

# POSTTRAUMATIC STRESS DISORDER IN CANADIAN POLICE OFFICERS

## **Posttraumatic Stress Disorder in Canadian Police Officers**

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## **Abstract**

The purpose of this research was to determine whether there are specific risk and protective factors that contribute to, or prevent Canadian police officers from developing Posttraumatic Stress Disorder (PTSD). This research aimed to answer: what risk and protective factors influence the development of PTSD in Canadian officers? This research is a critical appraisal. The inclusion criteria includes English full-text, scholarly articles, with a publication time frame of 2011-2021 to ensure recent research is included. The research includes literature on Canadian police officers, with a specific focus on the factors that contribute to the likelihood to develop PTSD. Exclusion criteria are any articles that are not available in English, published before the set time frame, and/or based on studies conducted in another country. The research found that psychological/cognitive variables play a significant role in the development of PTSD, particularly identifying emotional regulation, and resilience as keys variables in preventing PTSD. Significant differences between RCMP and municipal officers were also found, with RCMP officers showing higher rates of PTSD and PTSD symptomology.

*Keywords:* Canada, posttraumatic stress disorder, police, risk and protective factors, susceptibility and development of PTSD

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## **Posttraumatic Stress Disorder in Canadian Police Officers**

Research shows that recurrent exposure to trauma is an inevitable part of work for first responders, which negatively impacts their mental health (Public Safety Canada, 2019). A study included in Foley & Massey's research article showed that police officers displayed the highest levels of stress and poor mental health among first responders (2021). Development of Posttraumatic Stress Disorder (PTSD) is defined as a disturbance that causes clinically significant distress or impairment in an individual's social interactions and capacity to function in work and other areas (Pai et al., 2017). PTSD is caused by exposure to an actual or threatened death, serious injury, or sexual violence, and is accompanied by intrusion symptoms, avoidance of stimuli, negative alterations in cognition and mood, and alterations in arousal and reactivity (Center for Substance Abuse Treatment, 2014). These symptoms must be present for more than one month to fulfill the diagnostic criteria (Center for Substance Abuse Treatment, 2014).

Studies have shown various outcomes in PTSD development, and further research is required to identify the risk and protective factors in a Canadian context. The purpose of this critical appraisal is to develop a more thorough understanding of the importance of specific protective and risk factors for PTSD in Police officers in Canada. The research will provide an overview of the current literature on Canadian police officer PTSD development to provide an explanation of the factors that contribute to or protect officers from developing PTSD. The research question was: what risk and protective factors influence the development of PTSD in Canadian officers?

The philosophical worldview guiding this study was pragmatism. Pragmatism views problems as those with solutions which can be implemented to come to a resolution (Creswell & Creswell, 2017). The development of PTSD is a result of a traumatic experience, which

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pragmatism sees as a problem with practical solutions, such as developing effective training or practicing healthy coping mechanisms to strengthen the individual's ability to overcome adversity. Further it follows the idea that the likelihood of developing PTSD is highly dependent on the presence of certain individual level factors. This means that by identifying certain risk or preventative factors practical solutions can be implemented to mitigate and lessen the risks of developing PTSD.

The research has found higher rates of PTSD in first responders, however it is unclear what the causes are. Some officers are often exposed to the same or similar events they can have significantly different mental health outcomes, some experiencing little to no negative changes, while others develop PTSD as a result. The research shows that the exposure to traumatic events is a cause of PTSD, however it is unclear what causes the difference in outcomes across officers. The majority of related research is based on studies conducted via self-reporting measures, and therefore leads to poor accuracy of results due to variances in reporting. The research provides conclusions about PTSD which may be conducted on people that do not fulfill diagnostic criteria. This also leads to poor generalizability overall, as well as difficulty determining causal relations between factors throughout studies.

### **Methodology**

This was a critical appraisal of literature, which was most appropriate due to the time constraints on the project. The inclusion criteria includes English full-text, scholarly articles, journals, publication date of 2011-2021 to ensure accuracy of findings, and includes studies on Canadian police officers, with a specific focus on the factors that contribute to the likelihood to develop PTSD. Exclusion criteria are any articles that are not available in English, published before the set time frame, and/or based on studies conducted in another country. Despite the need

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for current literature clarifying the differences in factors contributing to police officers' PTSD development compared to first responders there is lacking research presented, so studies that categorize police as a sector of public safety personnel are included.

