

Knowledge and Training Regarding the Link Between Trauma and Health: A National Survey of Finnish Police Officers

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Abstract

Research regarding what police officers currently know (or want to know) about the impact of trauma exposure on mental and physical health is rare. Given that police training and educational practices differ based on country or territory, studies using standardized surveys to discover police officer's preferences or openness to learning further information about the relationship between stress and health are not available. The goal of this study was to develop a survey to answer the following questions: (a) What do police officers know about stress, trauma, and health? (b) Are police officers interested in attaining more knowledge (and in what ways) about stress, trauma, and health? (c) Are police officers open to seeking help for trauma and/or stress-related issues, and if so, where do they prefer to seek help? The survey was fielded to all of the officers serving in the National Police Service in Finland during the spring and summer of 2014. Results suggest that officers were generally aware of the impact of police work on physical health problems (e.g., sleep disorders, heart-related issues) but had not received formal training about how trauma is related to mental and physical health or personal health risks. Officers were open to learning about both traditional (e.g., peer support) and alternative therapeutic techniques (e.g., relaxation), and many reported willingness to enroll in such programs if offered by the organization. Implications include incorporating evidence-based information regarding the trauma-health link into standard police curricula and providing officers with organizationally supported clinical and peer supports and therapeutic opportunities.

Keywords

trauma, stress, health, police training, psychological interventions

Introduction

Police officers experience both operational and organizational stress throughout their careers (McCreary & Thompson, 2006). Over a 30-year career, it is estimated that officers are exposed to upward of 900 potentially traumatic events (Rudofossi, 2009) during which time the role of a police officer often fluctuates between “social worker” and “street fighter” (Manzella & Papazoglou, 2014). For instance, police officers may need to support victims and survivors of crimes (e.g., child abuse cases, domestic violence situations) as well as arrest violent criminals. Moreover, exposure to multiple operational stressors is cumulative and may be exacerbated by organizational policies, shifts in work environment, or events beyond the officer's control (Papazoglou, 2013).

Longitudinal studies have shown that police officers are at an elevated risk of developing mental and physical health disorders and even early mortality when compared with their civilian peers (Violanti, 2010). For example, the connection

between extreme stress/trauma and health among police has been studied by Violanti and colleagues (2006). More specifically, in their 10-year longitudinal study, Violanti and colleagues found that police officers—compared with civil service workers—had elevated cortisol levels, more depressive symptoms, as well as more post-traumatic stress disorder (PTSD) symptoms. Similarly, other researchers found that officers—compared with civilians—had elevated blood pressure, increased risk for cardiovascular diseases, and higher prevalence of smoking and alcohol consumption (Joseph et al., 2010). Andersen, Wade, Possemato, and Ouimette (2010) have demonstrated that witnessing trauma

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(i.e., death and combat) increases the risk of operational stress injury (OSI) including PTSD and depression. In turn, OSI significantly increases the incidence and early onset of chronic disease (i.e., circulatory, musculoskeletal, hypertensive, digestive, and nervous system disease), even among young officers (Andersen et al., 2010; Pizarro, Silver, & Prause, 2006; Possemato, Wade, Andersen, & Ouimette, 2010).

Rationale Behind the “Education About Trauma and Health” (ETH) National Survey

Research regarding what police officers currently know (or want to know) about the relationship between trauma exposure and mental and physical health is rare. Given that police training and educational practices differ based on country or territory, studies using standardized surveys to discover police officer’s preferences or openness to learning further information about the relationship between stress and health are not available. The ETH survey was developed to answer the following questions:

Research Question 1: What do police officers know about stress, trauma, and health?

Research Question 2: Are police officers interested in attaining more knowledge (and in what ways) about stress, trauma, and health?

Research Question 3: Are police officers open to seeking help for trauma and/or stress-related issues?

The purpose of the ETH survey is to form a foundation upon which ideas for stress reduction and health intervention strategies may be developed for police officers. The survey was created not with a specific country or region in mind; rather, the questions cover the link between trauma and health, and thus, the survey can be tailored to the unique needs of the country or region surveyed. To develop interventions, it is important to first understand what officers already know, what they need to know, preferred methods of learning, and willingness to engage in interventions. The data discussed in this article refer to survey results from Finland.

Method

Participants

Invitations to participate in the ETH survey were sent to all police officers (nationwide) in Finland ($n = 7,500$). This included officers from 11 police districts and three units (Finnish Security Intelligence Service, National Bureau of Investigation, and the Police University College of Finland). Participants in this study were both male and female Finnish police officers ($n = 1,330$) who consented to participate in the ETH study (17.73% response rate).

Procedure

In collaboration with the National Police Board in Finland, the ETH questionnaire was translated from English to Finnish. The Finnish police internal network (Webropol) was utilized to collect data and maintain participants’ confidentiality. Officers were sent an email describing the ETH survey with the consent form attached. If the officer agreed to participate, he or she could access the link provided in the email to complete the survey. Officers who did not agree to participate received a “thank you” note and were able to exit the ETH survey page on the Webropol network. Our participants were not asked to identify or report any personal information to maintain confidentiality. The study was approved by the ethics board of the University of Toronto and the National Police Board in Finland.

