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COMMENTARY

A trauma-informed approach is needed to reduce police misconduct

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Dhanani and colleagues (2022) rightfully acknowledge the stressful nature of policing as an occupation and highlight the need to promote officer well-being, yet the authors and other scholars underestimate the role of trauma and the potential impact it has on nearly all aspects of policing. Trauma is not merely stress as industrial-organizational (I-O) and occupational health psychologists typically study it; it emerges from "an event, series of events, or set of circumstances, that is experienced by an individual as physically or emotionally harmful or life-threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being" (SAMHSA, 2014, p. 7). The nature of police officers' jobs requires them to experience chronic exposure to potentially psychologically traumatic events (PPTEs), that is, direct or indirect exposure to actual or threatened death, serious injury or sexual violence (APA, 2013). Moreover, police agencies' organizational cultures are often unsupportive at best (Dhanani et al.), and officers report very high levels of other organizational stressors including inconsistent leadership styles, bureaucratic red tape, lack of resources, unfair/inconsistent personnel practices, unsupportive peers, and unfair workload distributions (Bikos, 2020; Carleton et al., 2020; Ricciardelli et al., 2020). Organizational stressors are such a problem in policing that they are even more strongly associated with mental health disorders than are operational stressors, even after controlling for exposure to PPTEs (Carleton et al., 2020). This confluence of conditions is the perfect recipe for the onset of posttraumatic stress injuries (PTSIs), including posttraumatic stress disorder (PTSD) and subclinical markers of trauma, both of which are abundant among police (Syed et al., 2020). Indeed, police and other public safety personnel have an estimated 20-37% PTSD prevalence rate, compared to the general population at 3.5% (APA, 2013; Marmar et al., 2006).

I-O psychologists may be prone to dismissing trauma and these statistics because they seem to belong within the domain of clinical psychology, yet we assert that it is essential for I-O psychologists to incorporate clinical and neurobiological evidence on trauma if we aim to contribute to the science and practice of impacting police misconduct. Moreover, we believe that interdisciplinary collaborations—such as those among I-O psychologists, clinical psychologists, psychiatrists, and neurobiologists—are essential to address the complex problem of how to reduce racialized violence and other forms of police misconduct. We thus begin with a brief overview of the neurobiological nature of trauma before outlining a trauma-informed approach.

Overview of police trauma and its effects

One of the problems with some I-O psychology solutions (e.g., setting performance standards, deescalation training) laid out by Dhahani et al. is that they prioritize rational decision making, cognitive control, and self-regulation; however, these prefrontal cortex-driven executive functions are

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largely inactive when an individual is exposed to a life-threatening situation (Shields et al., 2016). I-O psychologists who understand the neurobiology of trauma will have a better understanding of how and why police officers may make very poor decisions and engage in violence in the face of perceived or actual stress. Physiologically, chronic exposure to PPTEs can lead to an array of neurobiological dysregulations, including autonomic nervous system (ANS) dysfunction and decreased activation of the medial prefrontal cortex, which is essential for cognitive control (McKlveen et al., 2015). For example, in the neuroendocrine system, the hypothalamicpituitary-adrenal (HPA) axis activation upregulates the response to stress (de Kloet et al., 2005), and neurochemicals such as increased norepinephrine and serotonin increase arousal, vigilance, and the startle response (Sherin & Nemeroff, 2011). Chronic exposure to PPTEs, combined with limited opportunities to emotionally, physically, and cognitively process events, can influence changes in neuroanatomic structures in the brain, including reduced volume and activity in the hippocampus, increased activity in the amygdala, and reduced prefrontal cortex volume (Sherin & Nemeroff, 2011). What all of this can mean is that when police officers experience PPTEs—coupled with the absence of sufficient and effective organizational supports—their brains and bodies can become hypervigilant to threats in their environment. This can result in nervous system priming to respond to these threats in primal ways that fail to engage higher ordered thinking (e.g., bias suppression, rational weighing of options, impulse control, consideration of the consequences of one's actions, perspective taking, conflict resolution; Cornwell et al., 2017; Junger, 2018).