For article selection the JIBC Library search database EBSCOHost was used first, after inputting keywords: PTSD or Posttraumatic Stress Disorder, AND Police AND Canada. The additional criteria was added: full text, scholarly peer reviewed journals, search journals only, English language and 2011-2021 time frame. This resulted in 72 results articles for title and abstract review, of which 8 were deemed useful as they were relevant to the research topic. The following 7 articles were found on the UBC library, after inputting keywords: PTSD or Posttraumatic Stress Disorder, AND Police AND Canada AND predictor AND risk factor. The additional criteria was added: full text online, scholarly & peer reviewed, journal articles, open access, English language and publication time frame of 2011-2021, which resulted in 343 hits, followed by a title and abstract review. Many of the research papers on both databases had titles appearing to be relevant to the topic, however upon abstract review were not conducted on a sample of Canadian officers, this led to exclusion of the article.

The main research interest was to investigate the risk and protective factors as variables for police officer susceptibility to PTSD but did not find sufficient research specifically pertaining to police officers. This is because a lot of data collection on PTSD in Canada has combined public safety personnel within studies, therefore, the results from Canadian police officers are predominantly derived from research on public safety personnel. The present research aimed to differentiate the risk and protective factors specifically on police officer PTSD susceptibility. Additionally, some studies conducted research on a particular police agency, therefore generalizability to Canadian police officers is low. The research was collected in regard

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to police officers' development of PTSD, with special regard to the risk and protective factors. Other relevant information is included when available, such as previous occupations which may contribute to PTSD development, as well as some research on related professions, such as paramedics, and military services to allow the comparison of research findings which will better determine applicability of PSP studies on Canadian police officers.

The researcher assessed accuracy by reviewing the results of the article and comparing whether the researcher would obtain the same conclusions from such results. Validity was assessed by evaluating whether the search conducted was measuring the attributed variables, and analyzing the possibility of confounding variables in the consideration of the findings. The researcher assessed whether the results indicated significantly different findings compared to similar studies, to ensure reliability of studies. The researcher chose studies that analyzed mental health specifically in regard to police officer PTSD, with inclusion of related studies such as those on public safety personnel, as these would be applicable.

### **Results**

Groll et al. (2020) conducted research including public service personnel (PSP), and examined the relationship between PSP's previous military service and mental health disorders. They found that those with previous military service were 1.5 times more likely to screen positive for PTSD along with other mental disorders, compared to PSP without prior military service. Park et al. (2021) research also studied PSP and found that depersonalization and derealization were correlated with PTSD symptom severity, emotional dysregulation, functional impairment and poor social functioning.

Horswill et al. (2021) research consisted of a web-based questionnaire, completed by municipal and RCMP officers. This examined psychosocial variables including anxiety

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sensitivity, intolerance of uncertainty, childhood adversity, personality facets, work engagement, hope, optimism and perceived social support, and compared them with correlation to both PTSD and Posttraumatic growth. The results supported existing literature, stating that RCMP and municipal officers displayed similar risk characteristics, while municipal officers reported higher levels of protective factors, yet RCMP officers have higher rates of PTSD than municipal officers (Horswill et al., 2021). Their study also found that high anxiety sensitivity, high intolerance of uncertainty, low social support, and low optimism were statistically significantly associated with PTSD whereas greater PTSD severity, high agreeableness, and more adverse childhood events were statistically significantly associated with posttraumatic growth (Horswill et al., 2021). Korol et al. (2021) compared demographic and cognitive variables, and shared similar findings as Horswill et al. (2021) study. Korol et al. (2021) found that anxiety sensitivity and intolerance of uncertainty were significant contributors to all mental disorders experienced among police officers in their study. Korol et al. (2021) research also found that female officers in provincial and municipal forces displayed higher levels of PTSD than their male counterparts, however, in the RCMP they found no significant difference between genders' PTSD rates.

Marchand et al. (2015) research differentiated between officer's disorders, studying acute stress disorder and full/partial PTSD and found the individual's emotional coping to be a significant contributing factor. Their study also analyzed the pre-traumatic, peritraumatic and posttraumatic stages, and found that the intensity of the officer's reaction in the peritraumatic stage had the most significant impact (Marchand et al., 2015). On another note, Papazoglou & Chopko (2017) examined the differences between moral distress (cumulative mundane incidents with moral dilemma) and moral injury (death & violence related incidents) in combination, and their influence on police officers' susceptibility to developing PTSD. They found that moral



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distress is a predictor of PTSD symptoms in soldiers/veterans and other first responders, and is prevalent in the triggering, re-experiencing and responding to traumatic events (Papazoglou & Chopko, 2017).

Regehr et al., (2013) measured biological stress levels of police communicators, to assess the association of psychological distress and physiological stress with the following factors: anxiety, depression, posttraumatic stress, coping strategies, social supports and locus of control. The study found that duration of employment and coping styles were the most significant factors associated with PTSD development. Specifically, the study found that police communicators that employed emotion focused coping (including attitudes of self-blame, repetitive worry and anger) had higher levels of anxiety, depression and PTSD. Additionally, avoidant-focused coping was correlated to PTSD development in the correlational analysis, but not the multivariate analysis.