Measures

The ETH survey questionnaire consisted of 43 questions (see the appendix). Survey items were a combination of dichotomous, Likert-type scales and open-ended questions. The ETH survey also included an evidence-based brief educational about the potential impacts of trauma exposure and severe stress on police officers’ mental and physical health. This paragraph provided officers with a brief literature review about the relationship between stress, trauma, and health. Participants were asked before and after reading the passage to report their knowledge about the stress, trauma, and health relationship and risk of occupationally related mental and physical health conditions. The purpose of the exercise was to examine whether reading a brief psycho-educational text would change to officers’ perspective about their personal risk of developing a mental or physical health issue associated with the adversities of police work. The questions posed before the passage was presented were as follows (see the appendix): “What do you estimate your risk of having a *mental* health condition related to police work over the course of your career (0%-100%)?” and “What do you estimate your risk to be of having a *physical* health condition related to police work over the course of your career (0%-100%)?” The questions posed after the passage was stated were as follows: “After reading this paragraph, what do you estimate your risk to be of having a *mental* health condition related to police work over the course of your career (0%-100%)?” and “After reading this paragraph, what do you estimate your risk to be of having a *physical* condition related to police work over the course of your career (0%-100%)?”

Results

Demographics

Our sample ($n = 1,330$) consisted of 75.6% males and 24.4% female police officers. Their ages ranged between 20 and 69

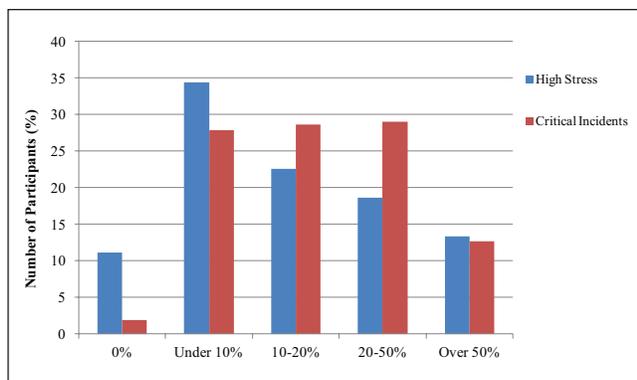


Figure 1. Amount of time exposed to critical incidents and high stress in the line of duty.

years. The majority of the participants (32.7%) were between 40 and 49 years old. In terms of the ethnicity, 95.4% of the participants were Finnish, and the rest (4.5%) identified as Finnish Swedish. Most of our participants identified as heterosexual (97.6%). A small proportion (2.4%) identified as lesbian, gay, or bisexual (LGB).

In terms of position status, most of our participants (60.7%) occupied operational positions (investigative duties and fieldwork), and 33.9% held administrative, managerial, or teaching positions. With regard to years of service, most participants (66%) had been working in their current position for the last 9 years or less. In addition, 26.7% of our participants had worked between 10 and 19 years in their current position.

Stress and Trauma Exposure

Police officers experience various degrees of trauma and stress exposure in the police field. One of the questions explored the degree of high stress and critical incident exposure that participants experienced in their current positions (Figure 1). Participants' exposure to critical incidents (potential traumas) appeared elevated compared with their experience of high stress events (Figure 1).

Most of the participants (85.9%) predicted—for themselves—that they would be exposed to a critical incident in the line of duty at some point in the future and (90.7%) endorsed the strong relationship between exposure to critical incidents (i.e., trauma) and mental health conditions. Fewer participants (64.5%) had been formally taught about the connection between critical incidents and mental health, and a portion (35.5%) reported that they had no prior training or introduction to this topic. In terms of operational and non-operational status positions, our chi-square analysis showed that significantly more operational officers than non-operational officers ($\chi^2 = 46.602 > 13.816$, $df = 2$, $p < .000$) believed that they would be exposed to critical incidents in the line of duty. Moreover, significantly more operational officers than

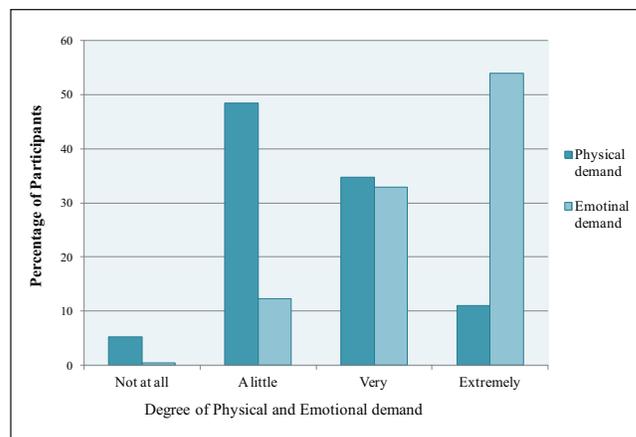


Figure 2. Emotional and physical demands of current role.

non-operational officers ($\chi^2 = 25.812 > 18.467$, $df = 4$, $p < .000$) maintained that their work involved exposure to critical incidents or demanding situations.

