EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY
2023, VOL. 14, NO. 2, 2269696
https://doi.org/10.1080/20008066.2023.2269696

CLINICAL RESEARCH ARTICLE

OPEN ACCESS Check for updates

# The mental health toll of service: an examination of self-reported impacts of public safety personnel careers in a treatment-seeking population

Sarah Lade[a], Bethany Easterbrook[a,b,c], Andrea Brown[a], Heather Millman[a], Andrea M. D'Alessandro-Lowe[a], Charlene O'Connor[b] and Margaret C. McKinnon[b,d]*

[a]Department of Psychology, Neuroscience & Behaviour, McMaster University, Hamilton, Canada; [b]Homewood Research Institute, Guelph, Canada; [c]MacDonald Franklin Operational Stress Injury Research Centre, London, Canada; [d]Department of Psychiatry & Behavioural Neurosciences, McMaster University, Hamilton, Canada

## ABSTRACT

**Introduction:** Public safety personnel (PSP), including firefighters, paramedics, and police officers, are exposed to traumatic events as part of their day-to-day jobs. These traumatic events often result in significant stress and increase the likelihood of negative mental health outcomes, including post-traumatic stress disorder (PTSD). The present study sought to develop an in-depth understanding of the lived experiences of PSPs as related to the mental health toll of their service. Through a series of targeted focus groups, Canadian PSP were asked to provide their perspectives on the PTSD-related symptoms that resulted as a by-product of their occupational service. The DSM-5-TR PSTD criteria (A-E) provided a thematic lens to map the self-described symptomatic expression of PSP's lived experiences.

**Methods:** The present study employed a phenomenological focus-group approach with a treatment-seeking inpatient population of PSP. Participants included PSP from a variety of occupational backgrounds. Using semi-structured focus groups, fifty-one participants were interviewed. These focus groups were audio recorded, with consent, and transcribed verbatim. Using an interpretive phenomenological approach, emergent themes within the data were inductively developed, examined, and connected across individual cases.

**Results:** Utilizing the primary criteria of PTSD (Criteria A-E) outlined by the DSM-5-TR, we identified qualitative themes that included exposure to a traumatic event, intrusion symptoms, avoidance symptoms, negative alterations in mood and cognition, and marked alterations in arousal and reactivity.

**Conclusion:** PSP are exposed to extreme stressors as a daily part of their occupation and are at elevated risk of developing mental health difficulties, including PTSD. In the present study, focus groups were conducted with PSP about the mental health toll of their occupations. Their experiences mapped onto the five primary criteria of PTSD, as outlined by the DSM-5-TR. This study provides crucial descriptive information to guide mental health research aims and treatment goals for PSTD in PSP populations.

## El costo del servicio en la salud mental: un examen de los auto-reportes acerca de los impactos de las carreras del personal de seguridad pública en una población que busca tratamiento

**Introducción:** El personal de seguridad pública (PSP), incluidos bomberos, paramédicos y policías, está expuesto a eventos traumáticos como parte de su trabajo diario. Estos eventos traumáticos a menudo resultan en un estrés significativo y aumentan la probabilidad de resultados negativos para su salud mental, incluido el trastorno de estrés postraumático (TEPT). El presente estudio buscó desarrollar una comprensión profunda de las experiencias vividas por el PSP en relación con el costo en su salud mental de su servicio. A través de una serie de grupos focales específicos, se pidió al PSP canadienses que brindaran sus perspectivas sobre los síntomas relacionados con el trastorno de estrés postraumático que resultaron como subproducto de su trabajo de servicio. Los criterios TEPT (A-E) del DSM-5-TR proporcionaron una mirada temática para mapear la expresión sintomática autodescrita de las experiencias vividas por el PSP.

**Métodos:** El presente estudio empleó un enfoque fenomenológico de grupos focales con una población de pacientes hospitalizados con PSP que buscaban tratamiento. Entre los participantes se encontraban PSP de diversos orígenes laborales. Se entrevistó a cincuenta y un participantes mediante grupos focales semiestructurados. Estos grupos focales fueron grabados en audio, contaron con consentimiento informado, y fueron transcritos palabra por palabra. Utilizando enfoque fenomenológico interpretativo, los temas emergentes

**ARTICLE HISTORY**
Received 1 December 2022
Revised 25 July 2023
Accepted 15 September 2023

**KEYWORDS**
Qualitative; public safety personnel; mental health; self-report; PTSD; first responders

**PALABRAS CLAVE**
Cualitativo; personal de seguridad pública; salud mental; auto reporte; TEPT; primeros respondedores

**关键词**
定性; 公共安全人员; 心理健康; 自我报告; ptsd; 急救人员

**HIGHLIGHTS**

- Repeated exposure to stressful and traumatic events is often a daily occurrence for public safety personnel, actively contributing to an increased risk of development of mental health disorders, including Post-Traumatic Stress Disorder, in this population.
- Through a series of interviews, the present study examined the subjective experiences of traumatic events in a treatment-seeking population of public safety personnel. Participants' narrative descriptions of their experiences were examined and analysed using the criteria of Post-Traumatic Stress Disorder, as outlined by the Diagnostic and Statistical Manual of Mental Illness-Version V – Text Revision, as a thematic lens.

**CONTACT** Margaret C. McKinnon mckinno@mcmaster.ca Homewood Research Institute, Guelph, ON, Canada Department of Psychiatry & Behavioural Neurosciences, McMaster University, 100 West 5th Street, Hamilton, ON, Canada, L9C 0E3
*This author holds senior authorship.

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (http://creativecommons.org/licenses/by-nc/4.0/), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

dentro de los datos se desarrollaron, examinaron y conectaron inductivamente a través de casos individuales.
**Resultados:** Utilizando los criterios primarios de TEPT (Criterios A-E) descritos por el DSM-5-TR, identificamos temas cualitativos que incluían exposición a un evento traumático, síntomas de intrusión, síntomas de evitación, alteraciones negativas en el estado de ánimo y cognición, y alteraciones marcadas en alerta y reactividad.
**Conclusión:** El PSP está expuesto a factores estresantes extremos como parte de su vida laboral cotidiana y tienen un riesgo elevado de desarrollar dificultades en su salud mental, incluido el TEPT. En el presente estudio, se realizaron grupos focales con PSP sobre el costo de este tipo de empleos en la salud mental. Sus experiencias se relacionaron con los cinco criterios principales del trastorno de estrés postraumático descritos en el DSM-5-TR. Este estudio proporciona información descriptiva crucial para guiar los objetivos de la investigación en salud mental para los síntomas relacionados con el trastorno de estrés postraumático en poblaciones de PSP.

