

# Predictors of Secondary Traumatic Stress Symptoms in Police Officers Exposed to Secondary Trauma

**Nina Ogińska-Bulik**

ORCID: 0000-0001-8868-407X

Institute of Psychology, University of Łódź, Poland

**Grzegorz Bąk**

ORCID: 0000-0002-1380-4476

Institute of Social Sciences, Police Academy, Szczytno, Poland

**Abstract.** Police officers are particularly exposed to work-related stress and one of the difficult situations they face is contact with trauma victims. Such exposure may entail a range of negative consequences for helpers, such as symptoms of secondary traumatic stress (STS) and risk of secondary traumatic stress disorder (STSD). The aim of this study is to establish the predictors of STS symptoms among police officers who have been exposed to secondary trauma in the line of duty. The following factors have been assessed as potential predictors: personality traits, rumination on their experiences, and a sense of self-efficacy in coping with trauma experienced by others.

The research was carried out from June to October 2021 at the Police Academy in Szczytno, Poland, among participants of training and professional courses for police officers. Out of 790 surveyed officers, the results of 682 officers who reported direct contact with trauma victims were taken into account. Four standard measurement tools, i.e. the Secondary Traumatic Stress Inventory, The NEO Five-Factor Inventory, The Event Related Rumination Inventory, The Secondary Trauma Self-Efficacy Scale, were used, along with a survey developed for the purpose of the study.

The participants demonstrated a relatively low risk of experiencing negative consequences of exposure to secondary trauma: a low risk of developing STSD was observed for 86.1% of the participants and a high risk was observed for 13.9%. The symptoms of STS were positively correlated with ruminations on the traumatic events experienced by clients, especially intrusive ones. Intrusive ruminations turned out to be the main predictor of STS. With regard to personality traits, STS was most closely associated with neuroticism. A sense of self-efficacy was negatively correlated with symptoms of STS. Although the study on police officers working with trauma victims showed rather low intensity of STS symptoms, it is advisable to expand their competencies in coping with trauma, including reducing the tendency to ruminate on the traumatic events experienced by clients.

DOI: 10.5604/01.3001.0016.0390

<http://dx.doi.org/10.5604/01.3001.0016.0390>

**Keywords:** personality, police, predictors, secondary traumatic stress, self-efficacy, rumination

## Introduction

### Secondary Traumatic Stress

Police officers experience a range of stressors in connection with their work. Conn and Butterfield propose a threefold classification for stressors. The first category, *organisational stress*, includes all types of nuisance resulting from the specifics of the job (e.g. shift work, preparation of appropriate documentation). The second

category includes cases that threaten the officer's sense of security as a result of traumatic experiences, such as PTSD (Post-Traumatic Stress Disorder). Finally, the third category is related to exposure to the traumatic experiences of other people, with the most common being accidents and violence; such indirect exposure to trauma can result in the development of secondary traumatic stress (STS) symptoms.<sup>1</sup>

Although many studies examined the negative effects of direct experience of traumatic events among police officers, little research was devoted to their indirect exposure to trauma. Just like representatives of other professions confronted with victims of trauma (doctors, nurses, therapists, social workers), police officers may also be particularly susceptible to specific psychological costs, most often in the form of STS symptoms.

The term *Secondary Traumatic Stress* (STS) characterises a set of symptoms occurring in people having contact with other individuals who have directly experienced trauma.<sup>2</sup> The concept of STS was popularised by Figley, who described it as 'the stress of helping other people suffering from trauma'.<sup>3</sup> Helpers who engage in long-term contact with the victims of trauma, despite not having experienced trauma themselves, begin to view reality through their eyes; they also feel similar emotions and display similar reactions and behaviour. In some sense, they themselves become victims of trauma. In other words, the concept of STS is understood as a set of specific behavioural and emotional consequences that an individual experiences after confronting the trauma experienced by another human being. According to Figley, STS reflects PTSD, with the difference that, in the first case, it refers to people indirectly exposed to trauma.<sup>4</sup>