It is not merely behavior in highly stressful situations that is disordered; officers exposed to chronic PPTEs experience autonomic nervous system dysregulation that leads to maladaptive behaviors in other aspects of their jobs as well. For example, after the hypervigilance of being in a life-threatening situation, officers may "crash" into withdrawal (e.g., neglecting job duties, alcohol use) and then be easily retriggered to hyperarousal (e.g., displaced aggression toward coworkers and family members; Burke, 2016). People with healthy ANS functioning stay within what Siegel (1999) referred to as the window of tolerance, meaning that they experience sympathetic nervous system (SNS) activation to stressors followed by parasympathetic nervous system (PSNS) calming and healing, thereby allowing the individual to return to equilibrium. By contrast, traumatized individuals tend to swing between extremes of SNS hyperarousal (e.g., hypervigilance, impulsivity, emotional flooding) followed by PSNS hypoarousal (e.g., dissociated, numb, hopeless, brain fog). The inability of dysregulated police officers and other public safety personnel to stay within the window of tolerance is well recognized among clinicians and used as the basis for trauma-informed clinical practice. As an example, an effective intervention police officers (and others working in high-stress environments) often automatically utilize is the tendency to "tend and befriend" under contexts of stress (Taylor, 2012). In policing contexts, the "tend and befriend" approach highlights the importance of increasing the availability and empathy of social supports available to officers as a potentially key mechanism through which officers attempt to increase regulation and stay within the window of tolerance despite exposure to PPTEs.

Police organizations' culture represents another key factor contributing to officers' neurobiological dysregulation and subsequent poor decision making under threat. We agree with Dhanani et al.'s depiction of police organizations' culture as often being unsupportive to mental health, often emphasizing strength, silence, hypermasculinity, and exclusion of officers from underrepresented groups. The collective effect of these organizational cultural characteristics is that the organization itself can become an unsafe environment characterized by employee hypervigilance to threats to one's well-being and identity. This means that officers exposed to PPTEs as part of their operational job demands do not have a safe space to come back to after the acute stressor has passed but instead may continue to experience SNS activation and hyperarousal when interacting with colleagues or leaders. This phenomenon has been referred to as a form of moral injury known as *sanctuary trauma*, where the psychological safety and security anticipated within the organization and from other police officer peers is found to be lacking or critical (Shay, 2014). Thus, rather than having a supportive organizational environment where one's PSNS can engage to "rest

and digest" after PPTEs, the SNS stays hyperactivated due to the psychologically unsafe organizational environments in which officers work (i.e., organizational stressors). Thus, many police organizations are not only failing to help officers process their PPTEs but are instead further contributing to the burden of stress officers are experiencing because of the invalidating nature of the organizational climate.

A trauma-informed approach

Given these neurobiological effects of trauma, an essential part of the path toward reducing racialized police violence and other forms of police misconduct is a trauma-informed approach. Put simply, trauma impairs officers' ability to think clearly and mitigate biases, so any attempt to encourage better decision making must acknowledge the clinical and neurobiological evidence on trauma and the disruptive impact that unprocessed traumatic events can have. To be trauma informed, any program, organization, or system must first explicitly recognize signs and symptoms of trauma and seek to build knowledge about trauma into practices and policies, along with resisting adding to the trauma or retraumatizing individuals (SAMHSA, 2014). At an operational level for practitioners, being trauma informed means first and foremost creating normative language around the impact of trauma and teaching the neurobiological effects of stress as a universal part of humans' neurological and biological programming (see Stelnicki et al., 2021 for a training program aligned with this goal). By teaching organizational leaders and officers about trauma, it helps to destigmatize stress and normalizes emotional regulation and coping skills as key parts of one's job. Officers benefit from learning to develop self-awareness and the connections between emotions, thoughts, physiological sensations, and behaviors (i.e., cognitive-behavioral therapy), as well as skills to foster healthy relationships (Stelnicki et al, 2021). If organizational leaders or respected senior officers embrace these teachings and begin storytelling about how they have learned to be more effective as the "bending tree" versus the "unmoveable rock," the narrative of emotion suppression and mental health stigma may begin to shift. Indeed, officers in the policing literature have already begun to advocate for this neurobiological approach to helping control emotions and bias during stressful encounters (e.g., Malpass, 2022; Nuwer, 2016; Van Brocklin, 2021)

Above and beyond these general principles, a trauma-informed approach would benefit from both individual and organizational interventions aimed at helping police organizations and their officers to better manage and prevent trauma from being so debilitating that it causes them to traumatize others. More specifically, individual officers can and should also be taught a range of behavioral and cognitive coping strategies to help regulate the ANS under periods of extreme stress when hypervigilance and impaired decision making are most likely to occur (see Arnetz et al., 2009 for a training program aligned with this goal). Many of these strategies aim to reduce SNS hyperarousal and bring officers back to the window of tolerance—despite amplified physiological reactivity—such that their medial prefrontal cortex re-innervates to enable better decision making and cognitive control over stress (McKlveen et al., 2015). An evidence-supported area of intervention especially beneficial for highly stressful situations is breath control. A robust body of evidence shows that breathing techniques can be consciously controlled to help to regulate the ANS and mitigate the "fight-flight-freeze" SNS response in particular (Kox et al., 2014; Malpass, 2022). Clinical trials are underway to determine which specific breathing patterns (e.g., box breathing, cyclic sighing, cyclic hyperventilation with retention) are most beneficial for stress reduction (Spiegel, 2022). The evidence on breathwork and ANS functioning suggests that I-O psychologists would be wise to investigate breathwork training as a trauma-informed intervention with the potential to supplement other initiatives.