## 服务的心理健康代价：对寻求治疗人群中自我报告公共安全人员职业影响的考查

**引言**：公共安全人员 (PSP)，包括消防员、护理人员和警察，在日常工作中会接触到创伤性事件。这些创伤事件通常会导致巨大的压力，并增加负面心理健康结果的可能性，包括创伤后应激障碍（PTSD）。本研究旨在深入了解 PSP 的生活经历及其服务造成的心理健康损失。通过一系列有针对性的焦点小组，加拿大 PSP 被要求提供他们对其职业服务副产品的 PTSD 相关症状的看法。DSM-5-TR PSTD 标准 (A-E) 提供了一个主题镜头来绘制 PSP 生活经历的自我描述症状表达。
**方法**：本研究采用现象学焦点小组方法，针对寻求治疗的 PSP 住院患者群体。参与者包括来自各种职业背景的 PSP。通过半结构化焦点小组，对 51 名参与者进行了访谈。这些焦点小组在征得同意的情况下进行了录音，并逐字转录。使用解释现象学方法，归纳地开发、考查数据中的新兴主题，并将其与各个案例联系起来。
**结果**：利用 DSM-5-TR 概述的 PTSD（标准 A-E）的主要标准，我们确定了定性主题，包括暴露于创伤事件、侵入症状、回避症状、情绪和认知的负性改变以及觉醒和反应性行为的显著改变。。
**结论**：PSP 在日常职业中暴露于极端压力源，并且出现心理健康问题（包括 PTSD）的风险较高。在本研究中，PSP 就其职业对心理健康造成的影响进行了焦点小组讨论。他们的经历映射到 DSM-5-TR 概述的 PTSD 的五个主要标准。本研究提供了重要的描述性信息，以指导 PSP 人群中 PTSD 相关症状的心理健康研究。

Analyses yielded rich descriptive information of the symptomatic expression of criterion-specific themes.
- The present study offers valuable insights into how a treatment-seeking population of public safety personnel experience their trauma-related symptoms. It also offers an opportunity for both researchers and practitioners to better understand the way public safety personnel may differ from other populations in how they express and understand their experience of Post-Traumatic Stress symptoms.

## 1. Introduction

In 2018, the Canadian government enacted the Federal Framework on Post-Traumatic Stress Disorder (PTSD) Act (Government of Canada, 2018), outlining legislation and the formulation of a federal framework for improving tracking of PSTD among occupational groups facing increased risks of PSTD as a result of their duties. In particular, Public Safety Personnel (PSP) were identified as being at a high risk due to increased exposure to psychologically traumatic events (Carleton, Afifi, Turner et al., 2018). Repeated exposure to stressful and traumatic events is often a daily occurrence for PSP, for whom this may be seen as a 'part of the job'. The Canadian Institute of Public Safety Research and Treatment (CIPSRT) define PSP as 'personnel who ensure the safety and security of Canadians' and includes the following: 'paramedics, police border services officers, public safety communications officials, correctional workers, firefighters (career and volunteer), Indigenous emergency managers, operational intelligence personnel, police (municipal, provincial, federal), and search and rescue personnel officers, correctional, probation, and parole officers, and emergency dispatchers' (CIPSRT Glossary, 2020).

These stressful and potentially psychologically traumatic events (PPTEs) can include exposure to real or threatened death, injury, sexual violence, images of death and dying (e.g. human remains), as well as more subversive forms of harm, such as harassment or threats (Sareen et al., 2017). PSP may also be exposed to potentially morally injurious events (PMIEs) – events in which a person conducts, witnesses, or fails to prevent acts which transgress their moral values (Litz et al., 2009). Examples of PMIEs among PSP include having to remove a person experiencing homelessness from a public space, feeling poorly trained to work within broken systems with a lack of accountability, allocating limited lifesaving resources, or being required to use more force than comfortable with (Lentz et al., 2021). Exposure to PPTEs and PMIEs are known and largely unavoidable features of PSP professions and the negative impact of these events on the mental health of society's critical service members is undeniable.

In response to PPTEs or PMIEs, PSP often experience negative physical effects (e.g. headaches, heart disease, muscle tension), psychological effects (e.g. PTSD, anxiety, depression, increased stress), and social impacts (e.g. social exclusion, cynicism,

avoidance of friends and family; Ricciardelli et al., 2018). In addition, these exposures can lead to feelings of anger, shame, guilt, betrayal, and worthlessness (Litz et al., 2009: Litz et al., 2018). Indeed, in the 2013 Canadian Mental Health Survey, Canadian PSP were also found to be at increased risk of major depressive disorder, generalized anxiety disorder, and alcohol use disorder, because of their exposure to stressful and potentially traumatic events (Carleton, Afifi, Taillieu et al., 2018; Carleton et al., 2019). In another study, approximately 45% of the 5,813 Canadian PSP surveyed screened positive for symptom clusters consistent with at least one mental health disorder (Carleton, Afifi, Turner et al., 2018). Notably, this rate is significantly higher than that of the Canadian civilian population, which screens at a 10% positivity rate on average for symptoms consistent with at least one mental health disorder (Carleton, Afifi, Turner et al., 2018).

Despite ongoing mental health research among PSP (Haugen et al., 2017; Lowe et al., 2021), little is known about their perspectives regarding the mental health toll of their service. Understanding the perspectives of this population is critical to increase potential treatment options, enhance adherence, and promote positive outcomes stemming from targeted treatments (Weeks et al., 2021). To address this pivotal research gap, we conducted focus groups with treatment-seeking Canadian PSP to gain a first-hand subjective understanding of the mental health toll of their service. The outcomes of these focus groups were published in an overview paper (Easterbrook et al., 2022) and revealed crucial areas of the trauma-related impacts for these populations, including their relationships, the mental health toll, and potential moral injury.

The present study sought to expand on the rich narrative descriptions of PTSD-relevant themes identified by Easterbrook et al. (2022), particularly as they relate to the PTSD diagnostic criteria set out in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition – Text Revision (DSM-5-TR; American Psychological Association, 2022). In most cases, employers or insurance providers require a formal diagnosis of PTSD, made by a licensed health care provider, for PSP to access treatment (Szymanski & Hall, 2021). In Canada, the majority of mental health professionals rely on the DSM-5-TR to inform diagnostic formulations (Kogan & Paterniti, 2017). In this paper, we describe the thematic outcomes of these focus groups using the DSM-5-TR's PSTD criteria (Criteria A-E) in order to better understand and characterize PSPs' subjective experiences of PTSD symptom expression. This analysis provides important insight into the experiences of treatment-seeking populations and informs treatment objectives for mental health care providers in the provision of tailored PSTD treatment.

## 2. Methods

### 2.1. Setting and participants

Following institutional ethics approval, focus groups were conducted in a mental health and addictions inpatient residential treatment facility located in Canada. Institutional ethics approval was obtained from Regional Centre for Excellence in Ethics (REB #18-08). The facility offers group-based treatment to adults (i.e. 18 + years old) for substance use disorders, trauma, mood, and anxiety-related disorders.

The present focus groups were conducted as part of a dual diagnosis treatment programme for individuals with a history of trauma and/or substance use. Twenty-six focus groups were conducted with self-identified PSP ($n = 51$). An additional 12 participants who self-identified as military personnel participated in these focus groups but are excluded from the present analysis. These focus groups were conducted once weekly, for approximately an hour, with the number of participants per group ranging from 4 to 16. Any patient with PSP experience participating in group-based treatment programming was invited to attend the focus groups as often/frequently as they chose.

The mean age of participants was 46.4 (range: 29–80) years of age. With respect to gender identity, the present sample of participants identified only as male (73%) or female (27%). Eighty-six per cent of participants identified as White, 8% identified as Indigenous, 2% identified as Other, and the remainder declined to respond.

Thirty-nine per cent self-identified as police officers (regional, provincial, municipal, or RCMP), 18% as corrections officers, 18% as paramedics, 10% as firefighters, and 15% as other (unemployed, emergency dispatch, declined to answer). Fifty-five per cent identified as having completed a college/university degree, 18% as having completed some college/university, 10% as having completed high school, 12% as having completed some graduate level education, and 6% declined to respond. With respect to marital status, 61% identified as married, 22% identified as separated/divorced, 12% identified as single, 6% as other/ declined to respond.

Participant demographics were not able to be disaggregated further for the purposes of this study due to potentially identifiable characteristics and ethical constraints surrounding protection of participant data and confidentiality. In particular, the PSP community is typically small and somewhat insular, resulting in a much higher likelihood of participants in the study knowing one another or being more easily identified as a result (Table 1).