Stelnicki et al. (2021) assessed the implementation of a unique early intervention program on PSP which included cognitive behavioural therapy (CBT). They found that individuals participating in the program experienced improvements in self-awareness, avoidant behaviours, relationships, and decrease in PTSD symptoms. Vig et al. (2020) similarly studied the relationship between PSP's perceived social support and two disorders: PTSD and Major Depressive Disorder (MDD). Their research found perceived social support to be a predicting factor for PTSD development. This is particularly in RCMP officers, who shared lower levels of perceived support. These findings are similar to the aforementioned study by Horswill et al. (2021), while different factors were studied by Vig et al. (2020), the contributing factors measured have proven more prevalent in RCMP officers compared to municipal officers.

Waegemakers Schiff & Lane (2019) studied the psychological impacts of frontline work in the homeless service sector, specifically to determine whether frontline workers in the

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homeless sector were more susceptible to developing PTSD. The study found that  $\frac{1}{3}$  of participants reported symptomology of PTSD, yet they maintained lower burnout rates than other frontline workers, which the researchers attributed to their lack of education on PTSD (Waegemakers Schiff & Lane, 2019).

Carleton et al. (2018) studied 147 Canadian police officers who participated in the Road to Mental Readiness training (R2MR) (a form of cognitive behavioural therapy). The Mental Health Commission of Canada created a specific version of the R2MR program to combat police officer mental health issues, as the program was initially implemented for military personnel (Carleton et al., 2018). The goal of this program was to determine the potential of the program to combat mental health issues specific to police officers. Following the program, participants shared written responses indicating accumulation of greater resiliency skills, and less stigma on mental health issues (Carleton et al., 2018). Their research found a reduction in stigma, changing attitudes, and improving communication following the program. They also found differences in perceptions and thought processes about mental health in general, but did not find significant changes in symptoms of PTSD or the other mental health issues measured (Carleton et al., 2018).

Doyle et al. (2021) study aimed to determine the relationship between occupational stress (OS) and first responders' mental health, in particular regard to the role that anger and resiliency have with the various levels of OS. Their study found that the impact of resiliency on OS factors and anger levels was most impactful on role overload, responsibility, role boundary (Doyle et al., 2021). Meanwhile, the impact of resilience on role insufficiency, role ambiguity and physical environment as components of OS was insignificant (Doyle et al., 2021).

Janssens et al. (2021) study aimed to discover the ways that resilience is measured among police officers, and the extent to which resilience predicts officers ability to function. Janssens et

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al., found many gaps in the literature stating that studies identify resilience as a protective factor to police officer PTSD, despite it being a static and changing variable (2021). Further, the study indicated that the impact of resilience is measurable through mental health outcomes but does not account for work performance measures, because studies on PTSD attribute the lack of PTSD or PTSD symptomatology to the presence of resilience (Janssens et al., 2021).

Boyd et al., (2018) study examined the relation between functional impairment and symptoms of PTSD comparing between military, veterans and first responders. Their study found that dissociative symptoms (depersonalization and derealization) were the strongest indicator of functional impairment in all three occupational groups, with the total number of symptoms having a potentially mitigating effect. They also found that reported exposure to childhood abuse was significantly higher among military members and veterans compared to the general population (Boyd et al., 2018). Boyd et al., research also found differences in dissociative symptomology in the peritraumatic stage (2018). These findings support the aforementioned study by Marchand et al., (2015), which found that the peritraumatic stage has the greatest impact on PTSD development.

Halpern et al., (2014) evaluated the impact of down time on EMT/paramedics rates of depression, PTSD, burnout and stress related emotional symptoms. While their research was conducted on EMT/Paramedics, it is applicable because police officers experience similar mental health issues due to similar exposure with frontline work. The mental health outcomes evaluated in response to the downtime included depressive symptoms, PTSD, burnout and stress related emotional symptoms. Halpern et al., (2014) hypothesized that this downtime would create an immediate reduction in anxiety following the incident, therefore leading to a reduction in the negative mental health outcomes caused by critical incidents. They found that implementing a

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brief period of downtime following critical incidents is an effective strategy for reducing depressive related symptoms (Halpern et al., 2014).