It is also important to note that the skills taught to improve regulation from a state of hyperarousal (e.g., relaxation strategies, breathing exercises) should be different from those to improve regulation after periods of hypoarousal (e.g., focus on connection, engagement, movement). Thus, a blunt "one size fits all" approach to training will be ineffective if officers and leaders do not have an understanding of trauma and how it manifests as both hyperarousal and hypoarousal. Providing officers with the self-awareness to build an idiosyncratic understanding of how they personally experience disruptions to nervous system arousal can potentially increase their efficacy in attending to regulation during periods of acute or chronic stress exposure (Stelnicki et al., 2021). This is especially important given police officers' multiple sources of stress, both operational and organizational, and the complex and inconsistent nature of the job demands that they face (Carleton et al., 2020).

These individual interventions will fail to produce systematic change across police organizations unless they are simultaneously paired with organizational efforts to change the culture to be more supportive of employees' wellness. We are not, however, suggesting that police organizations merely put in place "add-on" wellness programs as a means to destigmatize trauma and encourage employees' stress reduction. Such programs are unlikely to be effective when stacked atop a vast array of stressful organizational practices and a hostile or exclusionary organizational culture. Rather, we are advocating for real change that starts with leaders—at all levels of police organizations—learning about trauma and adopting new leadership skills in accordance with helping employees to process PPTEs more effectively. For example, just as many public health and safety personnel are trained in how to enact trauma-informed practices for the public that they serve (Kim et al., 2021), police leaders can be similarly trained about the neurobiological markers of trauma and the window of tolerance dysregulations that may be evident among their staff. Most importantly, they can then be taught tools and techniques aimed at validating their employees' experiences through check-ins that involve active listening and social support, along with referrals for additional psychological supports when desired. These leadership skills are aligned with the "tend and befriend" technique (Taylor, 2012), which help to bring the PSNS back online such that officers will be able to more effectively process PPTE exposures without chronic ANS dysregulation.

Enacting such organization-wide changes that recognize and prioritize becoming traumainformed requires that senior police leadership show a willingness to change the culture. As noted by Dhanani et al., police organizations are often described as being culturally resistant to change, but our experience working with senior police leaders in many police agencies has shown otherwise; instead, there is a strong appetite for the neurobiological, trauma-informed approach advocated here (see also Malpass, 2022). Especially in the face of intense public criticism, police leaders are increasingly motivated to address police misconduct, along with the high prevalence of mental health problems and needed organizational cultural changes. The trauma-informed principles outlined in this commentary are the basis for the authors' own collaboration, wherein we are bridging I-O and clinical psychology to refine and implement a trauma-informed leadership training intervention in several police agencies (Raver, 2022). We have received considerable support from police chiefs to help build and implement training programs for police to better manage their own stress (see Stelnicki et al, 2021) and for police leaders to create more psychologically safe and supportive work environments (Raver, 2022). Ultimately, we believe that I-O psychologists who keep in mind the neurobiological evidence on trauma will be better suited to develop interventions that work with officers' physiology for their own betterment and, more importantly, for the betterment and inclusion of all members of society that they serve.

References

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders, 5th Ed. American Psychiatric Association.

Arnetz, B.B., Nevedal, D.C., Lumley, M.A., Backman, L., & Lublin, A. (2009). Trauma resilience training for police: Psychophysiological and performance effects. *Journal of Police and Criminal Psychology*, 24, 1–9.

