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Police Health Professionals’ Knowledge and Practices in Educating Officers about Trauma and Health

Judith P. Andersen, PhD & Konstantinos Papazoglou, MA

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Abstract

Research has shown a connection between trauma exposure and elevated health risks among police officers. This study explored police health professionals’ knowledge and current practices in educating officers about the trauma-health relationship. Results indicated the main method of education included lectures and seminars, but participants expressed an openness to include practical exercises such as mindfulness and yoga. The majority of survey participants were aware of the connection between critical incident exposure and physical disease conditions. Participants were open to learning trauma prevention techniques to improve health and wellness and to promote resilience.

Keywords: police health professionals, adversities, prevention, trauma and health, resilience, training
Introduction

The challenges of police work can leave officers exposed to adverse events, which can negatively impact their health. The scientific literature on this subject has highlighted the impact of trauma on mental and physical health (Andersen, Wade, Possemato, & Ouimette, 2010; Violanti et al., 2006). The impact of adversities on officers’ health is exacerbated by expectations that officers will maintain astute physical and emotional strength in the face of such atrocities (Rudofossi, 2007; Violanti, 2007).

Violanti and colleagues (2006) recruited 100 police officers from the Buffalo New York Police Department to examine the connection between officers’ exposure to severe stress, responses to trauma, and mental and physical health dysfunctions. Violanti and colleagues (2006) utilized psychological, physiological, and subclinical measures to compare police officers with Civil Service workers in terms of stress, disease, and mental dysfunction. Study results showed that police officers, compared to Civil Service workers, indicated elevated cortisol levels, higher body-mass index (BMI) scores, increased risk for depression and post-traumatic stress disorder (PTSD) (Violanti et al., 2006). In a similar study, Joseph and colleagues (2010) compared 261 police officers with 229 civilians from the same geographic area and found that the officers had an increased risk for cardiovascular disease, a higher prevalence of smoking and alcohol consumption, and elevated blood pressure. Considering that police officers experience cumulative and complex exposure to potentially traumatic incidents over the course of a career, these results are not surprising (Papazoglou, 2013). Many scholars have highlighted the need for police training programs to help officers cope with adversities effectively (Anderson, Litzenberger, & Plecas, 2002; Chae & Boyle, 2013; Violanti, 1993).

Following Wessely and colleagues (2008) definition, psychoeducation about trauma refers to information provided with the potential use of multiple means (e.g., electronic, lectures) vis-à-vis the nature of posttraumatic stress and its symptoms. In addition, psychoeducation offers recommendations that have the capacity to ameliorate or mitigate the negative effects of stress on one’s health and wellbeing (Wessely et al., 2008). Phoenix (2007) referred to the crucial role of psychoeducation as a way of helping those exposed to trauma adopt healthy coping strategies. This included understanding how the mind and body react to critical incident exposure and seeking social support instead of feeling helpless. Trauma prevention training programs have been applied to military personnel before deployment in the combat field (Deahl et al., 2000) and rookie police officers (Arnetz et al., 2009). These programs proved effective in helping those exposed to trauma function satisfactorily in the face of adversities, whereas those who did not receive such training did not show the same results. However, research such as this is not as prevalent in the field of police work. Further testing is needed to address the effectiveness of psychoeducation and how this approach contributes to the prevention of trauma (Kilpatrick, Cougle, & Resnick, 2008; Wessely et al., 2008), especially in police work considering the amount of trauma experienced.

Present Study

Papazoglou and Andersen (2014) introduced a training guide for police educators and health professionals. The curricula promoted resilience and positive coping skills in the face of trauma exposure. The current descriptive study builds on this guide by exploring a). What police health professionals (PHPs) already know about the relationship between police trauma and its connection to physical and mental health and what knowledge gaps remain; b). Current practices PHPs use to educate officers about trauma health relationships and; c). The ways PHPs are open to new
strategies to best educate police officers about these issues. The development and application of preventative interventions for police are crucial. Understanding what PHPs and police officers’ need to know should precede the development of any intervention.

Methods

The authors participated in the annual 3-day meeting of the European Medical and Psychology Experts Network (EMPEN) held in Tampere, Finland. The event was organized by the Police University College of Finland under the auspices of the European Police College (CEPOL). Data was collected using a survey questionnaire (see Appendix A) from EMPEN participants.

Participants

Participants (N=34) were from the following European Union countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxemburg, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, and the United Kingdom. Participants were selected by national governments in order to represent each European country at the EMPEN annual meeting. Meeting attendees were in charge of supervising personnel, developing policy programs, and making reforms in terms of mental health policies about issues encountered by police personnel.