### **Discussion**

Several limitations must be noted, firstly many of these studies were focused on public safety personnel, among this category the differences between groups are not clarified in all studies, despite stark differences in occupational demands. Additionally, while the analysis of resilience is done through longitudinal studies, the measures of resilience are researcher dependent, and therefore have poor interrater reliability. Due to the ethical issues surrounding the study of mental health disorders, the majority of studies on PTSD are retrospective in nature, therefore the ability to analyze and identify the level of impact of specific factors is difficult. However, causal conclusions can only be drawn from longitudinal studies which include the pre-critical incident exposures which officers face.

The research has shown that RCMP officers have higher rates of PTSD and PTSD symptomology, however the listed factors are subjective to researcher bias, and lack causal attributions. For example, Vig et al. (2020) research showed that due to variances in the factor “social support” PTSD development in RCMP members is significantly higher over provincial and municipal officers. While social support is likely a contributing factor to a person’s ability to cope with a mental illness, this could also be attributed to many other factors, such as differences in organizational demands, inconsistent working schedules, instability caused by frequent relocation, inadequate resources, work overload, etc. Another significant difference found by Vig et al. (2020) is the militaristic organizational structure of the RCMP. Vig et al. (2020) research had strong generalizability because the research was on Canadian police, with a sample that was demographically representative of the Canadian population.

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The findings of higher rates of PTSD is also supported by the stronger prevalence of PTSD in those with a military background as well, as shown in Groll et al. (2020) study. With exposure to traumatic events in the military being significantly higher, PTSD symptomology could be further exacerbated by the combination of their past experiences with the militaristic style of policing in the RCMP. Alternatively, these officers could have fully developed the symptomology represented in the study prior to their engagement in police services, and could have experienced a decrease in symptomology since beginning their police service. Neither of these possibilities are accounted for, therefore the causal attribution is deemed void for the current research, only a correlation can be attributed. There are multiple confounding variables which could be contributing to RCMP officer's higher rates of PTSD development, and these should be further evaluated through longitudinal studies to determine the causal relation.

Papazoglou & Chopko's (2017) research found moral distress, the experience of cumulative mundane incidents, is a considerable factor in predicting first responders' development of PTSD. While their study was not conducted solely on police officers, it can be assumed that moral distress would similarly contribute to police officers' PTSD development of PTSD. The results show that despite the focus on death and violence related incidents as the primary cause of PTSD, further research into moral distress may prove its impact to be similarly significant.

Park et al. (2021) research also studied PSP and found that depersonalization and derealization were associated with PTSD symptom severity, emotional dysregulation, functional impairment and poor social functioning. Longitudinal studies on this would be beneficial to determine the causal relation, rather than simply attributing these factors as being caused by the traumatic event. These symptoms could be present prior to the traumatic experience, and be

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exacerbated by the event, or in some cases may be caused by the event, however further studies are necessary to assert this. Moreover, Park et al. (2021) research suggests that those with PTSD diagnoses would benefit from treatment that is specific to emotional awareness and regulation and the analysis of the resulting functional impairment is important for analysis.

Waegemakers Schiff & Lane's (2019) research on workers in the homeless sector found lower levels of burnout despite extensive frontline exposure. The researchers attributed this to the lack of education surrounding PTSD, however it can be assumed that professionals in the frontline community services likely have an understanding of PTSD, as they work with clientele that have experienced trauma, substance abuse, and other related issues. Alternatively, the findings could be reflective of the differences in professions, as those working in the frontline homeless sector may be more likely to develop relationships with their clients, see the impact of their role. These experiences may contribute to greater job satisfaction from the opportunities to see progress in their clients. Comparatively, due to the nature of police work in the short term/crisis stage, police officers recurrent traumatic exposures do not provide officers with any type of relationship with their clientele base. They also lack the opportunity for the satisfaction from seeing the long term (positive) impact of their work on the people they respond to.

While Boyd et al. (2018) research found dissociative symptoms to be the most strongly linked to PTSD in their study, they also discovered that the military members and veterans were more likely to have experiences of childhood abuse compared to the general public. Boyd et al. further suggests that these childhood experiences contribute to PTSD development, and worse mental health outcomes in general for these groups (2018). As the differences in PTSD development among military members and veterans are likely impacted by childhood

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experiences, the development of PTSD in other first responders, such as police, is also highly likely to be affected by the experience of childhood abuse.

Boyd et al. also discussed other studies with contradictory findings, such as the strength of hyperarousal symptoms being the greatest indicator of impairment, while other studies find emotional dysregulation to be the most consistent (2018). Boyd et al. found that first responders employ peritraumatic dissociation, which is associated with greater likelihood of developing PTSD (2018). This aligns with Marchand et al. (2015) research on the different stages identified for evaluation. While the association is clear between dissociation and PTSD, the findings of Boyd et al. (2018) and Marchand et al. (2015), necessitate further research into the different stages, to determine if the presence of dissociation in the peritraumatic stage is a cause or effect of PTSD. This would also broaden the understanding of the use of emotional regulation, the psychological state of officers during critical incidents, and the relationship between these and PTSD outcomes.