Chi-square analysis showed a significant difference ($\chi^2 = 12.257 > 10.597$, $df = 2$, $p < .01$) between male and female police officers' regarding their predictions of being exposed to critical incidents in the line of duty. The data indicate that significantly more males than females believed that they would be exposed to future critical incidents.

Participants were asked about the physical and emotional demands of policing (Figure 2). More than half of the officers (53.7%) reported low to moderate levels of physical demands in their police work (not at all to very little). The other participants (48.8%) stated elevated levels of physical demands in their work (high to extremely high). The majority of participants (86.9%) experienced their personal police work as being highly (high to extremely high) emotionally demanding, compared with 12.7% of participants who reported low to moderate levels of emotional demands in their police work (not at all to very little). Moreover, chi-square analysis highlighted gender differences ($\chi^2 = 9.823 > 9.488$, $df = 4$, $p < .05$) in the estimation of the physical demandingness of police work. Significantly, more male than female officers estimate that police work is physically demanding. There were no gender differences in the estimation of how emotionally demanding police work is.

Examining the differences between operational and non-operational officers showed that significantly more operational officers considered police work to be both physically ($\chi^2 = 27.940 > 14.860$, $df = 4$, $p < .000$) and emotionally demanding ($\chi^2 = 22.095$, $df = 4$, $p < .000$). Of the operational officers, significantly more male than female officers consider police work to be both physically ($\chi^2 = 12.927 > 10.828$, $df = 1$, $p < .000$) as well as emotionally demanding ($\chi^2 = 13.394 > 10.828$, $df = 1$, $p < .000$).

The majority of police officers found their jobs to be stressful (Figure 3). However, there were no significant differences

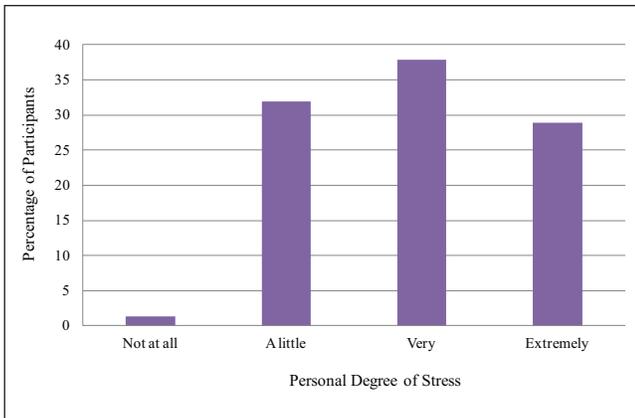


Figure 3. Degree of stress involved in police work.

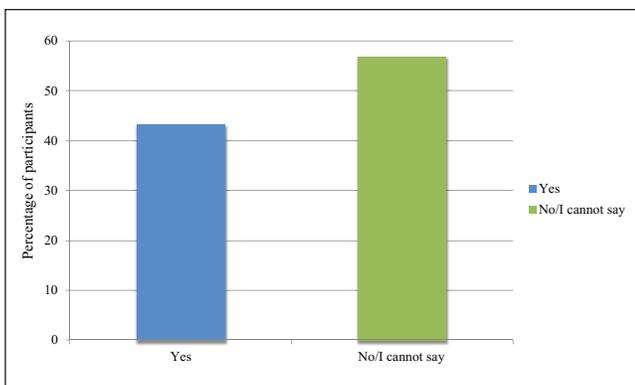


Figure 4. The connection between critical incident exposure and physical conditions.

between the two groups (operational and non-operational) in terms of how stressful they considered police work to be. Significantly more operational officers ($\chi^2 = 133.388 > 18.467$, $df = 4$, $p < .000$) believed that their job included high stress situations. Significantly, more operational male officers than operational female officers considered police work as stressful ($\chi^2 = 13.024 > 10.828$, $df = 1$, $p < .000$). Also, significantly more operational male officers than operational female officers ($\chi^2 = 11.969 > 10.828$, $df = 1$, $p < .001$) estimated that their work included high stress situations.

Physical and Mental Health

Participants were asked to rate their knowledge about the impact of critical incident exposure in the development of physical health conditions (Figure 4). The majority of participants (56.9%) reported that they had never been taught (no/I cannot say) about the connection between critical incident exposure and *physical* health outcomes. However, most of the participants (93.4%) reported knowing that having a mental health condition could increase a person's risk of getting a physical health problem.