Procedure

In coordination with the organizers of the EMPEN annual meeting, a consent form and questionnaire were sent to all attendees. Participants were asked to complete the consent form and questionnaire if they wished to participate and to submit their copies during the first day of the meeting. Participants were not asked to provide names or any identifying information on the questionnaire. The University of Toronto Research Ethics Board and the organizers of the EMPEN annual meeting approved this study.

Measures

Following the aims of the study, a questionnaire was developed and customized for PHPs. The questionnaire consisted of 51 questions (see Appendix A). Some questions were developed on a Likert-type scale and others requested brief, one or two sentence answers. Nine demographic questions were asked regarding gender, age, ethnicity, sexual orientation, years of police service, and the number of officers the PHP supervised.

Knowledge of the trauma-health relationship. Fifteen questions assessed the participants’ knowledge about trauma experienced by officers in connection to physical and mental health. Four questions asked about PHPs perspectives about trauma experienced by minority group officers and the degree of support, if any, these officers received from peers and organizational support staff. The questionnaire included a brief educational passage (see Appendix B) that discussed outcomes from the scientific literature about the connection between trauma and mental and physical health. Before the passage, PHPs were asked to estimate the risk of an officer’s negative health outcomes following trauma exposure. The same questions were asked following the passage to evaluate whether respondents learned new information and changed their perspective about the impact of such critical incidents on physical and mental health.
Current practices. This cluster included four questions. Two questions assessed the methods PHPs used to educate officers about trauma. The other two questions examined PHPs’ interactions with high-ranking police officials about the trauma-health issues encountered by police personnel.

Openness to alternative educational practices. Participants of the study were queried about openness to applying alternative preventive interventions (i.e., yoga, journaling, relaxation techniques, mindfulness, and dance therapy) in police training curricula. The questionnaire asked PHPs if they ever applied these exercises (i.e., yoga, journaling, relaxation techniques, mindfulness, and dance therapy) in their work with police officers. Participants were asked about their experiences of having applied these exercises (i.e., yoga, journaling, relaxation techniques, mindfulness, and dance therapy) within their respective organizations, and if not, what prevented them from doing so. Participants were also asked whether they were open to learning more about such alternative interventions. If so, they were queried to note in what methods they preferred to acquire this new information about alternative interventions. Specifically, participants were asked about their openness to self-help methods: self-help books, self-help CDs and DVDs. They were also asked about openness to interactive activities: workshops and seminars, scientific conferences. Other methods of learning were examined: reading research studies, referencing a guidebook that offers concise information about these issues. Participants were encouraged to share with researchers any other preferred learning method not mentioned in the survey questionnaire.

Results

Demographics

The survey sample (N=34) consisted of psychologists (76.47%), police officers participating in peer support programs (8.82%), medical doctors (8.82%), wellness coordinators (5.88%), and social workers (2.94%). The study sample included professionals with different specialties; however, all worked within police organizations in order to promote officer health and wellness. For the sake of brevity, the term “police health professionals – PHPs” is used for all study participants. In addition, the terms “PHPs” and “survey participants” are used interchangeably throughout the manuscript. Survey participants ranged in age from 28 to 65 years (M=42.85; SD=10.60). Participants’ years of service ranged from 8 months to 33 years (M=12.64; SD=7.98). The survey sample consisted of 70.58% females and 29.42% males. All participants were Caucasian and of non-Hispanic descent. In terms of sexual orientation, 0.3% identified as bisexual, 76.47% as heterosexual, 0.3% as lesbian, and 17.64% did not answer this question. Participant geographic areas of residence were as follows: 32.35% Eastern Europe, 28.1% Northern Europe, 14.70% Southern Europe, and 28.1% Western Europe. Police health professionals in the sample supervised or were responsible on average for health-related issues of 486 police officers. From the survey sample, 79.41% were responsible for supervising more than 100 police officers within their respective organizations and 17.64% were supervising 1,000 or more officers.

Stress Exposure

All participants reported that officers within their respective organizations were routinely exposed to critical incidents in the line of duty. In addition, 96.9% of participants considered police work, in general, as very (63.6%) or extremely (33.3%) stressful work. In total, 97% of survey participants considered police work emotionally demanding and 76.4% of participants considered police work physically demanding.
Trauma-Health Connection

**Exposure to critical incidents and mental health.** Most survey participants (79.41%) were mental health professionals. Nonetheless, participant perspectives about the association between critical incident exposure and mental health were explored. Few (11.70%) reported no connection between exposure to critical incidents and mental health. Most participants (87.5%) had talked to police managers within their respective organizations about the connection between trauma and mental health.

