive Psychoneuroendocrinology*, *7*(100069). <https://doi.org/10.1016/j.cpnec.2021.100069>
- Ricciardelli, R., Carleton, R., Groll, D., & Cramm, H. (2018). Qualitatively unpacking Canadian public safety personnel experiences of trauma and their well-being. *Canadian Journal of Criminology and Criminal Justice*, *60*(4), 566–577. <https://doi.org/10.3138/cjccj.2017-0053.r2>
- Stelnicki, A. M., Jamshidi, L., Fletcher, A. J., & Carleton, R. N. (2021). Evaluation of Before Operational Stress: A program to support mental health and proactive psychological protection in public safety personnel. *Frontiers in Psychology*, *12*, 511755 <https://doi.org/10.3389/fpsyg.2021.511755>
- Stevenson, R. (2018). *Storying sustainability* [unpublished manuscript]. School of Graduate Studies, Trinity Western University.
- Sylvan, L. (2021). Mindful of authority: Exploring leadership with police officers who meditate. *International Leadership Association*. <https://ilglobalnetwork.org/mindful-of-authority-exploring-leadership-with-police-officers-who-meditate/>
- Trombka, M., Demarzo, M., Bacas, D. C., Antonio, S. B., Cicuto, K., Salvo, V., Claudino, F., Ribeiro, L., Christopher, M., Garcia-Campayo, J., & Rocha, N. S. (2018). Study protocol of a multicenter randomized controlled trial of mindfulness training to reduce burnout and promote quality of life in police officers: The POLICE study. *BMC Psychiatry*, *18*(1), 151. <https://doi.org/10.1186/s12888-018-1726-7>
- Violanti, J. M., Charles, L. E., McCanlies, E., Hartley, T. A., Baughman, P., Andrew, M. E., Fekedulegn, D., Ma, C. C., Mnatsakanova, A., & Burchfiel, C. M. (2017). Police stressors and health: A state-of-the-art review. *Policing (Bradford, England)*, *40*(4), 642–656. <https://doi.org/10.1108/PJPSM-06-2016-0097>
- Wahbeh, H., Svalina, M. N., & Oken, B. S. (2014). Group, one-on-one, or Internet? Preferences for mindfulness meditation delivery format and their predictors. *Open Medicine Journal*, *1*, 66–74. <https://doi.org/10.2174/1874220301401010066>
- Wahbeh, H., Goodrich, E., Goy, E., & Oken, B. S. (2016). Mechanistic pathways of mindfulness meditation in combat veterans with post-traumatic stress disorder. *Journal of Clinical Psychology*, *72*(4), 365–383. <https://doi.org/10.1002/jclp.22255>
- Wilson, S., Guliani, H., & Boichev, G. (2016). On the economics of post-traumatic stress disorder among first responders in Canada. *Journal of Community Safety & Wellbeing*, *1*(20), 26–31. <https://doi.org/10.35502/jcswb.6>
- Yehuda, R., Engel, S. M., Brand, S. R., Seckl, J., Marcus, S. M., & Berkowitz, G. S. (2005). Transgenerational effects of posttraumatic stress disorder in babies of mothers exposed to the World Trade Center attacks during pregnancy. *The Journal of Clinical Endocrinology and Metabolism*, *90*(7), 4115–4118. <https://doi.org/10.1210/jc.2005-0550>
- Yehuda, R., & Lehrner, A. (2018). Intergenerational transmission of trauma effects: Putative role of epigenetic mechanisms. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA)*, *17*(3), 243–257. <https://doi.org/10.1002/wps.20568>