Focus groups were led by Masters' or Doctoral level clinicians, using four different semistructured

question guides, who engaged participants in facilitative discussion to better understand their subjective experiences as PSP, while simultaneously encouraging general discussion and connection amongst group attendees. The interview guides posed discussion questions including what specific challenges and stressors participants' jobs resulted in that affected their day-to-day lives, including relationships, stigma, potential moral injury, treatment expectations and treatment experiences. The question guides were rotated each session, resulting in some participants engaging in more than one focus group session. With consent, these discussions were audio recorded and transcribed verbatim by three research team members who then assessed them for initial ideas that could represent dominant themes.

#### 2.1.1. Data analysis

Initially, using an interpretive phenomenological approach (IPA), these data were analysed and published as a preliminary study of the mental health and trauma/non-trauma-related experiences of military members and PSP (Easterbrook et al., 2022). This preliminary analysis of emergent themes was inductively developed, examined, and connected across individual cases (Engward & Goldspink, 2020). Primary themes were based on participant discussion topics, which were then discussed amongst the coders, and a consensus was agreed upon. Disagreements were resolved through discussion. Independent parallel coding was performed, with two coders evaluating the same raw text, using Miles and Huberman's techniques of data reduction, data display, and conclusion drawing/verification (Miles & Huberman, 1994).

Then, through an 'unfolding' (Nicholls, 2019, p. 2) and reflexive exploration, new patterns became observable (Goldspink & Engward, 2018; Smith, 2011), with the data mapping neatly onto the DSM-5-TR PTSD diagnostic criteria (American Psychiatric Association, 2022; Easterbrook et al., 2022). Through supervised (i.e. multiple team members) reflexive hermeneutic analysis, unique data lodgers were identified (Smith, 2011). In the manner of Larkin et al.'s (2021), an 'imaginative' (p. 40) systematic IPA methodology was used to guide and develop these insights to fit this new understanding. Thus, utilizing the DSM-5-TR PTSD criteria as a structured framework by which to map these themes, five team members interpreted and mapped the data accordingly.

**Table 1.** Demographics of focus group participants ($n = 51$).

| | *n* | % |
|---|---|---|
| Median age (Range: 29–80 years) | 48 | |
| Sex/Gender | 51 | |
| Male | 37 | 73% |
| Female | 14 | 27% |
| Marital Status | 51 | |
| Married | 31 | 61% |
| Separated/Divorced | 11 | 22% |
| Single | 6 | 12% |
| Other/Declined to respond | 3 | 6% |
| Ethnicity | 51 | |
| White | 44 | 86% |
| Other/Declined to respond | 7 | 14% |
| Education | 51 | |
| Completed college/University | 28 | 55% |
| Some college/University | 9 | 18% |
| High school | 5 | 10% |
| Some graduate level education | 6 | 12% |
| Declined to respond | 3 | 6% |
| Employment status | 51 | |
| Working full time | 29 | 57% |
| Other (e.g. off work, suspended) | 13 | 25% |
| Retired | 6 | 12% |
| Declined to respond | 3 | 6% |
| Current employment | 51 | |
| Police (Regional/Provincial/Municipal/RCMP) | 20 | 39% |
| Corrections officer | 9 | 18% |
| Paramedic | 9 | 18% |
| Firefighter | 5 | 10% |
| Other (e.g. unemployed, emergency dispatch, declined to respond) | 8 | 15% |

## 3. Results

The overview study on these data revealed that the phenomenological experiences of PSP's mental health toll and trauma experiences largely mapped onto the DSM-5 PTSD Criteria A-E (Easterbrook et al., 2022). Indeed, the present analyses found unique and descriptive examples of the symptomatic expression of these criteria that included exposure to a traumatic event, intrusion symptoms, avoidance symptoms, marked changes in reactivity, and negative alterations in cognitions and mood. Due to the detailed and sensitive nature of these narrative examples described herein, a content warning is provided to readers.

### 3.1. Criterion A

For a health care provider to provide a diagnosis of PTSD using the DSM-5-TR, they must confirm that the patient experienced an etiological event (Criterion A), that is, an initial exposure to a traumatic event (American Psychiatric Association, 2022). Criterion A is described by the DSM-5-TR as 'exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways: (1) directly experiencing the traumatic event(s); (2) witnessing, in person, the event(s) as it occurred to others; (3) learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental; and (4) experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g. first responders collecting human remains: police officers repeatedly exposed to details of child abuse)'.

PSP participants provided many examples of life threatening and potentially traumatic events that they experienced directly on the job, such as being

shot and/or being shot at, stabbed, punched, strangled, kicked, and being physically assaulted with various weapons (e.g. hammer, shears).

> … and that can range anywhere from verbal aggression to being threatened to kill you, to stabbings, to assaults, to weapons there for murders. Like, I have been there for everything. (Participant 22; Firefighter/ Correctional Officer)

> We chased this guy who had already shot and murdered somebody, and we tracked him down and he turned and come up with a rifle … see the look in his eye and I … he was going to shoot, I knew it. And then upon inspection of the weapon it was loaded and there was one in the chamber. (Participant 41; Police Officer)

Participants also reported having their lives threatened and/or the lives of their loved ones threatened.

> I've been in the [maximum penitentiary] and shit and piss thrown on me and like my life threatened every day. The big one is always, 'I'm going to get out and I'm going to rape and kill your family' and all that stuff. (Participant 22; Firefighter/ Correctional Officer)

Trauma that incurred because of taking a life while on the job was also discussed. Although police officers are trained to take lives as a possible requirement of their vocation, many consider being forced to take the life of another to be a traumatic experience. The act of accidentally taking a life while on the job (e.g. accidentally hitting a pedestrian with a vehicle while chasing a suspect) also has negative impacts on PSP's mental health.

> I find it very difficult, with faith in the organization. I believe that there's a moral injury there, with me having to shoot somebody that was mentally ill. (Participant 40; Police Officer)

In addition to directly experiencing a host of traumatic events, witnessing traumatic events is also common for many PSP. Examples of these types of events that were discussed included drownings, homicides, physical assaults, sexual assaults, and vehicular homicides. For example, one participant described hearing a murder take place:

> I'm a call taker, was that day, and I deescalated what started as a domestic and turned into a homicide, where I listened to him kill [person], from start to finish. (Participant 42; Emergency Dispatcher)

PSP also witness, at times, colleagues being injured or even killed while on the job.

> I've had two partners die in my arms. I've had three partners that were shot, one of them has no eyes. The other guy got his guts blown out 12 feet away [from me], 12-gauge shotgun. (Participant 43; Police Officer)

Participants noted that they offer unique perspectives on witnessing trauma, because they observe these events in real-time, whereas other professions (e.g. healthcare providers) see the impact of the traumatic event but do not witness the actual event/ scene. As described by one participant:

> A doctor sees the trauma of the person; he doesn't see the traumatic experience where the knife's right there. The person still holding the knife, they're still freaking out and the whole scene where there's clothes and bugs crawling all over it. You know what I mean? It's a little different, you know? (Participant 61; Firefighter)

Another participant spoke of the hard choices made on the scene of an accident:

> You got to see bad things, [healthcare providers] see traumas and what have you, but they don't see the person that you've had to leave in the car because there's no way you're getting them out for two hours or an industrial accident. (Participant 4; Paramedic)

PSP also learn about and are made aware of traumatic events experienced by other PSP. This occurs through numerous outlets, from discussions with each other following traumatic events, to briefings from management following negative outcomes of these experiences. For example, participants discussed learning about events in which their colleagues died due to a traumatic event either on the job or as a consequence of the job. For example, one participant noted that they had three partners who died by suicide over the course of their career.