**Exposure to critical incidents and physical health.** Participants stated that on average, the risk for officers developing a physical health condition related to police work was 42.10% (SD=20.40; Range=10%-80%). The majority of PHPs (85.3%) reported they taught officers within their organizations about the connection between critical incident exposure and physical health, while 17.60% did not answer this question. Police Health Professionals were asked about the connection between critical incident exposure and specific physical health conditions shown in Table 1. From a statistical perspective, chi-square goodness of fit test was performed. The test aimed to explore whether or not the observed frequencies (percentages in the following Table’s cells) differed significantly from the expected frequencies. The expected frequencies are expected to be consistent with a normal distribution (z-distribution). The chi-square goodness of fit test allowed researchers to test the difference between the observed (participants’ answers) and the expected frequencies (z-distribution) in each cell of the Table 1. Thereby, the chi-square goodness of fit test helped to assess to what extent the answers ‘Yes,’ ‘No,’ and ‘Don’t Know’ provided by participants for each physical health condition are significantly different from the expected frequencies (z-distribution). The null hypothesis is that the observed frequencies (participants’ responses) are consistent with the expected frequencies (z-distribution). However, it was expected that the observed frequencies (participants’ responses) would be different from the expected frequencies (z-distribution). Thereby, participants’ responses (e.g., “Yes,” “No,” “Don’t Know”) were different from a normal z-distribution; or else, they differed significantly from a random response. Results indicated that participants knew more about the relationship between critical incident exposure and specific physical health conditions then expected.

**Knowledge gained from the brief educational statement.** Participants were asked to read the educational statement about the connection between trauma and health (see Appendix B). Afterwards, they were asked to report what percentage of the text information they were familiar with. The majority of participants stated they knew about the connection between occupational stress and physical health (72.77%) and occupational stress and mental health (76.22%).

The educational statement in Appendix B was used to assess participants’ pre and post knowledge. Participants reported that an officers’ risk of developing a mental health condition related to police work at some point during their career was, on average, 38.32%, (SD=21.70) before reading the text versus 38.37% (SD=22.66) after reading. A paired samples t-test revealed no significant differences in participant knowledge before and after reading the educational text. In terms of the impact of adversities on officers’ physical health, participants believed that the risk, on average, was 42.10% (SD=20.40) before reading versus 48.07% (SD=22.60) after reading the educational passage. A paired samples t-test revealed no significant differences in participant knowledge pre or post reading of the educational passage.
Trauma experience and multiculturalism. Table 2 shows a PHPs perspective on how minority group officers are treated in comparison to non-minority peers. Chi-square was run to determine if each group of minority officers were rated as being treated equally. Chi-square was performed so minority officers’ experiences of respect and support were explored. Similarly, minority officers’ health problems and coping following trauma exposure were examined using chi-square. A significant number of PHPs rated organizational support (24% of participants) and health problems following a trauma (60% of participants) were not applicable to the treatment of minority officers.

Police health professionals’ current practices for educating officers about trauma and health

All PHPs surveyed reported focusing on symptoms’ rather than on the causes of health problems when training officers about trauma. In addition, all reported that the training techniques used were lecture based. Only half of the PHPs surveyed practiced one-on-one contact with officers in addition to lectures. Only two PHPs (5.88%) referred to recovery and resilience when teaching officers about the impact of trauma on mental health. Education regarding preventative health care was not incorporated into current curricula.

Interventions for trauma prevention and health promotion

Openness to new knowledge. All survey participants were interested in learning more about the job risks that may impact mental and physical health. Further, 92.9% of the respondents reported they wished to incorporate information about the trauma-health relationship into their training curriculum. Table 3 shows the ways PHPs in the survey sample would like to get new information about the impact of trauma on health. The majority reported lectures would be the most common mode of communicating new information about the trauma-health relationship to officers. Only (20%) reported plans for active strategies (e.g., workshop) to incorporate new knowledge into the curriculum.

Alternative preventative interventions. Chi square analyses indicated the majority of PHPs have not incorporated yoga, dance, mindfulness or journaling as a method of education and trauma prevention in their work with officers (p<.05). The majority of PHPs (61.5%) have already incorporated relaxation techniques (see Table 4) into current curricula. The majority of PHPs were familiar with yoga (58.3%), relaxation techniques (92.9%), and mindfulness interventions (59.3%) but not with dance therapy (15.4%) (p< .05) (see Table 5).

The chi-square goodness of fit test allowed for the assessment of differences between the observed (participants’ answers in each cell) and expected frequencies. This test explored whether the ‘Yes,’ ‘No,’ and ‘Don’t Know’ answers by survey participants (in terms of familiarity with alternative therapeutic interventions for trauma recovery) were significantly different from the expected frequencies. Analyses revealed a significant number (70.1%) of PHPs were familiar with yoga, relaxation techniques, and mindfulness as alternative treatments for trauma. Chi square analyses indicated that the majority of PHPs were open to learning more about yoga, relaxation techniques, and mindfulness as a method of education and trauma prevention (see Table 6). A majority (63.6%) of PHPs were interested in learning more about journaling and dance therapy (48%) interventions. Chi square test of independence was conducted in order to measure statistical difference between our participants ‘Yes’ and ‘No’ answers in terms of openness to learning about alternative therapeutic techniques. Most PHPs (57.7%) reported they would try one of the alternative techniques before teaching officers, while 34.6% stated they would need more
information, and 7.7% were undecided. The majority of PHPs (82.4%) preferred to learn about new information by participation in courses and/or seminars.