The symptoms of STS (just like PTSD) fall into four categories: intrusion, avoidance, negative changes in the cognitions and/or mood, as well as increased arousal and reactivity.<sup>5</sup> Certain symptoms, such as recurring memories, insomnia or nightmares, can also occur in those exposed to secondary trauma. They may also avoid thoughts and situations related to past events, they may have negative beliefs about the world and themselves, and demonstrate excessive reactivity when recalling events experienced by clients. A high intensity of STS symptoms can lead to a disorder referred to as Secondary Traumatic Stress Disorder (STSD). This kind of stress can give rise to other symptoms relating to the emotional, cognitive and

<sup>1</sup> Conn S.M, Butterfield L.D, Coping with Secondary Traumatic Stress by General Duty Police Officers: Practical Implications. *Canadian Journal of Counselling and Psychotherapy*, 2013, Vol. 47, No. 2, pp. 272–298.

<sup>2</sup> Bride B.E, Prevalence of secondary traumatic stress among social workers. *Social Work*, 2007, Vol. 52, No. 1, pp. 63–70.

<sup>3</sup> Figley C.R, Compassion fatigue: Toward a new understanding of the cost of caring, [in:] Stamm B.H (Ed.), *Secondary traumatic stress*, Towson, MD: Sirdan Institute, 1999, p. 110.

<sup>4</sup> Figley C.R (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. New York: Brunner/Mazel Publishers, 1995, pp. 1–20; Figley C.R, Compassion fatigue: Psychotherapists' chronic lack of self-care. *Journal of Clinical Psychology*, 2002, Vol. 58, pp. 1433–1441.

<sup>5</sup> APA — American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC, 2013.

behavioural sphere, including a sense of fear, dread, helplessness, or symptoms of depression.<sup>6</sup>

Other terms such as *compassion fatigue* and *vicarious traumatization* are also used in relation to this issue. The concept of compassion fatigue as a condition comprising various cognitive, emotional and behavioural components was introduced by Figley as one affecting therapists and nurses. The first component is manifested as an excessive preoccupation with the trauma suffered by others, apathy and problems with concentration.<sup>7</sup> The emotional component includes loss of strength, guilt, sadness and anger, while the behavioural component includes excessive excitability, irritation or sleep problems.<sup>8</sup> Furthermore, Newell *et al.* portray compassion fatigue as a condition that arises before secondary traumatic stress.<sup>9</sup> In contrast, the term *vicarious traumatization* (VT) was introduced to describe changes in the worldview of professionals as a result of their empathetic commitment to helping clients who experienced trauma.<sup>10</sup>

## Secondary Traumatic Stress among policemen

Most of the research conducted so far among policemen relates to the effects of direct exposure to traumatic events, *i.e.* PTSD. The available data shows that this syndrome was recognised in 8% of British and 15% of Swiss police officers.<sup>11</sup> However, few studies have examined the severity of symptoms of STS among policemen and even fewer have addressed the determinants of the presence of STS in this group.

While some evidence indicates that police officers experience less negative consequences from secondary exposure to trauma than the representatives of other professions<sup>12</sup>, Maran *et al.* suggest that police officers in fact experience higher levels of STS than health professionals.<sup>13</sup> A meta-analysis of research conducted

---

<sup>6</sup> Bride B.E, Prevalence of secondary traumatic stress..., *op. cit.*, pp. 63–70.

<sup>7</sup> Figley C.R, Compassion fatigue as secondary traumatic stress disorder..., *op. cit.*, pp. 1–20.

<sup>8</sup> Papazoglou K, Koskelainen M, Stuewe N, Examining the relationship between personality traits, compassion satisfaction, and compassion fatigue among police officers. *Sage Open*, 2019, Vol. 23, pp. 1–13.

<sup>9</sup> Newell J.M, Nelson-Gardell D, MacNeil G, Clinician responses to client traumas: A chronological review of constructs and terminology. *Trauma, Violence & Abuse*, 2016, Vol. 17, pp. 306–313.