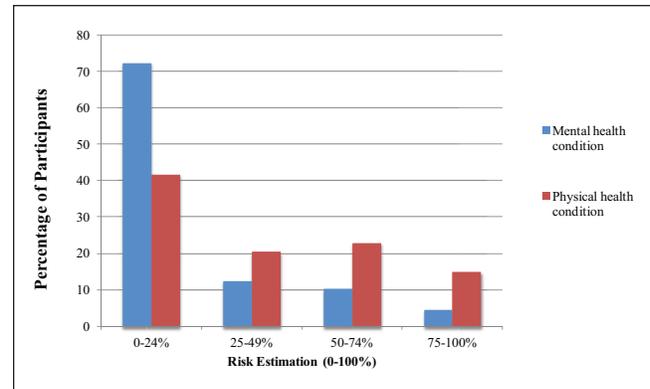


Figure 5. Personal risk for a mental or physical health condition related to police work.

We examined participants' estimation of the impact of police work on raising one's risk of mental or physical health conditions (Figure 5). Most of participants reported a weak connection between police work—in general—and mental and physical health. There were no significant differences between female and male officers or between operational and non-operational officers in estimation of risk for a mental-health-related condition over the years of service. However, significantly more operational officers than non-operational ones ($\chi^2 = 58.701 > 57.342$, $df = 35$, $p < .01$) believed that they would get a physical health condition during their years of service.

Participants were asked to estimate their personal risk of contracting a mental or physical health condition related to police work (0%-100%) before and after reading a brief evidence-based educational passage about known health risks associated with police work. Participants' estimation of the risk of acquiring mental but not physical health conditions related to police work over the years in service increased after ($M = 23.66$, $SD = 24.72$, $n = 1,309$) reading the educational passage in contrast to their risk estimation before ($M = 19.461$, $SD = 22.1$, $n = 1,309$) reading the passage, $t(1,308) = -10,666$, $p < .000$.

Interventions and Treatment Seeking

Participants were presented with a series of traditional and non-traditional post-trauma interventions. The majority of participants were familiar with, and interested in learning more about, peer support, physical exercise, debriefing practices, and meeting with a psychologist (Figures 6 and 7). However, fewer participants were familiar with, or interested in learning about, dance and movement therapy, mindfulness, yoga, or journaling, although over half were interested in learning about relaxation techniques (Figures 8 and 9). With regard to the ways in which participants wanted to learn about post-trauma interventions, most stated through basic training (39.4%) followed by debriefing practices (33.4%), formal peer support (33.3%), and handbooks (31.5%).

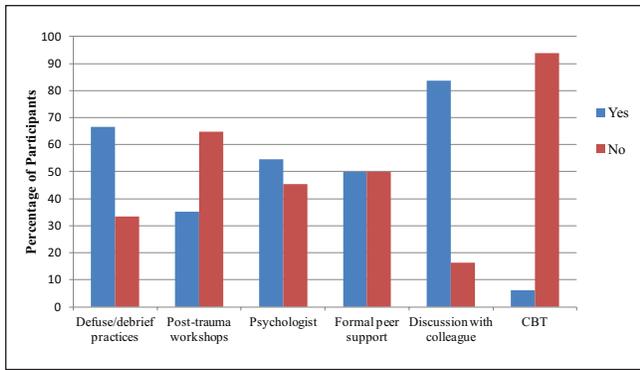


Figure 6. Familiarity with traditional therapies following trauma exposure.
Note. CBT = Cognitive Behavioral Therapy.

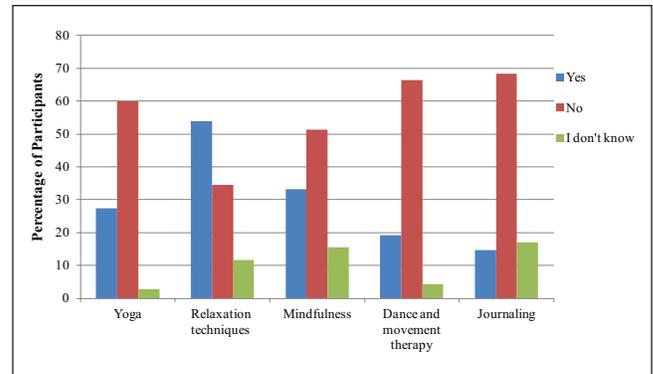


Figure 9. Interest in learning more about alternative stress management interventions.

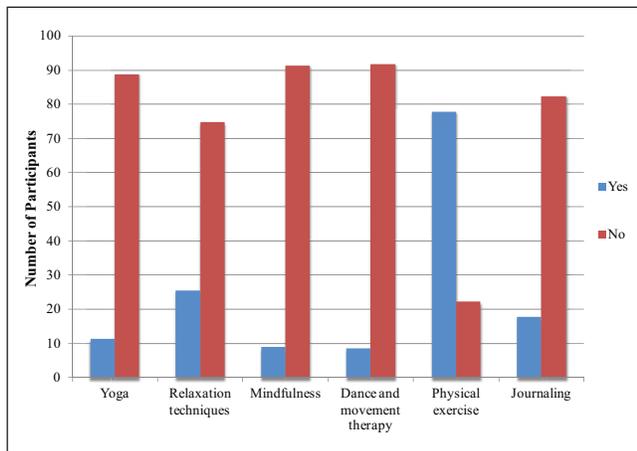


Figure 7. Familiarity with non-traditional therapies following trauma exposure.