**Discussion**

**Current knowledge about trauma and health connection**

Police health professionals maintained that many officers experience critical incidents over the course of their careers and indicated that police work was extremely stressful. Only a minority of participants (11.70%) did not believe a connection existed between trauma exposure and mental health. In addition, some participants (17.60%) did not answer whether or not there is a connection between trauma exposure and physical health. Overall, PHPs were knowledgeable about the trauma-health connection in addition to the symptoms of trauma, and were open to learning better ways of communicating this to officers. The findings are encouraging, as PHPs have a “duty of care” for the wellbeing of police officers’ and for the police organizations’ satisfactory functioning.

**Current training and clinical practices helping officers cope with trauma**

Results indicated that participants relied on lectures to train officers regarding trauma impact on health. In addition, most of the lectures focused on descriptions of the symptoms of trauma. Some research suggests alternative methods, beyond the lecture format, may be very beneficial in educating police officers (Papazoglou & Andersen, 2014). Most uniformed officers work on the street and prioritize survival while on duty (Rudofossi, 2007). Therefore, training needs must incorporate tangible examples and practical exercises. Police training programs need to introduce officers with what Bonanno and Diminich (2013) call “emergent resilience” (p.394). Emergent resilience, according to Bonanno and Diminich is defined as a constant positive adjustment to the chronic exposure to severe stress and potentially traumatic circumstances.

Papazoglou & Andersen (2014) published a guide for police educators and health professionals that incorporate alternative preventative interventions into police training curricula (for more details please see: http://dx.doi.org/10.1037/h0099394). The authors suggested changing the focus of training from a symptom-oriented perspective to a health promotion, resilience, and prevention focus. This shift would help avoid a focus on pathology and promote health, prevention, and resilience among police officers (Woody, 2005).

**New knowledge about prevention of trauma exposure and health promotion**

All survey participants were open to gaining new knowledge and experience in the area of trauma and health education. Participants’ were also willing to share this information within their respective organizations. A significant number (73.83%) of survey participants reported that although they had not applied yoga, mindfulness, or journaling in their work with police officers, they were open to doing so. Specifically, survey participants indicated they were open to apply yoga (73.9%), mindfulness (84%), and journaling (63.6%) respectively. Participants reported they would attend scientific conferences, workshops, and training sessions to learn more about trauma exposure and its connection with mental and physical health. Given the interest in learning more, it is recommended additional workshops, conferences, and scholarly journals become available to PHPs.

**Health of Minority Officers.** The majority of the participants (76%) reported minority officers (e.g., female, gay and lesbian, officers of Color, officers from different religions, officers who have immigrated to the country) might receive the same support from their organization as
their non-minority peers (e.g., White European officers). These results are in line with recent literature findings. A sense of solidarity is pervasive in police culture and officers predominantly support fellow officers during critical incidents regardless of race, gender, sexual orientation or minority status (Belkin & McNichol, 2002; Jaeger & Vitalis, 2005; Jordan, Fridell, Faggiani, & Kubu, 2009; Hery, 1995; Paoline, 2004; Skolnick, 2008). However, some research suggests that some minority officers may be isolated from peers (Rabe-Hemp, 2008; Rojek & Decker, 2009) or experience a lack of organizational support (Bolton, 2003; Hassell & Brandl, 2009). Most participants (60%) reported no association between discrimination experienced by some officers and severity of their health problems. Nevertheless, recent research indicates when officers face discrimination they may experience more severe mental and physical health symptoms in the aftermath compared to peers who do not experience such discrimination (Andersen & Papazoglou, 2014). Other researchers reported that discrimination (Bryant-Davis & Ocampo, 2005) and microaggressions (Nadal et al., 2011) exacerbate the impact of trauma exposure. Given these findings, health services, police training, and counseling support services must be aware of the unique experiences minority officers might face in the field and within the organization (Constantine, Hage, Kindaichi, & Bryant, 2007).

Understanding what PHPs need to know and the manner in which they prefer to learn is salient. Police health professionals play a pivotal role in the development and application of preventative educational interventions in police officers. Such interventions may, in turn, help officers cope with the adversities of police work. It appears that survey participants’ are knowledgeable about the relationship between trauma and health, but are seeking better ways to communicate this to officers. Given the right resources, survey participants’ are open to making positive changes in their respective organizations by promoting resilience and prevention strategies.