Boyd et al. (2018) findings of childhood abuse as a potential contributing factor also suggests the need for a comprehensive analysis of the non-work related contributing factors. The level of influence of non-work related factors on PTSD development could be greater than the critical incidents officers are exposed to. The peritraumatic processes in the critical incidents police are responding to in combination with adverse childhood experiences could also influence PTSD development, along with variables mentioned in other studies, such as anxiety sensitivity (AS), intolerance of uncertainty (IU). For example, the research article by Korol et al. (2021) found AS and IU to be predictors of PTSD development but failed to investigate multiple factor combinations, or the variances in childhood experiences of these officers. This and other factors

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could be found to contribute to PTSD in combination with or at varying degrees compared to the incidents which the PTSD assessments were instigated by.

Korol et al. (2021) research found that anxiety sensitivity and intolerance of uncertainty were significant contributors to all mental disorders experienced among police officers in their study, however this does not differentiate the presence of other mental disorders such as anxiety and depression prior to PTSD development. These factors may be influential in the development of PTSD in police officers, those with 1 mental disorder may be more likely to develop PTSD when combined with other PTSD related symptomology. Korol et al. (2021) also found female provincial and municipal officers to have higher levels of PTSD, however the impact of gender as a variable is already significant in the general population. Females have higher rates of mental disorders, therefore the rates in the provincial and municipal police may not be indicative of work-related experiences (Korol et al., 2021). Additionally, the research was a cross-sectional design which means it has poor validity, however it includes research on a Canadian sample of police officers, making the results highly applicable to the current study (Korol et al., 2021).

Janssens et al. (2021) research focused on the evaluation of mental strength of police, including resilience, hardiness and psychological capital, and the use of factors as predictors of PTSD. The research found greater consistency in hardiness and psychological capital, whereas resilience is often referred to as the ability of an officer to carry out their duties, yet the presence of a mental illness may or may not alter their ability to work effectively. Janssens et al. (2021) criticized the study of mental health as a dependent variable, arguing that the presence of a mental illness may or may not hinder an officer's ability to work effectively. Further, Janssens et al., study suggests that the officer's work performance is rarely measured in connection with PTSD, which means the presence of a mental illness, in this case PTSD, should not be taken as



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an indicator of the need for intervention (2021). The intervention required then would simply be mental health focused from a holistic approach rather than in an attempt to address poor work functioning, as the majority of studies do not evaluate work performance in connection to PTSD symptoms.

In Carleton et al.'s (2018) research on the Road to Mental Readiness training (R2MR) was based on a self-reporting measures, over 1 year, which does not effectively capture the sudden nature of PTSD, or accurately reflect the long term impacts due to the changing nature of PTSD symptomology. Regardless, the research was conducted on a sample of Canadian municipal police officers, making it applicable to the current research. Additionally, there was high interrater reliability from this study, as the results were consistent with other research findings. The findings of Carleton et al. (2018) show that implementing an educational program can change attitudes about mental health issues, however, the program's impact on PTSD over the course of the year was minimal. While the program had positive effects on the municipal sample, on stigma related outcomes, the R2MR session did not have a significant impact on long term mental health.

Research by Halpern et al. (2014) found that implementing a brief period of down time after critical incidents is an effective method to reduce depressive symptoms in paramedics. While these results are indicative of the positive impact on paramedics, it would likely have a similarly relieving effect on police officers' mental health. This could easily be used as a mitigating strategy by implementing briefing break periods with adequate personnel coverage, thereby reducing pressure on officers to return to work, following critical incidents.

While Horswill et al. research found RCMP officers have higher rates of PTSD than municipal officers; high anxiety sensitivity, high intolerance of uncertainty, low social support,

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and low optimism were statistically significantly associated with PTSD whereas greater PTSD severity, high agreeableness, and more adverse childhood events were statistically significantly associated with posttraumatic growth (2021). This study has high generalizability to Canadian police because it included both RCMP and municipal officers, however there may still be variances in municipal and federal agencies across Canada. This is a significant indicator that RCMP departments, more so than municipal agencies, should be implementing programs to better address mental health issues for their members. Alternatively, this may not be due to organizational differences, as the research also found municipal officers showed higher levels of protective factors. Therefore, the factor which contributes more to the higher rates of PTSD in this case, is unclear. Comparing differences between RCMP and municipal agencies should be done Canada-wide to better understand the causal relations, between the organizational and individual protective factors, and would therefore determine whether changes should be prioritized at the organizational or individual level.