Finally, participants provided examples of experiences that met the last descriptor of Criterion A: experiencing repeated or extreme exposure to aversive details of traumatic events. Potentially traumatic events that participants reported being regularly exposed to at work included homicide and suicide scenes, vehicular homicide, industrial accidents, and child and spousal abuse situations. Many of these events involved significant human suffering.

Participants noted that it is not always seeing the 'gore' that is traumatic. Often the trauma comes from seeing people in difficult situations and anticipating the negative impact these situations inevitably may have on victims or witnesses.

> It's not just the gore, it's the going into a house where there's a domestic and the kid's in a shitty diaper that's probably been there for 2 days and there's crap all over the floor and you know what the kid just saw and it's that kind of stuff that gets to you to it doesn't always have to be the gore. (Participant 9; Firefighter)

Events involving children were described overwhelmingly as the most distressing events to attend.

> Well, [my job has] given me PTSD … everything in my [traumatic incidents], other than one, are all

> child-based. You could only hold so many dying children and not be affected. (Participant 24; Firefighter)

Events involving children were particularly traumatic for participants who had children of their own, especially if the children were similar in age.

> The last one I had was a [age] girl that hung herself and I have an [same age] daughter. I had to go home and pick her up and take her to school that day. I was screwed up. And I just went in and as soon as I saw her, I just broke down. (Participant 24; Firefighter)

### 3.2. Criterion B

Criterion B is described by the DSM-5-TR as the Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred: (1) Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s); (2) Recurrent distressing dreams in which the content and/or effect of the dream are related to the traumatic event(s); (3) Dissociative reactions (e.g. flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings); (4) Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s); (5) Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).

Criterion B symptoms were endorsed in a variety of ways by PSP. The most frequently discussed intrusion symptom was the experience of distressing dreams that made falling or staying asleep difficult, to the extent that some endorsed not wanting to sleep at all due to the content of their dreams. Many participants also noted that nightmares or distressing dreams regarding the traumatic events that they had witnessed were common.

One participant noted that distressing dreams were a normalized experience among colleagues:

> I thought it just came with the job, the nightmares come with the job, that's what you sign up for. (Participant 7; Police Officer)

Some individuals also endorsed feeling as though they were re-experiencing the trauma. They could experience flashbacks 'anywhere'.

One participant described the experience of even simple daily tasks being difficult due to re-experiencing their trauma:

> The shower used to be my safe place and now it's my nightmare … my brain just takes off … it kind of turns into like a flashback reflection and you get lost. (Participant 9; Firefighter)

Other participants described how they would experience physiological reactions when thinking about traumatic events, with one member stating 'I get so keyed up [thinking about the trauma] that I get the adrenaline going. Then that just makes me feel sick.' While many participants endorsed feelings of long-term psychological distress related to the traumas, few discussed explicitly the relation between this distress and their relation to cues that resembled or symbolized the trauma itself. Of note, many individuals commented that even being back at work could trigger psychological distress, which for many, may have been related to the resemblance of the environment in which the trauma occurred.

### 3.3. Criterion C

Criterion C is described by the DSM-5-TR as the 'Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following: (1) Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or associated with the traumatic event(s); (2) Avoidance or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).'

Participants discussed avoidance of stimuli associated with traumatic events, including efforts to evade distressing memories, thoughts, or feelings associated with these events. This avoidance placed strain on relationships with family, friends, and coworkers, as participants found themselves progressively isolating both physically and emotionally from interpersonal relationships. Participants expressed a desire to leave the events of their shift behind them when returning home, either because they did not want to think about distressing events, or because they worried about how hearing of these events could negatively impact their spouse or partner. In both circumstances, public safety personnel described how they felt these experiences led them to isolate themselves from their family and friends.

As one participant explained:

> Yeah, like I would be on a shift for whatever, front and low cases so you're gone for 36 h or whatever. You come home and they'd want to talk and it's just like 'just stay away from me' kind of thing. I don't say, 'Stay away from me', I just, 'Sorry dear I don't want to talk'. I'd go down and put on the news or put on the hockey highlights and have a drink and eventually get to bed and get up in five hours and go back to work. (Participant 51; Police Officer)

Many individuals in our focus groups discussed a similar need to avoid thinking about traumatic events or discussing them with their loved ones, and how this loss of communication often combined with other avoidance behaviours, such as alcohol use, to negatively impact their relationships.

> I isolated. I mean I ruined my life, I drank, I cheated on my wife, I isolated, I pushed family away, pushed my wife away. I treated everyone like crap, but I held everyone responsible for my happiness because I didn't know. Doesn't excuse my behaviour but after that call, it affected me. (Participant 7; Police Officer)

Participants described both the mental and social toll of persistently trying to push traumatic memories out of their minds. Some participants avoided their coworkers and work-related events such as holiday parties, because they felt they couldn't mask their feelings enough to fit into a certain professional 'persona,' or because they simply could not tolerate socialization outside of work. Others avoided public places where they may be identified by other coworkers or members of the public, or locations where specific incidents took place. Several participants found their anxiety was so overwhelming that it was too stressful to leave the house at all.

As one participant described:

> Just my anxiety was through the roof. I didn't even want to go to the gym; didn't want to go to the grocery store because I identify myself as my job, not who I really am. So, then it's like, you know, how is work? And I just don't want to talk about it or whatever. So, like I felt like I shut in in the last four months waiting for [treatment facility] to call. It was horrible. Yeah, like just anxious nonstop and super-depressed. Yeah, it was crazy. (Participant 46; Paramedic)

Some participants also reported avoiding particular public spaces or leisure activities because they felt unsafe, or because they might run into members of the public with whom they had previously interacted on the job. This pattern was particularly true for police or correctional officers, some of whom voiced anxiety or discomfort with the possibility of running into 'criminals' in their off time, such as on sporting teams or at their children's school events.

Even when staying at home, many participants described frequently practicing distraction behaviours to avoid traumatic memories. Several participants voiced a need to keep chronically busy and distracted, whether that meant excessive housework or running errands on their days off, or to 'grab a couple of beers and forget a bad day.' Interestingly, several participants described taking overtime shifts to 'keep busy with work' and avoid 'off-time.' Others felt that they could only discuss traumatic events during heavy drinking sessions with coworkers who 'understood' what the participant had been through. Despite various strategies, these participants felt a need to avoid thoughts of their troubling work experiences.

> For like 10 years I wouldn't say I was fine, but I just kept burying all this stuff and kept working and liked staying busy because if you're standing still – like the only way I could get through my day is if I completed 100 things, like if I wasn't working overtime, I wanted to stay busy and that was the only way. And then when I was off work things just came crashing down because I couldn't stay busy enough, and that staying busy was the only thing that helped me. But after that it kind of just all went crashing down. (Participant 12; Border Services Officer)

Many participants expressed trepidation toward returning to work post-treatment as another mechanism of avoidance. Some worried about going back to the stressful environment or their ability to handle difficult calls. Some even doubted whether they would return to the job, weighing the risk to their mental health and the amount of work that went into achieving their position and status. Many felt that mental health supports in their place of work were inadequate, serving only as 'lip service' to address the mental health struggles of staff or officers. Many pointed out that the coping techniques they had been taught, while practical on-shift, did not help in their day-to-day management of PTSD symptoms. They reported feeling as though they had to choose between maintaining their mental health and being placed on unfulfilling 'modified' duties.