**Future directions**

This research study was conducted with PHPs as part of the annual EMPEN meeting activities. The small sample size is a limitation of this study and prevents the generalization of findings to be compared to a larger population. It is recommended that this study be replicated in other geographic areas (e.g., North America) and with larger samples. Findings from similar research may be used to improve police training about trauma prevention, resilience, and health promotion. Research such as this may also lead to the development of evidence-based trauma prevention programs administered by PHPs.

**Acknowledgements**

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About the Authors:
Professor Judith Andersen is a health psychologist who specializes in the psychophysiology of stress-related mental and physical health issues. She has more than a decade of experience working with populations exposed to severe and chronic stress, including combat soldiers and police. Her early work examined the health effects associated with Operational Stress Injury (OSI) and Post Traumatic Stress Disorder (PTSD). Currently, Professor Andersen is the director of the Health Adaptation Research on Trauma (HART) Lab at the University of Toronto.

Her ongoing research projects include measuring health and performance changes associated with resilience training among police and Special Forces teams in Canada, the United States, and Europe. Further, she is working to customize evidence-based resilience programs for different sectors of first responders. Professor Andersen is dedicated to contributing to evidence based policing, and strategies for the prevention of OSI and PTSD. Correspondence can be sent to: j Judith.andersen@utoronto.ca

Konstantinos Papazoglou is a psychology doctoral (PhD) candidate (clinical and forensic areas) and a Vanier Scholar at the University of Toronto (UofT). He is a former Police Captain of the Hellenic Police and he holds a master’s degree in mental health counseling from New York University (NYU) as Onassis Scholar. Currently, he works with Professor Judith P. Andersen and Professor Peter I. Collins at the University of Toronto focusing his research work on stress, trauma prevention, and resilience promotion among police officers. As part of his doctoral clinical placement at the UofT-affiliated clinic, Centre for Addictions and Mental Health – Psychological Trauma Program (CAMH-PTP), he conducts assessments and provides treatment to officers suffering by trauma and stress-related issues. He has published scholarly articles and presented his research in many scientific venues (e.g., American Psychological Association, Academy of Criminal Justice Sciences, Canadian Psychological Association) and received many awards (e.g., American Psychological Association – Criminal Justice Section Outstanding Doctoral Research Award, American Psychological Foundation – Levinson Award). Konstantinos is also a co-moderator of the European Medical and Psychology Experts Network (EMPEN), an official network of police health professionals established and sponsored by the European Police College (CEPOL). Correspondence can be sent to: kons.papazoglou@mail.utoronto.ca

References


Table 1.

*Do you think that critical incident exposure is related to the following physical health conditions?*

<table>
<thead>
<tr>
<th>Physical Health Condition</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Don’t Know (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>53.8</td>
<td>23.1</td>
<td>23.1</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>85.7***</td>
<td>3.6**</td>
<td>10.7*</td>
</tr>
<tr>
<td>Immune System Disease</td>
<td>79.3***</td>
<td>3.4**</td>
<td>17.2</td>
</tr>
<tr>
<td>Pain Conditions</td>
<td>82.8***</td>
<td>3.4**</td>
<td>13.8</td>
</tr>
<tr>
<td>Sleep Problems</td>
<td>96.6***</td>
<td>3.4**</td>
<td>0.0**</td>
</tr>
<tr>
<td>Digestive Disease</td>
<td>79.3***</td>
<td>6.9*</td>
<td>13.8</td>
</tr>
<tr>
<td>Drug and Alcohol Use</td>
<td>96.4***</td>
<td>3.6**</td>
<td>0.0**</td>
</tr>
<tr>
<td>Flu and Colds</td>
<td>65.5**</td>
<td>13.8</td>
<td>20.7</td>
</tr>
</tbody>
</table>

*p < .05, ** p < .01, *** p < .000
### Table 2.

**Perceptions of how minority officers are treated.**

<table>
<thead>
<tr>
<th>Minority officers experiences:</th>
<th>Female Officers (%)</th>
<th>Gay and Lesbian Officers (%)</th>
<th>Officers of Color (%)</th>
<th>Officers from Immigrant Families (%)</th>
<th>Officers from different Religions (%)</th>
<th>Not Applicable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get the same respect as their peers (n=21)</td>
<td>61.9</td>
<td>23.8</td>
<td>23.8</td>
<td>42.9</td>
<td>61.9</td>
<td>38.1</td>
</tr>
<tr>
<td>Get the same support from the organization (n=25)</td>
<td>76.0</td>
<td>48.0</td>
<td>40.0</td>
<td>44.0</td>
<td>68.0</td>
<td>24.0*</td>
</tr>
<tr>
<td>Have more severe health symptoms after trauma (n=20)</td>
<td>25.0</td>
<td>15.0</td>
<td>5.0</td>
<td>10.0</td>
<td>10.0</td>
<td>60.0*</td>
</tr>
<tr>
<td>Employ different ways in coping after trauma (n=24)</td>
<td>58.3</td>
<td>8.3</td>
<td>8.3</td>
<td>20.8</td>
<td>29.2</td>
<td>41.7</td>
</tr>
</tbody>
</table>

*p< .05  
Note: Responses are the percent of agreement with each statement.
Table 3.