Regehr et al. (2013) found the duration of employment and coping styles to be the most significant factors associated with PTSD development in police communicators. In regard to the coping styles, the researchers argue that cognitive behavioural therapy (CBT) is an effective method to combatting PTSD. They attributed lower levels of PTSD to individuals partaking in task-oriented coping. These results suggest that PTSD development may be attributed to differences in coping mechanisms, rather than the specific traumatic experiences of the individual officers. This could be significant in the prevention of PTSD, as the coping mechanisms can be broken down into skills learnt to cope, prior to PTSD development, rather than implementing this as a solution. If further studied, CBT could be used as a mechanism of resilience against PTSD, thereby leading to a reduction in PTSD development.

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Stelnicki et al. (2021) found that an individual's increased emotional regulation, self-awareness and individual coping abilities decrease officer likelihood to develop PTSD. Stelnicki et al. also argue that CBT has a mitigating effect on PTSD symptoms, further arguing that incorporating an approach focused on resiliency through behavioural changes will aid in PTSD prevention (2021). While Stelnicki et al. (2021) research did not distinguish between clinical diagnoses and self-reported symptoms, their findings support the research by Regehr et al. (2013), Park et al. (2021), and Carleton et al. (2018), therefore it was deemed valid for the current research. Stelnicki et al. (2021), Regehr et al. (2013) and Park et al. (2021) research is also supported by Marchand et al. (2015) which found an officer's emotional regulation in the peritraumatic state to have a significant role on PTSD development. The multitude of research supporting the argument that emotional regulation is a crucial factor in PTSD development in police officers indicates that the development of CBT programming prior to traumatic events would be beneficial.

Doyle et al. (2021) study found that resiliency had a mitigating effect on role overload, responsibility, and role boundary. The impact of resiliency was found to play a role in the various symptoms of occupational stress, pointing again to the importance of differentiating between agency and individual related factors, to determine their contribution to police officer PTSD. This supports the aforementioned studies by Carleton et al. (2018) and Janssens et al. (2021), which necessitate the development of research on resilience as a contributing factor to officer PTSD development. However, the findings were insignificant in relation to the remainder of the literature included, as Doyle et al. (2021) research did not prove any causation of these symptoms to PTSD development, or contribute new information to the research.

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## **Recommendations**

Further research is necessary to determine specific risk factors' contribution to officer PTSD development. Specifically, evaluation of cognitive variables and their presence in the pre-traumatic, peritraumatic and posttraumatic stages, and the impact of such variables should be completed. Also, as Korol et al. (2021) suggested, further research in the area of anxiety sensitivity and intolerance of uncertainty should be completed to develop interventions specific to the maladaptive behavioural patterns present with these factors. The relationship between anxiety sensitivity and intolerance of uncertainty should be further investigated to distinguish other mental health related factors, as well as determine whether these are indeed risk factors, previously present which are then exacerbated by the events, or are solely a result of the critical events officers experience.

Conducting longitudinal studies specifically looking at PTSD symptomology and the prevalence of anxiety and its related psychological symptoms in these stages would be useful to determine the importance of the variables, as well as identify their prevalence at the different stages. Longitudinal research like this would also benefit from the concurrent evaluation and implementation of interventions, allow for the evaluation of multiple factors at different stages, and the level of impact of each factor. This would also provide a clear indication of the impact of specific prevention methods and interventions throughout the different stages. It is crucial to develop an understanding of the effectiveness of various intervention strategies based on the specific risk and protective factors present, further enabling agencies to screen and intervene with appropriate timing.

It is imperative to determine whether individual or agency related factors play a greater role in the development of PTSD, specifically, comparing the RCMP with municipal services would be beneficial. The studies shared stark differences in PTSD and PTSD symptomology in

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RCMP officers compared to those in municipal agencies. The studies did not determine a causal relationship between factors, however the higher PTSD rates in RCMP officers are suspected to be attributed to both two factors: poor organizational support, and isolation due to the nature of RCMP jurisdiction. Determining these differences in specific agency and/or officer related risk and protective factors between agencies would support PTSD prevention efforts, as well as hold agencies accountable to addressing their potential contribution to serious mental health concerns.

Research should also be done to capture the significant personal characteristics in individuals, differences in childhood/youth experiences, the family structure including parenting presence and relationships, as well as previous occupations (other than military service) to determine the contribution of these as risk and/or protective factors in police officer PTSD development. Additionally, as Regehr et al. (2013) suggested, filling gaps in the research related to individual officer coping methods and resiliency factors would be beneficial to implement effective preventative programming. Analysis of burnout and job retention, as well as inclusion of former employees in studies would be beneficial to supplement the research findings. Also, future research should differentiate between behavioural and cognitive variables to determine the individual's role and/or contribution to the development or prevention of PTSD. This should include evaluation of physical factors such as the maintenance of a physical regime, maintenance of social and familial relationships, and other health related factors, distinguishable from the main focus on cognitive/psychological or mental health variables.