> I found the badge I made when I was six and it had my name and said, 'I want to be a police officer'. So, all my life I worked towards that and in my heart now I know I can't go back to it, so I'm trying to find a purpose for my life now because our job is – the reason we do it is because we love protecting the public and, yeah, helping. (Participant 35; Police Officer)

Those participants considering a return to work felt similar conflicts, and despite tools gained through treatment, continued to feel the need to avoid re-exposing themselves to traumatic environments. One participant summarized what many participants expressed, when he questioned:

> How do you go back?' Like, we have these lifesaving tools, life-altering tools that we need to implement that I want to implement, because I want to be better. I mean, I don't think any of us would be sitting here, if we didn't want to be better. How do you go back into that? I don't see how. (Participant 7; Police Officer)

### 3.4. Criterion D

Criterion D is described by the DSM-5-TR as 'Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following': (1) Inability to remember an important aspect of the traumatic event(s) (typically due to dissociative amnesia, and not to other factors such as head injury, alcohol, or drugs); (2) Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g. 'I am bad,' 'No one can be trusted,' 'The world is completely

dangerous,' 'My whole nervous system is permanently ruined'); (3) Persistent, distorted cognitions about the cause or consequences of the traumatic event(s) that lead the individual to blame himself/herself or others; (4) Persistent negative emotional state (e.g. fear, horror, anger, guilt, or shame); (5) Markedly diminished interest or participation in significant activities; (6) Feelings of detachment or estrangement from others; and, (7) Persistent inability to experience positive emotions (e.g. inability to experience happiness, satisfaction, or loving feelings).

Some participants felt difficulty communicating with spouses and family members. Many participants discussed an overall decrease in their ability to engage in empathy in general, leading to a noticeable reduction in their ability to tolerate any interpersonal conflict at home:

> You don't have empathy for [your spouse's problems] because you spent all day crushing your feelings and empathy because you have to, because that's your job, so you don't – it's not like a switch you can turn on and off, it's too big of a stretch and a demand to be able to do that. You'd almost need a split personality to have an effective work life and an effective home life. (Participant 16; RCMP Officer)

Participants noted that, compared to early in their careers, their experiences as PSP (and relatedly the traumatic events they experienced) negatively impacted their worldviews. Many participants expressed feeling cynical of their organizations/governing bodies. As one participant described:

> … like a callus over your emotions, just like you would get from lifting, you know, calluses on your hands. It's the same thing, like a callus over your emotions. (Participant 60; Correctional Officer)

> It's almost like you have a filter for the outside world now and your filter changes because it's been blocked by this [work experiences] and you can't help but see the world differently. (Participant 32; Paramedic)

Interestingly, this cynicism led to an intense, 'flip of the switch' anger over minor stressors, which participants deemed typically disproportional to the situations they described.

Some individuals expressed that their emotional outbursts were driven by the need to keep how much they were struggling private, even attempting to hide these symptoms from their family members.

One participant described that: 'I know my family has suffered because of my PTSI but it's like you said it's better than them knowing what's really going on out there' (Participant 24; Firefighter).

Symptoms typically related to emotional dysregulation, such as hypervigilance, agitation, and disproportionate anger, were also discussed:

> Say the regular everyday stuff that people go through that is traumatic to them – whether it's my spouse or friends or somebody else and they're talking about some stress that they've gone through and then I get angry because I think 'Well that's your problem?! That's what your worst day is?! (Participant 52; Police Officer)

Many believed that their friends and family, as civilians, were unable to relate to them, leaving them feeling misunderstood and feeling isolated. Furthermore, some found it difficult to draw on their emotions to connect with others, leading to further frustration.

### 3.5. Criterion E

Criterion E is described by the DSM-5-TR as Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following: (1) Irritable behaviour and angry outbursts (with little or no provocation), typically expressed as verbal or physical aggression toward people or objects; (2) Reckless or self-destructive behaviour; (3) Hypervigilance; (4) Exaggerated startle response; (5) Problems with concentration; and, (6) Sleep disturbance (e.g. difficulty falling or staying asleep or restless sleep).

Participants discussed being frequently 'on-edge' or 'keyed-up', unfortunately resulting in unintended outbursts towards people they cared about. Many expressed guilt or shame regarding their angry outbursts towards friends and family members, especially if these outbursts were directed at their children, but feeling at a loss for how to manage their 'anger problems'. They also indicated that they no longer had the 'skills' needed to regulate their emotions effectively. These outbursts lead to relationship dysfunction and ongoing psychosocial difficulties in participants' personal relationships.

One participant spoke of vulnerability and a loss of self-control with respect to anger:

> I know for me at least I feel more vulnerable. It seemed like when I first got on, I was able to kind of control myself on the scene more and now I find myself really having to work hard to not get emotional or upset especially if there's kids involved or whatever. That kind of seems to be my trigger. So now I find myself really struggling to keep myself put together to do what we got to do in the time, where before I was able to kind of focus. Now I just don't have that skill anymore; it just seems like the emotions start to take over. (Participant 9; Firefighter)

Another described the feelings of immense guilt after losing control:

> Yeah, because when I'm done like freaking out then I realize that wow seriously I need to get control of myself, but I can't. And I think okay and then I'll talk to my daughter and like 'I'm so sorry', and I'd apologize but the words are already said, like I've

already been angry so how do I take that back? (Participant 4; Paramedic)

One participant described 'flying off the handle' at their young child:

> The simplest thing that you can look at and just say 'Okay this is only easy; I can deal with this.' Well now it just becomes all a big deal; like my [child] if he's doing something and he's not listening or, that just compounds into a whole thing where I'm just flying off the handle for no reason. But it's because of the build-up of everything else, now I can't deal with that. (Participant 10; RCMP Officer)

Multiple participants spoke of their thinking being overly focused on trauma-content (either the subject and/or aftermath) and how this kept them from being able to be actively present in their lives. Participants would attempt to distract themselves by keeping busy with tasks or exhausting themselves to regulate.

> … Because it's so focused on your trauma that you just don't think about anything else. I know, my husband had said to me that he thought I was angry at him and, because I just wasn't talking to him anymore. It's just everything was just, dealing with what's in my head. And, even with my kids, I noticed the same thing. Like, just disconnecting from them, as well. (Participant 3; Paramedic)

Many participants engaged in maladaptive coping strategies, including drinking excessive amounts of alcohol, engaging in risky sexual relationships, and/or engaging in recreational drug use. These behaviours surrounded a reported lack of inhibitory control regarding future-oriented thinking, ultimately leading to shame-related actions and hiding their coping strategies from friends and family. Importantly, participants felt helpless and often unable to find any other way to dampen the intensity of their symptoms other than to use these coping strategies. Participants also described feeling under-stimulated and/or 'dead inside', feeling drawn to engage in jobs with a greater element of risk, or pastimes of a risky nature, as though it provided a sense of comfort or normalcy.

> I'm an adrenaline junkie, I've done the skydiving, I've done all that stuff, playing paintball this weekend just to try and feel normal again but that's one thing that I just don't feel any more either, that adrenaline rush and then enjoying a bit of the hobbies I used to do, it's just kind of gone. It feels like I'm just numb now where I just can't get that feeling back, you know, that true happiness. After, when we did that return-to-work thing I drove home like a fucking asshole, three hours blasting at 140/150. I'm like the kind of guy I want to chase down and I hope – I caught myself getting home and I was like, 'That was stupid'. But it was just that, I needed that energy, I needed that just to kind of get me through it, just to get me home. It was kind of that, you know, and when I got home, I'd go 'you're an idiot, like was that – you were risking yourself and other people on the road, it was just stupid'. (Participant 9; Firefighter)

> Yeah, the risk-taking, that's the only time I … feel good. I'm too much of a coward to jump out of an airplane and stuff but just the more gruesome, the more smelly, the more violent a call is at work those are the only calls that I want to take. (Participant 7; Police Officer)

Heightened arousal and reactivity were reported across a widely varying range of circumstances. Participants discussed needing to be 'prepared' or 'on-guard', even in seemingly benign situations. There were pervasive negative impacts to relationships because of these startle responses, well as significant feelings of guilt and shame surrounding them.