*Police Health Professional’s Preferred Mode of Knowledge Acquisition*

<table>
<thead>
<tr>
<th></th>
<th>Scientific Conferences (%)</th>
<th>Workshops (%)</th>
<th>Guidebook (%)</th>
<th>Research Papers (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga</td>
<td>100</td>
<td>96</td>
<td>87</td>
<td>85.7</td>
</tr>
</tbody>
</table>

Table 4.

*Have you ever applied the following techniques in your work with officers/trainees/cadets?*

<table>
<thead>
<tr>
<th>Technique</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga</td>
<td>8.0</td>
<td>92.0</td>
</tr>
<tr>
<td>Relaxation Techniques</td>
<td>61.5</td>
<td>38.5</td>
</tr>
<tr>
<td>Mindfulness*</td>
<td>25.0</td>
<td>75.0</td>
</tr>
<tr>
<td>Dance Therapy***</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Journaling*</td>
<td>30.8</td>
<td>69.2</td>
</tr>
</tbody>
</table>

*p< .05, ** p< .01, *** p< .000

Table 5.

*Familiarity with Alternative Therapeutic Interventions for Trauma Recovery*

<table>
<thead>
<tr>
<th>Alternative Intervention</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Don’t Know (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga</td>
<td>58.3*</td>
<td>29.2</td>
<td>12.5</td>
</tr>
<tr>
<td>Relaxation Techniques</td>
<td>92.9***</td>
<td>3.6**</td>
<td>3.6**</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>59.3*</td>
<td>25.9</td>
<td>14.8</td>
</tr>
<tr>
<td>Dance Therapy</td>
<td>15.4</td>
<td>69.2**</td>
<td>15.4</td>
</tr>
<tr>
<td>Journaling</td>
<td>34.6</td>
<td>53.8</td>
<td>11.5</td>
</tr>
</tbody>
</table>

*p< .05, ** p< .01, *** p< .00
Table 6.

*Openness to Learning about Alternative Therapeutic Techniques*

<table>
<thead>
<tr>
<th>Alternative Techniques</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga*</td>
<td>73.9</td>
<td>26.1</td>
</tr>
<tr>
<td>Relaxation Techniques***</td>
<td>87.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Mindfulness**</td>
<td>84.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Dance Therapy</td>
<td>48.0</td>
<td>52.0</td>
</tr>
<tr>
<td>Journaling</td>
<td>63.6</td>
<td>36.4</td>
</tr>
</tbody>
</table>

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Appendix A: Survey Questionnaire Regarding Police Health Professionals’ Knowledge and Practices in Educating Officers about Trauma and Health

Demographics

1. What is your gender?
Female; Male; Transgender; Transwoman; Transman; Other identified; Other (please specify)

2. What is your age?

3. In what part of Europe do you live in?
Europe - Eastern; Europe - Northern; Europe - Southern; Europe - Western; Other (please specify)

4. Is English your first language?
Yes; No

5. How many years have you been speaking English?

6. How many officers, trainees, and cadets do you treat, supervise, and/or teach per year approximately?

7. How many years of professional experience working with the police do you have?
The following questions ask about your opinions on the challenges of police work. In each case, please indicate your response by clicking the circle representing how often you felt or thought a certain way. Please select an answer for each option.

8. How physically demanding do you consider police work in general?
Not at all; A little; Very; Extremely; Don’t know/Not applicable

9. How emotionally demanding would you consider police work in general?
Not at all; A little; Very; Extremely; Don’t know/Not applicable

10. How stressful do you consider police work in general?
Not at all; A little; Very; Extremely; Don’t know/Not applicable

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

11. I believe that officers/trainees/cadets in my organization are exposed to critical incidents in the line of duty.
Yes; No; Don’t know

In the following questions, we refer to mental health. By mental health we mean thoughts, beliefs, and feelings including anxiety, depression, and fear as well as positive thoughts and emotions. In each case, please indicate your response by clicking the circle. Please select an answer for each option.
12. Exposure to critical incidents is related to mental health.
Yes; No; Don’t know

13. Do you talk to police managers at your institution about critical incident exposure and mental health?
Yes; No; Don’t know

14. Have you ever taught and/or talked to the officers/trainees/cadets at your institution about the connection between exposure to critical incidents and mental health?
Yes; No; Don’t know

15. If the answer to the last question is ‘‘Yes,’’ please explain briefly (one-two sentences) what you told them about the connection between critical incidents and mental health.