### **Conclusion**

The research has provided an overview of PTSD in the context of Canadian police officers. This can be used to advance training, determine susceptibility factors to PTSD, implement specific screening measures, and therefore enable police agencies to adequately

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identify, prevent and support officers' PTSD development. The identified factors and their relation to PTSD needs to be further examined, however the correlation is clear between cognitive/psychological variables and their connection to PTSD development. Levels of anxiety, and other resiliency related psychological factors have risen to the surface, proving connected, however, further research is necessary to determine causal relations between each variable and PTSD. In preventing PTSD, the research largely supports the importance of emotional regulation and self-awareness of an officer's emotional states. Also, the factors which contribute to higher rates of PTSD in RCMP officers needs to specify the causes, whether agency or individually specific. Resilience is of particular interest as a protective factor in the development of PTSD, however, the research on this specific factor is inadequate.

Officers can become self-aware and further pursue self-development by taking precautionary measures to prevent PTSD in the preparation of, or early stages of their careers, by learning about the contributing factors, and the importance of developing healthy coping mechanisms. By evaluating the existing literature, and providing a summary of findings on the significance of the risk and protective variables on Canadian officers, proactive measures can be taken to prevent PTSD development. Additionally, these findings can influence officer screening at an organizational level to facilitate faster treatment implementation. This analysis of research provides for complementary advancements in action plans to prevent and treat PTSD effectively. The research is limited due to time restraints on the project, and further research into police officer PTSD separate from the PTSD development of other first responders is critical to further understand the specific variables and contributing factors to police officer PTSD susceptibility and prevention.

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Overall, there are many gaps in the current research on the risk and protective factors to PTSD development in Canadian police officers and extensive research is required to support and/or refute the current findings. Multiple suggestions arise from the authors of the articles reviewed, however, many of the results included are seemingly based on speculation, as causal relations have yet to be proven. To ensure more accurate results the research needs to be conducted with professional psychological assessment, such as the study by Marchand et al., (2015) which differentiated PTSD from acute-stress disorder through clinical professionals.

To develop effective prevention measures, and better enable Canadian agencies to support their members there needs to be more thorough research conducted which includes a comprehensive overview of officers health, psychological, emotional, physical and socio-economic variables, as well as childhood experiences to fully evaluate the level of impact of the various factors, and determine the strength of such factors in combination. Lastly, the need for longitudinal studies is necessary to discover whether certain individuals are more susceptible to develop PTSD, and whether this can be prevented through organizational efforts, before resources are distributed to these causes.

**References**

- Boyd, J. E., Protopopescu, A., O'Connor, C., Neufeld, R. W. J., Jetly, R., Hood, H. K., Lanius, R. A., & McKinnon, M. C. (2018). Dissociative symptoms mediate the relation between PTSD symptoms and functional impairment in a sample of military members, veterans, and first responders with PTSD, *European Journal of Psychotraumatology*, 9:1, 1463794, DOI: 10.1080/20008198.2018.1463794
- Carleton, N. R., Korol, S., Mason, J. E., Hozempa, K., Anderson, G. S., Jones, N. A., Dobson, K. S., Szeto A., & Bailey, S. (2018) A longitudinal assessment of the road to mental readiness training among municipal police, *Cognitive Behaviour Therapy*, 47:6, 508-528, DOI: 10.1080/16506073.2018.1475504
- Center for Substance Abuse Treatment (US) (2014). Trauma-Informed Care in Behavioral Health Services. Rockville (MD): Substance Abuse and Mental Health Services Administration (US). (Treatment Improvement Protocol (TIP) Series, No. 57.) Exhibit 1.3-4, DSM-5 Diagnostic Criteria for PTSD. Available from: [https://www.ncbi.nlm.nih.gov/books/NBK207191/box/part1\\_ch3.box16/](https://www.ncbi.nlm.nih.gov/books/NBK207191/box/part1_ch3.box16/)
- Creswell, J. W., Creswell, J. D. (2017). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. United States: SAGE Publications.
- Doyle, J. N. Campbell, M. A., & Gryshchuk, L. (2021). Occupational stress and anger: Mediating effects of Resiliency in first responders. *Journal of Police and Criminal Psychology*, 36(3), 463-472. <https://doi.org/10.1007/s11896-021-09429-y>
- Foley, J., & Massey, K. L. D. (2021). The “cost” of caring in policing: From burnout to PTSD in police officers in England and Wales. *Police Journal*, 94(3), 298–315. <https://doi.org/10.1177/0032258X20917442>



## POSTTRAUMATIC STRESS DISORDER IN CANADIAN POLICE OFFICERS

Groll, D. L. Ricciardelli, R., Carleton, R. N., Anderson, G., & Cramm, H. (2020). A

Cross-Sectional Study of the Relationship between Previous Military Experience and Mental Health Disorders in Currently Serving Public Safety Personnel in Canada. *Canadian Journal of Psychiatry*, 65(5), 330-337.