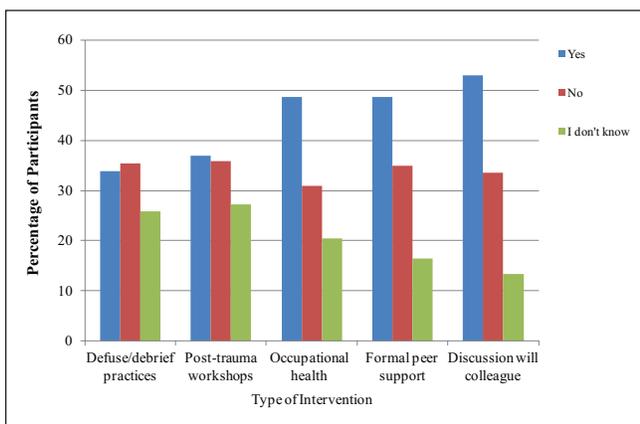


Figure 8. Interest in learning more about traditional stress management interventions.

Participants were asked whether they had participated in at least one of the therapeutic interventions listed in the

survey. A substantial proportion (40.3%) reported that such activities had never been offered to them but nearly half (46.7%) stated that they would participate in such activities if they were offered. A fewer percentage of participants (18.8%) reported that they would participate in stress management interventions and related education activities only if they encountered a personal health issue.

The majority of participants preferred the option to seek help from a health professional who belonged to the police organization (71%) versus seeking help from a health professional in private practice.

Discussion

Clinical and Training Implications

Stress and trauma exposure. Police officers in this sample were aware of occupational stress and critical incident exposure (operational officers), and quite a few were aware of the impact of this exposure on increasing one’s risk for a mental health condition in the line of duty. Interestingly, more than half of the officers were aware of the connection between occupational stress and physical health conditions (i.e., sleep problems, digestive disease, pain, substance use, and heart disease). Despite officer awareness of the stressors related to their job, only a third of participants had received formal training on the connection between stress and health.

An unexpected finding was that the majority were willing to admit that the job was emotionally demanding, even more so than physical demands. This may constitute a shift in the culture of police from a time when no one admitted that police work was emotionally demanding, which presented a barrier for them in terms of seeking treatment if they needed it (Papazoglou & Andersen, 2014). It is not surprising that significantly more operational officers compared with non-operational officers considered police work to be both as physically as well as emotionally demanding. What is important, however, is that there was no difference between the two groups (operational and non-operational) in how stressful police work was considered to be. These findings show

that operational officers may often experience negative emotions (e.g., sadness, grief, agony) due to exposure to loss, trauma, and extreme stress. However, the experience of stress in police work does not seem to be different between operational and non-operational police officers. This last finding indicates the impact of the operational as well as the organizational stress on a police officers' well-being.

More operational male officers than operational female officers considered police work to be both physically and emotionally demanding. One possible explanation is that male operational officers may be ordered to undertake more demanding tasks (e.g., carry equipment, handcuff a violent criminal) than their female peers. However, this situation may not always be the case because female officers are in the front line facing the same challenges as their "blue brothers." Another possibility regarding the finding that female officers reported fewer demands may be in line with studies that indicate that female officers may not openly admit that police work is physically and emotionally demanding because they are trying to comply with the traditionally masculine or "macho" values of police culture. Researchers have found that women may under report demands to present themselves as strong enough to be accepted as "real officers" (Franklin, 2005; Leger, 1997). Given previous research regarding females under-reporting demands suggests that our findings should be interpreted carefully, it may be the case that the demands are equal for male and female officers but there are other underlying reasons for females under-reporting demands, and this should be explored further.

Physical and mental health. The majority of participants were familiar with most of the information provided by the educational passage. However, almost one third of our responders seemed to have low to moderate familiarity with the educational passage's information regarding the connection between occupational stress and mental health, and the connection between occupational stress and physical health. This finding suggests that there is room for improvement in training officers about the links between stress, trauma, and health.

One of our most interesting findings is that the educational passage of the ETH survey significantly changed our responders' awareness about the impact of police work over time in increasing the risk of mental health outcomes. This finding indicates that officers' knowledge and awareness about the connection between the challenges of police work and the corresponding mental health risks can be improved through educational presentations.

Interventions and treatment seeking. Participants were generally open in acquiring more knowledge about stress, trauma, and health. However, they reported low degrees of familiarity with evidence-based practices and techniques: Cognitive Behavioral Therapy (CBT), movement therapy, mindfulness, yoga, and journaling. Researchers (see Papazoglou & Andersen, 2014) have suggested the benefits of these techniques in improving officers' resilience and promoting their health.

Most of our participants—compared with other offered options—stated their willingness to seek help from physical or mental health professionals who work at their own organizations. This finding likely reflects that officers believe that police health professionals are more familiar with the tenets of police culture and responsibilities and are thus better able to train and assist police officers. Results suggest that if police organizations seek to improve the health and performance of their officers, providing officers with organizationally trained and supported health professionals is the best investment of the organization's resources.