> You know, like so it's affected my relationship that way and, kind of, that startled effect. You know, you're overreacting to things that are just nothing at all, maybe … But even the talking. When the talking comes on over the PA, just the talking, because they are saying visiting hours are over, something like that, like I will get that instant startle jump … (Participant 20; Paramedic)

> I see someone walk into a room; I just see where their hands are placed. And, if they kind of got their hand tight to their side but, they're swinging the opposite arm, like, I immediately think there could be a weapon in that pocket, just, yeah, threat assessments on everything, situations, rooms. (Participant 7; Police Officer)

Finally, many participants spoke of ongoing sleep difficulties, both in terms of falling asleep and staying asleep. Many participants spoke of nightmares, attempts to avoid nightmares, and the need for sleep aids (both prescribed and unprescribed).

> It [keeping busy] keeps your mind off all the other stuff … . That's pretty much the only coping mechanism that I've ever used that – like there's others things, drinking and stuff to go to sleep, and those aren't healthy either but … (Participant 12; Border Officer)

> But I fall asleep like that, probably within less than a minute. But as soon as I wake up to go to the bathroom or something that's it for the night. I'll wake up at 11, 12 and I'll just … I got told get the hell out of bed and do something, but I just lay there, and I re-live all those fatal accidents and the smell of burning human flesh and … (Participant 43; Regional Police)

### 3.6. Potential moral injury and betrayal

In addition to describing symptoms across the spectrum of PTSD symptom clusters, many participants spoke of potentially morally injurious events. These events included witnessing tragic yet preventable outcomes or having to make difficult decisions that resulted in loss of life, while others felt that it was the repetitive nature of difficult decisions made over time that could lead to these feelings of shame and guilt.

One participant explicitly discussed moral injury in those terms, stating:

> It's that moral, those moral injuries right … it's not one trauma, I liken it to, it's that getting that little rock in your shoe where you can walk ten steps and kick it out, and it's okay, ten more steps you get another pebble in your shoe … You do that over ten years, you walk around with those pebbles in your shoes, it's going to irritate you after a while, and that's what I find in my experience, that's what kills me. And some of the big things are the straw that breaks the camel's back, [but] sometimes it's small. (Participant 39; Police Officer)

Many participants discussed guilt, shame, and betrayal as broader concepts, without explicitly mentioning the term moral injury. Another concept that was brought up in many different forms were feelings of betrayal. Some participants felt as though their organization did not care about them as people.

As one participant expressed:

> … they squeeze as much out of you as they can then when you break, they just throw you away. (Participant 7; Police Officer)

Others felt a distinct difference between the support that is purported to be offered and the supports that were received or available. Another participant expressed feeling a lack of support from their organization:

> Like, just having the lack of support. Like, they say they do all these great things for us and, they don't. They don't care one single bit. (Participant 12; Border Services Officer)

These feelings of betrayal exacerbated their frustration with the '*political red tape*' associated with careers in public safety organizations.

While guilt and shame may be associated with Criterion D of PTSD, they have also been shown to be crucial and individual components of moral injury. Whether the guilt and shame were associated with PTSD diagnoses or potential moral injury within this sample was not assessed in this study.

## 4. Discussion

The present study examined the qualitative experiences of PTSD symptoms among PSP who were seeking inpatient psychiatric treatment at a residential facility in Canada. We conducted focus groups with 51 self-identified PSP who were being treated for trauma and/or substance use disorder, regarding their subjective experiences of how exposure to traumatic events in their occupations impacted their personal well-being. The narrative descriptions provided by participants imparted rich information surrounding the subjective experience of PTSD symptoms across multiple PSP populations. Importantly, despite a wide range of traumatic experiences referenced among participants, criterion-specific themes (Criteria A-E) were readily identified within the subjective descriptions of their symptoms.

In light of the extensive experiences of traumatic occupational for PSP's in the pandemic (Carmassi et al., 2020), in addition to the high rates of PSTD in treatment-seeking populations of PSP's (Patel et al., 2022), the present results on the mental health toll of on-the-job traumatic experiences of PSP's are both timely and relevant (Haugen et al., 2017; Lowe et al., 2021). The present study offers valuable insight into how a treatment-seeking population of PSP experience their trauma-related symptoms. For example, future research should examine the differences in how individuals describe their personal experiences of the same symptom to further refine current treatments for that symptom cluster. Furthermore, by exploring the narrative descriptions of symptoms, trauma-focused treatments may be better designed to increase patients' ability to tolerate trauma-specific memories, as opposed to avoid, which is critical for cognitive and emotional processing of traumatic experiences (Foa et al., 2008).

Currently, Cognitive Processing Therapy (CPT) is one of the 'gold standard' treatments for PTSD (Resick et al., 2016), and is part of the standard treatment provided at the inpatient hospital in which participants were being treated. CPT is an evidence-based treatment that assists patients in identifying errors in their thinking patterns and confronting maladaptive and inaccurate thought patterns through cognitive restructuring. Since participants in our study were actively participating in CPT, it was common for them to discuss trauma-related symptoms daily. Different results may have been observed if participants were not actively in treatment and/or not accustomed to speaking about their traumatic experiences. For example, in the context of a group inpatient treatment environment, participants may have provided less detailed descriptions had they not already spent time discussing trauma(s) with a licensed therapist on the inpatient unit.

In particular, in consideration of narrative descriptions of treatment targets, symptoms such as overgeneralized/assimilated/accommodated beliefs (e.g. when talking about levels of responsibility [blame, responsibility and accidents]) and ruminative processing (e.g. repetitive thought cycles of blame/shame/grief) could be improved through CPT (Hayes et al., 2015). The re-experiencing of symptoms is a distinctive feature of PSTD and predicts prognosis and chronicity of symptoms as well as degree of disability (Breslau et al., 2005). By developing a better understanding of the way in which PSP's experience/express their own understanding of their own trauma-related symptoms, treatment engagement, outcomes, and efficacy can be bolstered (Holmes et al., 2018). One example of such insights that emerged was the way

in which participants coped with these cognitive symptoms while actively working (i.e. not on disability). Participants reported needing to keep busy to cope with ongoing activation of PSTD symptoms while actively partaking in their day-to-day occupational duties, which research has supported as one of the healthier ways in which public safety personnel can cope with occupational stress and burnout (Sundaram et al., 2014).

Also of note is the fact that these participants were currently off-work were inpatients, and treatment-seeking. Their symptom severity warranted more extensive treatment than that of a non-treatment-seeking population or outpatient-treatment-seeking PSP population. As a result, their narrative descriptions may have differed from those of PSP who remained at work/ were on active duty or of those who were seeking outpatient supports. For example, participants who were still actively working may have been concerned about providing details that could potentially adversely affect their job or may not have experienced the same intensity of distress associated with the PPTEs as inpatient treatment-seeking PSP. Further, patients who are off work may have had significantly more time to think about their traumatic experiences, and in fact been able to provide a greater degree of detail about their experiences as a result.

PSP may experience PMIES that are uniquely complex and that may differentially impact them in terms of symptom expression and treatment outcome when compared to civilian populations (Anderson et al., 2020). By developing a better understanding of the specifics of how PSP experience these symptom clusters, treatment providers and researchers may better inform treatment modality alterations that are specifically tailored to this population. For example, in treatments like Cognitive Processing Therapy (Resick et al., 2016), not all examples provided in the therapeutic material are directly relatable for PSP's (e.g. when talking about levels of responsibility as related to assigning blame in cases of accidents or mass casualties). A lack of relatability of material can hinder the perceived credibility and rate of patient buy-in (Sherrill et al., 2022) as well as reduce the sense of accountability of group members for the shared cause of group work (Sutherland et al., 2012). A trauma-specific and focused milieu supports efforts of treatment providers to facilitate connections among CPT group members and may boost progress for those who are struggling (Wright et al., 2023). Thus, through increasing treatment provider's understanding of contextually relevant examples, PSP's may be able to better positioned to engage with the therapeutic material, group members, and thereby, potentially experience improved treatment outcomes.