<https://doi.org/10.1177/0706743719895341>

Halpern, K. Maunder, R. G., Schwartz, B., & Gurevich, M. (2014). Downtime after

critical incidents in emergency medical technicians/paramedics. *BioMed Research International*. 483140-7. <https://doi.org/10.1155/2014/483140>

Horswill, S. C., Jones, N. A., & Carleton, R. N. (2021). Psychosocial Factors Associated with Canadian Police Officers' Susceptibility to Posttraumatic Stress and Growth. *Canadian Journal of Behavioural Science*, 53(3), 285-295.

<https://doi.org/10.1037/cbs0000221>

Janssens, K. M. E., van der Velden, P. G., Taris, T. W., & Van Veldhoven, M. (2021-

2018). Resilience among police officers: A critical systematic review of used concepts, measures, and predictive values of resilience. *Journal of Police and Criminal Psychology*, 36(1), 24-40. <https://doi.org/10.1007/s11896-018-9298-5>

Korol, S., Vig, K. D., Sapach, M. J. N. T., Asmundson, G. J. G., & Carleton, R. N.

(2021). Demographic and cognitive risk factors for police mental disorder symptoms. *Police Journal*, 94(1), 40–57.

<https://doi.org/10.1177/0032258X19894619>

Marchand, A., Nadeau, C., Beaulieu-Prevost, D., Boyer, R. & Martin, M. (2015)

Predictors of posttraumatic stress disorder among police officers: A prospective

## POSTTRAUMATIC STRESS DISORDER IN CANADIAN POLICE OFFICERS

- study. *Psychological Trauma: Theory, Research, Practice and Policy*, 7(3), 212-221. <https://doi.org/10.1037/a0038780>
- Pai, A., Suris, A. M., & North, C. S. (2017). Posttraumatic Stress Disorder in the DSM-5: Controversy, Change, and Conceptual Considerations. *Behavioral sciences (Basel, Switzerland)*, 7(1), 7. <https://doi.org/10.3390/bs7010007>
- Papazoglou, K., & Chopko, B. (2017). The Role of Moral Suffering (Moral Distress and Moral Injury) in Police Compassion Fatigue and PTSD: An Unexplored Topic. *Frontiers in Psychology*, 8, 1999. <https://doi.org/10.3389/fpsyg.2017.01999>
- Park, A. H., Protopopescu, A., Pogue, M. E., Boyd, J. E., O'Connor, C., Lanius, R. A., & McKinnon, M. C. (2021). Dissociative symptoms predict severe illness presentation in Canadian public safety personnel with presumptive post-traumatic stress disorder (PTSD). *European Journal of Psychotraumatology*, 12(1), 1953789. <https://doi.org/10.1080/20008198.2021.1953789>
- Public Safety Canada (2019). <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/2019-ctn-pln-ptsd/index-en.aspx>
- Regehr, C., LeBlanc, V. R., Barath, I., Balch, J., & Birze, A. (2013). Predictors of Physiological stress and psychological distress in police communicators. *Police Practice & Research*, 14(6), 451-463. <https://doi.org/10.1080/15614263.2012.736718>
- Stelnicki, A. M., Jamshidi, L., Fletcher, A. J., & Carleton, R. N. (2021). Evaluation of Before Operational Stress: A Program to Support Mental Health and Proactive Psychological Protection in Public Safety Personnel. *Frontiers in Psychology*, 12, 511755. <https://doi.org/10.3389/fpsyg.2021.511755>

## POSTTRAUMATIC STRESS DISORDER IN CANADIAN POLICE OFFICERS

Vig, K. D., Mason, J. E., Carleton, R. N., Asmundson, G. J. G., Anderson, G. S., & Groll, D. (2020). Mental health and social support among public safety personnel.

Occupational Medicine, 70(6), 427–433. <https://doi.org/10.1093/occmed/kqaa129>

Waegemakers Schiff, J., & Lane, A. M. (2019). PTSD symptoms, vicarious traumatization, and burnout in front line workers in the homeless sector. Community Mental Health Journal, 55(3), 454-462.

<https://doi.org/10.1007/s10597-018-00364-7>