Recommendations

Adapt police training curriculum to include formal education about stress and health. Given the findings that many officers were aware of job and physical health problems (e.g., sleep disorders, digestive issues, heart-related issues) but not formally taught about this connection may indicate some officers have struggled with health-related issues or know peers who have but may not know what to do about these issues or where to seek help. Formal curricula changes that include educating about the connection between mental and physical health (e.g., involving collaborations with health psychologists) are therefore recommended. When information is taught by the organization, better standardization, up to date information, and empirically based evidence can be presented, rather than hoping that officers learn correct information from peer to peer interactions, which is often not the most reliable or accurate information. Considering that operational officers seem to experience more challenges (e.g., critical incidents, demanding situations) than non-operational ones, education about trauma and stress needs to be customized at the level of "street survival." However, non-operational officers cannot be ignored; hence, stress and trauma education can be tailored in terms of the duties relevant to their work. For example, officers who are assigned to a task force to discover Internet-based child pornography sites are chronically exposed to graphic images. Although these officers are not in the field, exposure to graphic images over time has been shown to impact both physical and mental health (Silver et al., 2013). Thus, educating task force officers about secondary trauma exposure and health and then providing them with ongoing therapeutic resources provided by the organization is recommended.

Train about interventions—Traditional and non-traditional therapies. Providing education about both traditional and non-traditional therapies is recommended given that not every therapy works equally well for each individual. Some individuals respond better to physical exercise and others to CBT. Results of the current study indicate that officers were open to learning about interventions and even trying them out if they were offered by the organization. Given that many officers endorsed peer support as a preferred method of gathering information and treatment, developing a program to

deliver health information via peers may be a good investment of organizational resources. One suggestion is to train a task force of peers to “spread” correct (up to date, empirically based) information about stress and health in addition to informing others about treatment and other organizational supports. One could envision naming such a program “peers for prevention,” a resource that utilizes peers for post-trauma information and support as well as information and resources about occupational stress and health.

Interventions to promote resilience and reduce traumatic reactions following stress. Based on the results of this study, it is recommended that the police organization provide organizational support for clinical therapy, post-trauma interventions, and active prevention workshops or peer groups. Our findings are quite positive, indicating that overall, officers are open to learning more about the connection between occupational experiences, stress, and health and would utilize organization-supported resources.

Appendix

Education About Trauma and Health (ETH) Officers/Constables/Cadets

1. What is your gender?

Female [value = 1]

Male [value = 2]

Other identified [value = 3] (please specify)

2. What is your age?

3. What is your ethnic background?

Finnish [value = 1]

Swedish [Value = 2]

Other [Value = 3]

4. What is your first language?

Finnish [Value = 1]

Swedish [Value = 2]

Other [Value = 3]

5. How long have you worked as a policeman including the time as a police student?

6. Which of the following job description best describes your current role in the police?

- Teaching in office environment [Value = 1]
- Administrative job in office environment [Value = 2]
- Managerial job in office environment [Value = 3]
- Field officer [Value = 4]
- Investigation [Value = 5]
- Student (not yet worked in the field) [Value = 6]
- Student (completed work experience) [Value = 7]
- Other (please specify) [Value = 8]

7. How long have you been in your current job? Full years, round off to the nearest full year?

8. What percentage of your job includes high stress situations, such as being part of a Special Weapons and Tactics (SWAT) team, investigations of severe crime (e.g., homicides, child sexual abuse investigations, etc.).

0% [Value = 1]

Less than 10% [Value = 2]

10%-20% [Value = 3]

20%-50% [Value = 4]

More than 50% [Value = 5]

The following questions ask about your opinion for the challenges of police work. In each case, please indicate your response by clicking on the circle representing how often you felt or thought a certain way. Please select an answer for each option.

	Not at all	A little	Very	Extremely	Don't know/ not applicable
9. How physically demanding do you consider police work to be?	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]	<input type="radio"/> [Value = 4]	<input type="radio"/> [Value = 5]
10. How emotionally demanding would you consider police work to be?	<input type="radio"/>				
11. How stressful do you consider police work to be?	<input type="radio"/>				

In the following question, we refer to critical incidents. By critical incidents, we refer to the times in the line of duty in which you experience severe stress, or under attack, life threat, or exposed to a severe event such as a violent domestic dispute or child abuse. In each case, please indicate your response by clicking on the circle. Please select an answer for each option.

	Yes	No	Don't know
12. I believe that I will be exposed to critical incidents in the line of duty	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]

In the following questions, we refer to mental health. By mental health, we mean thoughts, beliefs, and feelings including anxiety, depression, fear, as well as positive thoughts and emotions. In each case, please indicate your response by clicking on the circle. Please select an answer for each option.

	Yes	No	Don't know
13. Exposure to critical incidents is related to mental health	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]
14. Have you ever been taught or talked in your school about the connection between exposure to critical incidents and mental health?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- 15. If the answer in the last question is “Yes,” please explain briefly (one to two sentences) what you know about the connection between critical incidents and mental health?
- 16. If the answer in the last question is “Yes,” please explain briefly (one to two sentences) in what methods (e.g., lecture, webinar, seminar, one on one contact with peer or teacher) have you been taught this information?