- Bikos, L.J. (2020). "It's all window dressing:" Canadian police officers' perceptions of mental health stigma in their workplace. *Policing: An International Journal of Police Strategies & Management*, 44, 63–76.
- Burke, R. J. (2016). Stress in policing: Sources, consequences and interventions. Routledge.
- Carleton, R.N., Afifi, T. O., Taillieu, T., Turner, S., Mason, J. E., Ricciardelli, R., McCreary, D. R., Vaughan, A. D., Anderson, G. S., Krakauer, R. L., Donnelly, E. A., Camp, 2nd, R., 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(4).
- Cornwell, B. R., Garrido, M. I., Overstreete, C., Pine, D. S., & Grillon, C. (2017). The unpredictive brain under threat: A neurocomputational account of anxious hypervigilance. *Biological Psychiatry*, 82(6), 447–454.
- de Kloet, E. R., Joëls, M., & Holsboer, F. (2005). Stress and the brain: From adaptation to disease. *Nature Reviews Neuroscience*, 6(6), 463–475.
- Dhanani, L.Y, Wiese, C.W., Brooks, L., & Beckles, K. (2022). Reckoning with racialized police violence: The role of I-O psychology. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 15(4), 554–577.
- Junger, P. M. (2018). Effects of hypervigilance on decision-making during critical incidents. Homeland Security Digital Library. Retrieved from https://www.hsdl.org/?abstract&did=818137
- Kim, J., Aggarwal, A., Maloney, S., & Tibbits, M. (2021). Organizational assessment to implement trauma-informed care for first responders, child welfare providers, and healthcare professionals. *Professional Psychology: Research and Practice*, 52(6), 569–578.
- Kox, M., van Eijk, L.T., Zwaag, J., & Pickkers, P. (2014). Voluntary activation of the sympathetic nervous system and attenuation of the innate immune response in humans. *Proceedings of the National Academy of Sciences*, 111(20), 7379–7384.
- Malpass, M. (2022). Taming the serpent: How neuroscience can revolutionize modern law enforcement training. Ockham Publishing.
- Marmar, C. R., McCaslin, S. E., Metzler, T. J., Best, S., Weiss, D. S., Fagan, J., Liberman, A., Pole, N., Otte, C., Yehuda, R., Mohr, D., & Neylan, T. (2006). Predictors of posttraumatic stress in police and other first responders. *Annals of the New York Academy of Sciences*, 1071, 1–18.
- McKlveen, J.M., Myers, B., & Herman, J.P. (2015). The medial prefrontal cortex: Coordinator of autonomic, neuroendocrine and behavioural responses to stress. *Journal of Neuroendocrinology*, 27(6), 446–456.
- Nuwer, R. (2016). Stress training for cops' brains could reduce suspect shootings. *Scientific American*. Retrieved from: https://www.scientificamerican.com/article/stress-training-for-cops-brains-could-reduce-suspect-shootings/
- Raver, J.L. (2022). Improving work culture with a trauma-informed leadership intervention for public safety personnel. Social Sciences and Humanities Research Council Partnership Engage Grant.
- Ricciardelli, R., Czarnuch, S., Carleton, R. N., Gacek, J., & Shewmake, J. (2020). Canadian public safety personnel and occupational stressors: How PSP interpret stressors on duty. *International Journal of Environmental Research and Public Health*, 17(13), 1–16.
- Shay, J. (2014). Moral injury. Psychoanalytic Psychology, 31(2), 182-191.
- Sherin, J.E., & Nemeroff, C.B. (2011). Post-traumatic stress disorder: The neurobiological impact of psychological trauma. *Dialogues in Clinical Neuroscience*, 13(3), 263–78.
- Shields, G.S., Sazma, M.A., & Yonelinas, A.P. (2016). The effects of acute stress on core executive functions: A meta-analysis and comparison with cortisol. *Neuroscience & Biobehavioral Reviews*, **68**, 651–668.
- Siegel, D.J. (1999). The developing mind. Guilford.
- Spiegel, D. (2022). Psychophysiological effects of controlled respiration and mindfulness (PECRM). Retrieved from: https://clinicaltrials.gov/ct2/show/NCT05304000
- 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, 1–16.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). SAMHSA's concept of trauma and guidance for a trauma-informed approach. Retrieved from: https://ncsacw.acf.hhs.gov/userfiles/files/SAMHSA_Trauma.pdf
- Syed, S., Ashwick, R., Schlosser, M., Jones, R., Rowe, S., & Billings, J. (2020). Global prevalence and risk factors for mental health problems in police personnel: A systematic review and meta-analysis. *Occupational and Environmental Medicine*, 77(11), 737–747.
- Taylor, S. E. (2012). Tend and befriend theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), Handbook of theories of social psychology (pp. 32–49). Sage Publications Ltd.
- Van Brocklin, V. (2021). Brain science not bias training is key to changing performance under stress. Police1 Research. Retrieved from: https://www.police1.com/police-training/articles/brain-science-not-bias-training-is-key-to-changing-performance-under-stress-8h7u2ZEM40FOLe5I/
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