Potential moral injury, while not directly probed for, emerged as a common theme in the present study. It is well understood that exposure to PMIEs is related to PTSD, major depressive disorder, and suicidal ideation among members of the Canadian Armed Forces (Nazarov et al., 2015). For example, when considering the mental health toll experienced as part of their job, many participants spoke of feelings of betrayal, guilt, and shame resulting from traumatic events, including a negative world view that they had not previously held. A person's internal assumptions guides their outlook on the world (Edmondson et al., 2011). Following intervening traumatic events (Janoff-Bulman, 1989), survivors experience a fragmenting of their inner conceptual system about how the world ought to function. While this system previously was sensical and coherent, it became broken as a result of traumatic events that were discrepant with a survivor's personal/occupational value system (Molendijk, 2021). Fleming (2022) describes how the complexity of this shattering directly impacts the development of a potential moral injury, prompting this as an important directive for future research efforts. For example, for many, this shattering results in generalized guilt, skewed moral/spiritual beliefs, and hopelessness that can become intractable in cases of increased complexity and nuance (Fleming, 2022; Jinkerson, 2016). In our results, while narrative descriptions of shattered feelings and assumptions were, at times, associated with Criterion D symptoms, in many cases, they surfaced as individual themes and connections were not directly apparent It is critical that the literature develop a better understanding of the common factors contributing to potential moral injury as experienced by public safety personnel.

### 4.1. Limitations

The present study is not without limitations. Firstly, this investigation included a variety of PSP professions; however, the specific professions and roles within these categories were not separated in analysis. By collapsing across specific professions and roles, this study is unable to address nuanced differences in the perceived mental health toll of service across professions. Future research should consider the unique mental health impacts that different PSP report when asked explicitly about the perceived mental health toll of their service.

Though not directly a limitation, the results of this investigation may not be easily generalizable to a broader population of PSP with PTSD, given that participants in this study were actively seeking treatment for PTSD and/or substance use in an inpatient treatment facility, had severe symptom expression, and had the ability to take time off work to access treatment. Given the study was qualitative in nature, this lack of generalizability is not particularly problematic, as case-to-case transfer is the only type of direct generalizability that can be achieved in qualitative research (Tobin & Begley, 2004). Qualitative research

cannot predict the transferability and applicability of one study to another (Braun & Clarke, 2022; Lincoln & Guba, 1985).

## 5. Conclusion

PSP are exposed to extreme stressors as a daily part of their occupations. As a result, they are at elevated risk of developing mental health difficulties, including PTSD. In the present study, focus groups were conducted with PSPs on the mental health toll of their occupation. Participants discussed personal descriptions of their mental health experiences which mapped onto the five main PTSD criteria outlined in the DSM-5-TR (American Psychiatric Association, 2022). These symptom descriptions included exposure to a primary stressor (e.g. witnessing a trauma), intrusion symptoms (e.g. unwanted memories or flashbacks), avoidance symptoms (e.g. avoidance of trauma-related thoughts/feelings), negative alterations in mood and cognition (e.g. inability to recall details of trauma), and alterations in arousal and reactivity (e.g. irritability, hypervigilance). In examining these descriptions, we are provided crucial illustrative examples of their own unique experience of PTSD symptoms with an aim to inform future research on mental health and treatment goals for these populations.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Data availability statement

The data that support the findings of this study are available on request from the senior author. The data are not publicly available due to their containing information that could compromise the privacy of research participants.

## References

American Psychiatric Association. (2022). Trauma and stressor-related disorders. In V. A. Arlington (Ed.), *Diagnostic and statistical manual of mental disorders* (5th ed., text rev., pp. 265–266). American Psychiatric Publishing. https://doi.org/10.1176/appi.books.9780890425787.x07_Trauma_and_Stressor_Related_Disorders

Anderson, G. S., Di Nota, P. M., Groll, D., & Carleton, R. N. (2020). Peer support and crisis-focused psychological interventions designed to mitigate post-traumatic stress injuries among public safety and frontline healthcare personnel: A systematic review. *International Journal of Environmental Research and Public Health*, *17*(20), Article 7645. https://doi.org/10.3390/ijerph17207645

Braun, V., & Clarke, V. (2022). *Contextualism, thematic analysis a practical guide*. American Psychological Association.

Breslau, N., Reboussin, B. A., Anthony, J. C., & Storr, C. L. (2005). The structure of posttraumatic stress disorder: Latent class analysis in 2 community samples. *Archives of General Psychiatry*, *62*(12), 1343–1351. https://doi.org/10.1001/archpsyc.62.12.1343

Canadian Institute for Public Safety Research and Treatment. (2020). *Glossary of terms: A shared understanding of the common terms used to describe psychological trauma (Version 2.1)*. https://doi.org/10.1177/0706743717723825

Carleton, R. N., Afifi, T. O., Taillieu, T., Turner, S., El-Gabalawy, R., Sareen, J., & Asmundson, G. J. G. (2018). Anxiety-related psychopathology and chronic pain comorbidity among public safety personnel. *Journal of Anxiety Disorders*, *55*, 48–55. https://doi.org/10.1016/j.janxdis.2018.03.006

Carleton, R. N., Afifi, T. O., Taillieu, T., Turner, S., Krakauer, R., Anderson, G. S., MacPhee, R. S., Ricciardelli, R., Cramm, H. A., Groll, D., & McCreary, D. R. (2019). Exposures to potentially traumatic events among public safety personnel in Canada. *Canadian Journal of Behavioural Science*, *51*(1), 37–52. https://doi.org/10.1037/cbs0000115

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. (2018). Mental disorder symptoms among public safety personnel in Canada. *The Canadian Journal of Psychiatry*, *63*(1), 54–64. https://doi.org/10.1177/0706743717723825

Carmassi, C., Foghi, C., Dell'Oste, V., Cordone, A., Bertelloni, C. A., Bui, E., & Dell'Osso, L. (2020). PTSD symptoms in healthcare workers facing the three coronavirus outbreaks: What can we expect after the COVID-19 pandemic. *Psychiatry Research*, *292*, Article 113312. https://doi.org/10.1016/j.psychres.2020.113312

Easterbrook, B., Brown, A., Millman, H., Van Blyderveen, S., Lanius, R., Heber, A., McKinnon, M., & O'Connor, C. (2022). The mental health experience of treatment-seeking military members and public safety personnel: A qualitative investigation of trauma and non-trauma-related concerns. *Health Promotion and Chronic Disease Prevention in Canada*, *42*(6), 252–260. https://doi.org/10.24095/hpcdp.42.6.03

Edmondson, D., Chaudoir, S. R., Mills, M. A., Park, C. L., Holub, J., & Bartkowiak, J. M. (2011). From shattered assumptions to weakened worldviews: Trauma symptoms signal anxiety buffer disruption. *Journal of Loss and Trauma*, *16*(4), 358–385. https://doi.org/10.1080/15325024.2011.572030

Engward, H., & Goldspink, S. (2020). Lodgers in the house: Living with the data in interpretive phenomenological analysis research. *Reflective Practice*, *21*(1), 41–53. https://doi.org/10.1080/14623943.2019.1708305

Fleming, W. H. (2022). Complex moral injury: Shattered moral assumptions. *Journal of Religion and Health*, *61*(2), 1022–1050. https://doi.org/10.1007/s10943-022-01542-4

Foa, E. B., Chrestman, K. R., & Gilboa-Schechtman, E. (2008). *Prolonged exposure therapy for adolescents with PTSD emotional processing of traumatic experiences, therapist guide*. Oxford University Press.