The following questions refer to critical incidents and physical health. In each case, please indicate your response by clicking on the circle. Please select an answer for each option.

- 17. Do you think critical incident exposure is related to the following physical health conditions?

	Yes	No	Don't know
Diabetes	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]
Heart disease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Immune system disease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digestive disease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flu and colds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drug and alcohol use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No	Don't know
18. Do you think critical incident exposure is related to other physical health conditions aside from those listed above? (Note: We do not mean physical injuries resulting directly from the incident.)	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]

- 19. Please briefly explain (one to two sentences) what physical health conditions you believe may be related to critical incident exposure. We do not mean any injuries that occur as a direct result of the critical incident.

	Yes	No	Don't know
20. Have you ever been taught/talked in the academy about the connection between critical incident exposure and physical health?	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]

- 21. Please briefly explain (one to two sentences) what physical health conditions you believe may be related to critical incident exposure.

	Yes	No	Don't know
22. Do you think that mental health conditions (e.g., anxiety and depression) increase the risk of getting a physical health problem or contracting a chronic disease?	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]

- 23. What do you estimate your risk to be of having a mental health condition related to police work over the course of your career (0%-100%)?

- 24. What do you estimate your risk to be of having a physical health condition related to police work over the course of your career (0%-100%)?

Please read the following passage.

Police officers often deal with unusual events and critical incidents. There are also occupational stressors presented by shift work, training exercises, equipment concerns, and lack of organizational support that worsen mental health responses to fieldwork stress. For example, a study with Swiss police officers shows that for many officers shift work was associated with increased stress. Another study with female Israeli

police officers points out that the weight of their equipment was related to some officers' stress levels. Carrying heavy equipment, particularly in inclement weather (extreme heat or cold), functions as a factor that increases stress for many officers. The quality of relationships among police officers and the organizational support that the force offers its personnel are also related to police officers' stress levels, sometimes equally related to the stress experienced in officers' daily contact with civilians. Police officers, over the course of their career, may be called to resolve a violent domestic dispute only to then have to chase an armed criminal, after which they may be called to protect an abused child, and then help a colleague who needs support, and so on. These stressful and often life-threatening exposures accumulate over time.

Police combat-related stress and exposure to critical incidents may have a major impact on the health of a police officer over the course of his or her life. Researchers have shown that the risks of health problems are elevated for individuals exposed to chronic stress. There are four areas that have been highlighted by researchers to be risk areas. Health behaviors: alcohol abuse, food, gambling, suicide attempt, and unsafe sex are elevated among some officers within the field. Too often the pressures of police culture, such as loyalty and secrecy, create barriers for officers to reach out for help when they need it. Mental health: Estimates indicate that upward of 35% of police officers experience—at some point in their career—various symptoms such as sleep disturbances, headaches, irritability, fatigue, depressing symptoms, loss of interest in life, and anxiety. These mental health conditions may have a negative impact on some police officers' physical health, relationships, and even the lives of those they serve. Physical health: Exposure to unusual/critical incidents is associated with various chronic disease (e.g., cardiac, gastrointestinal, musculoskeletal, diabetes) over the life span among some military officers and first responders. Feeling well and happy: Long-term exposure to critical incidents may impact one's ability to function well in her or his personal and professional life. For example, this may result in weaker memory and slower reaction times, which may directly impact some officer's job performance and, in some ways, relationships with family and friends. The good news is that there are stress reduction interventions available to help reduce and stop the negative effects of stress on health.

Note. References can be provided if you wish to read more. Please contact researchers in one of the following email addresses: judith.andersen@utoronto.ca OR kons.papazoglou@mail.utoronto.ca

25. What percentage of the information given above were you already familiar with (0%-100%)?

26. What percentage of the information about occupational stress and *physical* health were you familiar with (0%-100%)?

27. What percentage of the information about occupational stress and *mental* health were you familiar with (0%-100%)?

28. After reading this paragraph, what do you estimate your risk to be of having a *mental* health condition related to police work at some point in your career (0%-100%)?

29. After reading this paragraph, what do you estimate your risk to be of having a *physical* health condition related to police work at some point in your career (0%-100%)?