<sup>10</sup> McCann I.L, Pearlman L.A, Vicarious traumatization: A framework to understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 1990, Vol. 3, No. 1, pp. 131–149.

<sup>11</sup> Brewin C, Miller J, Soffia M, Peart A, Burchell B, Posttraumatic stress disorder and complex posttraumatic stress disorder in UK police officers. *Psychological Medicine*, 2020, pp. 1–9; Soravia L.M, Schwab S, Walther S, Müller T, Rescuers at Risk: Posttraumatic Stress Symptoms Among Police Officers, Fire Fighters, Ambulance Personnel and Emergency and Psychiatric Nurses. *Psychiatry*, 2021, pp. 1–10.

<sup>12</sup> Molnar B, Sprang G, Kilian K, Gottfried R, Emery V, Bride B, Advancing science and practice for vicarious/secondary traumatic stress: A research agenda. *Traumatology*, 2017, Vol. 23, No. 2, pp. 120–142.

<sup>13</sup> Maran D.A, Zito M, Colombo L, Secondary Traumatic Stress in Italian Police Officers: The Role of Job Demands and Job Resources. *Frontiers in Psychology*, 2020, Vol. 11, Article 1435, pp. 1–11.

among representatives of various emergency services (Greinacher *et al.*) found that STS occurred in 4–13% of respondents.<sup>14</sup>

The degree of STS symptoms may vary according to the type of exposure to trauma experienced by police officers. A high level of STS is mainly seen among police officers dealing with problems associated with children; indeed, more than half of the respondents (51%) of a study conducted in Great Britain experienced symptoms of STS.<sup>15</sup> STS symptoms were also identified among South African officials dealing with domestic violence, child protection and sexual crimes.<sup>16</sup> Another study found that 70% of the studied police officers dealing with the problem of child abuse on the internet demonstrated STS symptoms.<sup>17</sup>

## Correlation of STS with personality, rumination and self-efficacy

There are many factors that determine the development of PTSD and STS symptoms. These include environmental factors such as the type and level of exposure to trauma, workload and seniority or social support, as well as subjective variables, which include some personality traits, low self-efficacy in dealing with trauma and ruminations on traumatic experiences.

Many authors point out the importance of pre-traumatic susceptibility factors in the development of PTSD.<sup>18</sup> The conducted research on PTSD confirms the role of neuroticism as a factor contributing to the occurrence of the symptoms of this syndrome.<sup>19</sup> Neuroticism is also believed to play an important role in the development of the negative consequences of secondary exposure to trauma. People with high neuroticism tend to be more pessimistic, less able to deal with stress and less willing to seek social support.<sup>20</sup> A positive relationship between neuroticism and

<sup>14</sup> Greinacher A, Dereczka-Greeven C, Herzog W, Nikendei C, Secondary traumatization in first responders: a systematic review. *European Journal of Psychotraumatology*, 2019, Vol. 10, No. 1.

<sup>15</sup> MacEachern A.D, Dennis A.A, Jackson S, Secondary Traumatic Stress: Prevalence and Symptomology Amongst Detective Officers Investigating Child Protection Cases. *Journal of Police and Criminal Psychology*, 2019, Vol. 34, pp. 165–174.

<sup>16</sup> Cronje J.H, Vilakazi M.J, Secondary traumatic stress in police detective officers dealing with complainants of sexual crime. *South African Journal of Psychology*, 2020, Vol. 50, No. 4, pp. 520–529.

<sup>17</sup> Bourke M.L, Craun S.W, Coping with secondary traumatic stress: difference between U.K. and the U.S. child exploitation personnel. *Traumatology: An International Journal*, 2014, Vol. 20, No. 1, pp. 57–64.