16. If the answer to the last question is ‘‘Yes,’’ please describe the methods (e.g., lecture, webinar, seminar, one on one contact) you have used to convey this information to officers/trainees/cadets in your organization.

17. If the answer to the last question is ‘‘No,’’ please describe what prevented you from talking about or teaching this information to the officers/trainees/cadets at your organization.

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

18. Do you think that critical incident exposure is related to the following physical health conditions? The answers for all include: (Yes, No, Don’t know)

Diabetes; Immune system disease; Pain conditions; Digestive disease; Flu and colds; Drug and alcohol use

19. Do you think that 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.
Yes; No; Don’t know

20. Please briefly explain if there are any physical health conditions that you believe may be related to critical incident exposure.

21. Have you ever talked to police managers at your institution about critical incident exposure and mental health?
Yes; No; Don’t know

22. Have you ever taught/talked to the officers/trainees/cadets at your institution about the connection between critical incident exposure and physical health?
Yes; No; Don’t know

23. If the answer to the last question is “Yes,” please describe the methods (e.g., lecture, webinar, seminar, one on one contact) you have used to teach this information to the officers/trainees/cadets at your institution.

24. If the answer in the last question is “No,” please describe what prevented you from teaching this information to the officers/trainees/cadets at your institution.

25. What is the risk for officers/trainees/cadets at your institution to develop a mental health condition related to police work over the course of their career (0 to 100%)?
26. What is the risk for officers/trainees/cadets of your institution to develop a physical health condition related to police work over the course of their career (0 to 100%)?

(See passage in Appendix B)

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

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

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

30. Think about the officers/trainees/cadets at your institution. What do you estimate is their risk of developing a mental health condition related to police work at some point in their career (0 to 100%)?

31. Think about the officers/trainees/cadets at your institution. What do you estimate is their risk of developing a physical health condition related to police work at some point in their career (0 to 100%)?

32. Are you interested in learning more about the risks that officers/trainees/cadets at your institution may be exposed to in the line of duty and how this may impact their mental and physical health?

Yes; No; Don’t know

33. After reading this section, would you, as a health professional, like to teach the officers/trainees/cadets at your institution that exposure to critical incidents may increase their risk of developing (mental and physical) health-related conditions?

Yes; No; Don’t know

34. If the answer in the last question is “Yes,” please describe what methods (e.g., lecture, webinar, seminar, one on one contact) you would use to incorporate this information into your professional work with trainees/cadets.

35. In what ways would you like to receive such information? Each answer included: (Yes, No, Don’t know)

Self-help books; Self-help CDs & DVDs; Workshops & Seminars; Participation in Relevant Conferences and Scientific Meetings; Research Studies Focusing on these Issues; A Guide (Handbook) that Offers Concise Information about these Issues; Other (please specify):

36. Are you familiar with the connection between critical incident exposure and alternative interventions to promote recovery, such as: Each answer include: (Yes, No, Don’t know)

Yoga; Relaxation Techniques; Mindfulness; Dance Therapy; Journaling

37. Please provide a brief description of the benefits of:

Yoga; Relaxation Techniques; Mindfulness; Dance Therapy; Journaling

38. Have you ever applied the following techniques in your work with officers/trainees/cadets? Each answer included: (Yes, No)

Yoga; Relaxation Techniques; Mindfulness; Dance Therapy; Journaling
39. Please provide a description of your experiences with the practical application of these techniques. What were the officers/trainees/cadets’ reactions to the following?

Yoga; Relaxation Techniques; Mindfulness; Dance Therapy; Journaling

40. If you have not applied these techniques, what were the reasons why you chose not to do so?
Please provide a brief answer (one-two sentences):

41. If you have not applied these techniques yet, but you plan to apply them to your work with officers/trainees/cadets in the future, what do you think their reactions will be to each of the following techniques. Please provide a brief answer (one to two sentences):

Yoga; Relaxation Techniques; Mindfulness; Dance Therapy; Journaling

42. Would you like to learn about the following alternative techniques? Each answer included: (Yes, No, Don’t know). Yoga; Relaxation Techniques; Mindfulness; Dance Therapy; Journaling

43. Please describe briefly how would you like to learn about the following techniques (e.g., seminar, course, webinar)? Yoga; Relaxation Techniques; Mindfulness; Dance Therapy; Journaling

44. If you were offered these exercises, would you sign up for one or more?
No; Yes; Undecided; Need more information; Only if I have a health issue

45. Please provide a brief explanation for your answer to the question above (no more than two sentences):
The following questions are related to police work in a multi-cultural context. We value the answers and opinions of ALL physical and mental health professionals. In each case, if you agree with the statement, please indicate this by clicking the circle. You may select as many options as you think that correspond to the written statement.