	Yes	No	Don't know
30. After reading this paragraph, are you interested in finding out more information about specific risks you may be exposed to in the line of duty and how this may impact your mental and physical health?	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]

31. Indicate in what ways would you like to receive such information? Check all that apply.

	Yes	No	Don't know
Self-help books	<input type="checkbox"/> [Value = 1]	<input type="checkbox"/> [Value = 2]	<input type="checkbox"/> [Value = 3]
Self-help CDs and DVDs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workshops and seminars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participation in relevant conferences and scientific meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research studies focusing on these issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A guide (handbook) that offers concise information about these issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify):			

32. In the future if you experience a problem in one of the four areas of risk explained above (e.g., health behaviors, physical health, mental health, general well-being) how likely will it be that you will seek help for this issue from:

A physician or physical health professional (0%-100%)

A psychologist or mental health worker (0%-100%)

33. Are you familiar with the connection between critical incident exposure and alternative interventions to promote recovery, such as,

	Yes	No	Don't know
Cognitive-behavioral therapy	<input type="checkbox"/> [Value = 1]	<input type="checkbox"/> [Value = 2]	<input type="checkbox"/> [Value = 3]
Yoga	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relaxation techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mindfulness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dance/Tango/body movement therapy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sauna (as a relaxation technique)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical exercise (e.g., jogging, ice hockey)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Journaling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. Please provide a brief answer (one to two sentences) of the benefits of:

Yoga
Relaxation techniques
Mindfulness
Dance therapy
Sauna (as a relaxation technique)
Physical exercise (e.g., jogging, ice hockey)
Journaling

35. Are you open to learning more about the following alternative techniques?

	Yes	No	Don't know
Information as part of the basic training	<input type="checkbox"/> [Value = 1]	<input type="checkbox"/> [Value = 2]	<input type="checkbox"/> [Value = 3]
Information as part of advanced degree studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Debriefing/defusing practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Structured peer support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-trauma workshops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occupational health knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36. How would you like to learn about them? Check all that apply.

	Yes	No	Don't know
Self-help books	<input type="checkbox"/> [Value = 1]	<input type="checkbox"/> [Value = 2]	<input type="checkbox"/> [Value = 3]
Self-help CDs and DVDs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Active hands-on workshop or seminar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participation in relevant conferences and scientific meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read research studies focusing on these issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A guide (handbook) that offers concise information about these issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify):			

	No	Yes	Undecided	Need more information	Only if I have a health issue
37. If your academy/agency offered these exercises, would you sign up for one or more?	<input type="checkbox"/> [Value = 1]	<input type="checkbox"/> [Value = 2]	<input type="checkbox"/> [Value = 3]	<input type="checkbox"/> [Value = 4]	<input type="checkbox"/> [Value = 5]

	No	Yes	They did not offer these exercises.
38. If your academy/agency already has offered these exercises, did you sign up for one or more?	<input type="checkbox"/> [Value = 1]	<input type="checkbox"/> [Value = 2]	<input type="checkbox"/> [Value = 3]

The following questions are related to police work in a multi-cultural context. We value the answers and opinions of ALL officers. In each case, if you agree with the statement, please indicate this by clicking on the circle. You may select as many options as you think that correspond to the written statement.

	Female officers	Lesbian and gay officers	Officers of color	Officers from immigrant families	Officers from different religions	Not applicable
39. Police officers from each of these cultural groups receive the same respect from their peers.	<input type="checkbox"/> [Value = 1]	<input type="checkbox"/> [Value = 2]	<input type="checkbox"/> [Value = 3]	<input type="checkbox"/> [Value = 4]	<input type="checkbox"/> [Value = 5]	<input type="checkbox"/> [Value = 6]

	Female officers	Lesbian and gay officers	Officers of color	Officers from immigrant families	Officers from different religions	Not applicable
40. Police officers from each of these cultural groups receive the same support from the police organization as the rest of their peers.	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]	<input type="radio"/> [Value = 4]	<input type="radio"/> [Value = 5]	<input type="radio"/> [Value = 6]
41. Police officers from each of these cultural groups experience more severe mental and physical health symptoms after exposure to critical incidents than their colleagues.	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]	<input type="radio"/> [Value = 4]	<input type="radio"/> [Value = 5]	<input type="radio"/> [Value = 6]
42. Police officers from each of these cultural groups employ different ways in coping with trauma experience after an exposure to critical incidents than their colleagues.	<input type="radio"/> [Value = 1]	<input type="radio"/> [Value = 2]	<input type="radio"/> [Value = 3]	<input type="radio"/> [Value = 4]	<input type="radio"/> [Value = 5]	<input type="radio"/> [Value = 6]

43. As a reminder, this survey is completely anonymous and we value the information provided by everyone. We would appreciate if you would share with us how you identify regarding sexual orientation?

Do you identify as:

Bisexual [Value = 1]

Gay [Value = 2]

Heterosexual [Value = 3]

Lesbian [Value = 4]

Other (please specify) [Value = 5]

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Mari Koskelainen is a lecturer at the Police University College of Finland. She completed her Doctorate in Clinical Psychology at the Plymouth University, UK. She has worked in a forensic medium secure unit in London, UK competing violence risk assessments. At the Police University College of Finland she has focused on threat assessment procedures and after-care arrangements following critical incidents. She is a trained EMDR-therapist.

Markku Nyman is a psychologist at the Police University College on Finland. He earned his Master's Degrees in Psychology and in Social Sciences in Tampere University in Finland. At the Police University College of Finland he is responsible for the psychological assessment of applicants for basic, continuation and special training programs, with research and development of the processes and methods used therein as another main area of interest.