Goldspink, S., & Engward, H. (2018). Shedding light on transformational online learning using five practice based tenets: Illuminating the significance of the self. *Asia Pacific Journal of Contemporary Education and Communication Technology*, *4*(2), 10–16. https://doi.org/10.25275/apjcectv4i2edu2

Government of Canada. (2018). *Federal framework on Post-Traumatic Stress Disorder Act*. https://laws-lois.justice.gc.ca/eng/acts/F-7.38/page-1.html.

Haugen, P. T., McCrillis, A. M., Smid, G. E., & Nijdam, M. J. (2017). Mental health stigma and barriers to mental health care for first responders: A systematic review and meta-analysis. *Journal of Psychiatric Research*, *94*, 218–229. https://doi.org/10.1016/j.jpsychires.2017.08.001

Hayes, A. M., Yasinski, C., Barnes, J. B., & Bockting, C. L. (2015). Network destabilization and transition in depression: New methods for studying the dynamics of therapeutic change. *Clinical Psychology Review*, *41*, 27–39.

Holmes, E. A., Ghaderi, A., Harmer, C. J., Ramchandani, P. G., Cuijpers, P., Morrison, A. P., Roiser, J. P., Bockting, C. L. H., O'Connor, R. C., Shafran, R., Moulds, M. L., & Craske, M. G. (2018). The lancet psychiatry commission on psychological treatments research in tomorrow's science. *The Lancet Psychiatry*, *5*(3), 237–286. https://doi.org/10.1016/S2215-0366(17)30513-8

Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of the schema construct. *Social Cognition*, *7*(2), 113–136. https://doi.org/10.1521/soco.1989.7.2.113

Jinkerson, J. D. (2016). Defining and assessing moral injury: A syndrome perspective. *Traumatology*, *22*(2), 122–130. https://doi.org/10.1037/trm0000069

Kogan, C. S., & Paterniti, S. (2017). The true north strong and free? Opportunities for improving Canadian mental health care and education by adopting the WHO's ICD-11 classification. *The Canadian Journal of Psychiatry*, *62*(10), 690–696.

Larkin, M., Flowers, P., & Smith, J. A. (2021). *Interpretative phenomenological analysis: Theory, method and research* (pp. 1–100). Sage Publications Ltd.

Lentz, L. M., Smith-MacDonald, L., Malloy, D., Carleton, R. N., & Brémault-Phillips, S. (2021). Compromised conscience: A scoping review of moral injury among firefighters, paramedics, and police officers. *Frontiers in Psychology*, *12*, Article 639781. https://doi.org/10.3389/fpsyg.2021.639781

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Litz, B. T., Contractor, A. A., Rhodes, C., Dondanville, K. A., Jordan, A. H., Resick, P. A., Foa, E. B., Young-McCaughan, S., Mintz, J., Yarvis, J. S., & Peterson, A. L. (2018). Distinct trauma types in military service members seeking treatment for posttraumatic stress disorder. *Journal of Traumatic Stress*, *31*(2), 286–295. https://doi.org/10.1002/jts.22276

Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, *29*(8), 695–706. https://doi.org/10.1016/j.cpr.2009.07.003

Lowe, S. M., Haugen, P. T., Marrone, K., Rosen, R., & Reissman, D. B. (2021). The COVID-19 pandemic and the five essential elements in mass trauma intervention: Perspectives from world trade center health program mental health clinicians. *Psychiatry*, *84*(4), 386–392. https://doi.org/10.1080/00332747.2021.2005443

Miles, M., & Huberman, M. (1994). *Qualitative data analysis*. Sage.

Molendijk, T. (2021). *Moral injury and soldiers in conflict: Political practices and public perceptions*. Routledge.

Nazarov, A., Jetly, R., McNeely, H., Kiang, M., Lanius, R., & McKinnon, M. C. (2015). Role of morality in the experience of guilt and shame within the armed forces. *Acta Psychiatrica Scandinavica*, *132*(1), 4–19. https://doi.org/10.1111/acps.12406

Nicholls, C. D. (2019). Innovating the craft of phenomenological research methods through mindfulness. *Methodological Innovations*, *12*(2), Article 2059799119840977. https://doi.org/10.1177/2059799119840977

Patel, H., O'Connor, C., Andrews, K., Amlung, M., Lanius, R., & McKinnon, M. C. (2022). Dissociative symptomatology mediates the relation between posttraumatic stress disorder severity and alcohol-related problems. *Alcoholism: Clinical and Experimental Research*, *46*(2), 289–299. https://doi.org/10.1111/acer.14764

Resick, P. A., Monson, C. M., & Chard, K. M. (2016). *Cognitive processing therapy for PTSD: A comprehensive manual*. Guilford Publications.

Ricciardelli, R., Carleton, N. 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

Sareen, J., Afifi, T. O., Taillieu, T., Cheung, K., Turner, S., Stein, M. B., & Zamorski, M. A. (2017). Deployment-related traumatic events and suicidal behaviours in a nationally representative sample of Canadian armed forces personnel. *Canadian Journal of Psychiatry*, *62*(11), 795–804. https://doi.org/10.1177/0706743717699174

Sherrill, A. M., Maples-Keller, J. L., Yasinski, C. W., Loucks, L. A., Rothbaum, B. O., & Rauch, S. A. (2022). Perceived benefits and drawbacks of massed prolonged exposure: A qualitative thematic analysis of reactions from treatment completers. *Psychological Trauma: Theory, Research, Practice, and Policy*, *14*(5), 862–870. https://doi.org/10.1037/tra0000548

Smith, J. A. (2011). Evaluating the contribution of interpretative phenomenological analysis. *Health Psychology Review*, *5*(1), 9–27. https://doi.org/10.1080/17437199.2010.510659

Sundaram, M. S., Sekar, M., & Subburaj, A. (2014). Occupational stress coping on policing reference to grade III police constables. *International Journal of Business Management & Research*, *4*, 39–50.

Sutherland, R. J., Mott, J. M., Lanier, S. H., Williams, W., Ready, D. J., & Teng, E. J. (2012). A pilot study of a 12-week model of group-based exposure therapy for veterans with PTSD. *Journal of Traumatic Stress*, *25*(2), 150–156. https://doi.org/10.1002/jts.21679

Szymanski, T., & Hall, A. (2021). Posttraumatic stress disorder and the limits of presumptive legislation. In *Handbook of posttraumatic stress* (pp. 109–130). Routledge.

Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of Advanced Nursing*, *48*(4), 388–396. https://doi.org/10.1111/j.1365-2648.2004.03207.x

Weeks, M., Park, S. B., Ghanem, S., Plebon-Huff, S., Robert, A. M., MacKay, H., & LeBlanc, A. G. (2021). A systematic review of the prevalence of posttraumatic stress disorder reported in Canadian studies. In *Handbook of posttraumatic stress* (pp. 38–108). Routledge.

Wright, E. C., Wachen, J. S., Yamokoski, C., Galovski, T., Morris, K., Goetter, E. M., Klassen, B., Jacoby, V., Zwiebach, L., Sornborger, J., Dondanville, K. A., Fina, B. A., & Rauch, S. A. (2023). Clinical and administrative insights from delivering massed trauma-focused therapy to service members and veterans. *Cognitive and Behavioral Practice*, *30*(3), 397–416. https://doi.org/10.1016/j.cbpra.2022.06.005