46. Police officers from each of these cultural groups receive the same respect from their peers.

Female Officers; Lesbian and Gay Officers; Officers of Color; Officers from Immigrant Families; Officers from different Religions; Not Applicable

47. Police officers from each of these cultural groups receive the same support from the police organization as the rest of their peers.

Female Officers; Lesbian and Gay Officers; Officers of Color; Officers from Immigrant Families; Officers from different Religions; Not Applicable

48. Police officers from each of these cultural groups experience more severe mental and physical health symptoms after exposure to critical incidents than their peers.

Female Officers; Lesbian and Gay Officers; Officers of Color; Officers from Immigrant Families; Officers from different Religions; Not Applicable

49. Police officers from each of these cultural groups employ different ways of coping following trauma than their peers.

Female Officers; Lesbian and Gay Officers; Officers of Color; Officers from Immigrant Families; Officers from different Religions; Not Applicable

50. As a reminder, this survey is completely anonymous and we value the information provided by everyone. We would appreciate if you shared with us how do you identify regarding your sexual orientation. (Please circle your choice)

Bisexual; Gay; Heterosexual; Lesbian; Other (please specify)
51. We would appreciate if you shared with us how do you identify regarding your race/ethnicity. (Please circle your choice)

Asian/Pacific Islander; Black/African American; Caucasian/White; Latino/Hispanic; Mixed Ethnicity/Race; Native American; Other (please specify)

Appendix B

Please read the following passage. We present evidence-based information from the scientific literature that refers to the possible ways that exposure to adversities may impact first responders’ mental and physical health.

Police officers often deal with unusual events and critical incidents (Rudofossi, 2007) but research shows that there may be occupational stressors presented by shift work, training exercises, equipment concerns, and lack of organizational support that exacerbate mental health responses to fieldwork stress. For example, Gerber and colleagues (2010) recruited 460 Swiss police officers and the results of their study showed that shift work in some cases was associated with increased social stress. Constantini and colleagues (2010) studied female Israeli police officers and point out that the weight of their equipment was positively correlated with their stress levels. Carrying heavy equipment, particularly in inclement weather (extreme heat or cold) functions as a chronic stress for some officers (Constantini, et al., 2010). The quality of relationships among police officers and the organizational support that the force offers its personnel seems to be correlated to police officers’ stress levels. Adams and Buck (2010) conducted a research study with 196 police officers from Wisconsin and they found that relationships among officers were associated with levels of stress parallel to that which they experienced in their daily contact with civilians. Police officers 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 may accumulate over time. Future exposures may trigger the re-experiencing of traumatic symptoms from prior exposure (Yehuda, Southwick, & Giller, 1992).

Police stress and trauma may have an impact on the physical health and well-being of a police officer over the course of his or her life. Four areas are highlighted here. Health behaviors: The scientific literature supports that alcohol use and/or abuse, poor nutrition, gambling, suicide, and unsafe sex very often prevail within the field. Pressures of police culture, such as loyalty and secrecy, may create barriers for officers to reach out for help when in pain (Atkinson-Tovar, 2003; Cross & Ashley, 2004; Follette, Polusny, & Milbeck, 1994; Plaxton-Hennings, 2004; Reiser & Geiger, 1984). Mental health: Estimates indicate that upwards of 35% of police officers experience Posttraumatic Stress Symptoms (PTSS) at some point in their careers and between 10% and 19% develop full PTSD (Haugen et al., 2012). These mental health conditions can have a profound impact on police officers’ physical health, relationships and even the lives of those they serve. Physical health: Trauma may be associated with increased incidence of chronic disease (e.g., cardiac, gastrointestinal, musculoskeletal) over the lifespan among military and first responders, and this was even more apparent among officers with mental health conditions such as PTSD (Andersen et al., 2010; Pizarro et al., 2006). Chronically activated stress hormones (e.g., cortisol) constitute a proposed mechanism by which the onset of PTSS is common. Many additional mental and physical health risks may be elevated, such as sleep disturbances, headaches, irritability, compassion fatigue, depression and loss of interest in life, anxiety, depression, and cognitive problems (Brodie & Eppler, 2012; Figley, 1995; Mohr et al., 2003; Rajaratnam et al., 2011; Van der
Velden et al., 2010; Violanti et al., 2007). Well-being: Chronic trauma exposure can impact the ability to function to one’s full potential. For example, researchers have found that chronic exposure may result in weaker verbal memory and slower reaction times, which may directly impact an officer’s ability to perform occupational requirements (Hennig-Fast et al., 2009). Exposure to traumatic and chronic stress may have an impact on officers’ families, friends, health, spirituality, honor, commitment, and self-worth (Atkinson-Tovar, 2003; Cross & Ashley, 2004).