<sup>18</sup> Dudek B, Disorder after traumatic stress. Gdańsk: GWP, 2003, pp. 45–61; Lis-Turlejska M, Stres traumatyczny. Występowanie, następstwa, terapia. Warsaw, 2002, pp. 45–65; Lis-Turlejska M, Psychologiczne konsekwencje traumatycznego stresu: współczesne kierunki badań. *Nowiny Psychologiczne*, Vol. 2, pp. 25–38; Ogińska-Bulik N, Dwa oblicza traumy. Negatywne i pozytywne skutki zdarzeń traumatycznych u pracowników służb ratowniczych. Warsaw, Difin SA, 2015, pp. 33–70.

<sup>19</sup> Ogińska-Bulik N, Dwa oblicza traumy..., *op. cit.*, pp. 33–70.

<sup>20</sup> Tehrani N, Compassion fatigue: Experiences in occupational health, human resources, counseling and police. *Occupational Medicine*, 2010, Vol. 60, pp. 133–138.

STS was demonstrated among study participants involved in dealing with cases related to child abuse on the Internet.<sup>21</sup> Similarly, in surveys conducted among representatives of medical personnel in Romania, a positive correlation was established between neuroticism and dysfunctional beliefs, treated as an indicator of secondary traumatisation.<sup>22</sup>

However, one of the most important factors influencing the severity of the negative effects of traumatic events experienced is the cognitive activity undertaken by the individual, most often expressed in the form of cognitive processing of trauma. One form of such processing is rumination on the event experienced. According to a cognitive model of PTSD developed by Ehlers and Clark, ruminations are understood as contemplation on the events experienced and their consequences (intrusive ruminations). They are regarded as a maladaptive style of cognitive processing of trauma and can contribute to the development of PTSD.<sup>23</sup> However, such cognitive processing may also include deliberate ruminations aimed at finding an effective way of dealing with a given situation.<sup>24</sup> This kind of rumination is of an adaptive nature and, as a rule, does not increase the severity of PTSD symptoms. Nevertheless, generally speaking, research conducted in this area indicates a positive correlation between ruminations, especially intrusive ones, and the development of PTSD.<sup>25</sup>

The role of cognitive activity in the manifestation of negative consequences of secondary exposure to trauma is emphasised in the theoretical models developed for STS. The Ecological Framework of Trauma model developed by Dutton and Rubinstein emphasises cognitive coping strategies, treated as a form of cognitive processing of trauma, as well as personal and environmental factors.<sup>26</sup> Coping strategies are important because the goal of a coping mechanism is to manage the demands that the traumatic situation places on the individual. Another concept is McCann and Pearlman's Constructivist Theory of Self-development, which focuses on identifying changes and abnormalities in cognitive schemas that may be important for secondary trauma.<sup>27</sup> However, it should be emphasised that little research has been done in this area so far. A positive relationship was found

---

<sup>21</sup> Tehrani N, Extraversion, neuroticism and secondary trauma in internet child abuse investigators. *Occupational Medicine*, 2016, Vol. 66, No. 5, pp. 403–407.

<sup>22</sup> Mairean C, Turliuc M, Predictors of vicarious trauma beliefs among medical staff. *Journal of Loss and Trauma*, 2013, Vol. 18, No. 5, pp. 414–428.

<sup>23</sup> Ehlers A, Clark D.M, A cognitive model of posttraumatic stress disorder. *Behavioral Research and Therapy*, 2000, Vol. 38, pp. 319–345.

<sup>24</sup> Cann A, Calhoun L.G, Tedeschi R.G, Triplett K.N, Vishnevsky T, Lindstrom C.M, Assessing posttraumatic cognitive processes: the Event Related Rumination Inventory. *Anxiety, Stress & Coping*, 2011, Vol. 24, pp. 137–156.

<sup>25</sup> Ehlers A, Clark D.M, A cognitive model of posttraumatic stress disorder..., *op. cit.*, pp. 319–345; Cann A, Calhoun L.G, Tedeschi R.G, Triplett K.N, Vishnevsky T, Lindstrom C.M, Assessing posttraumatic cognitive processes..., *op. cit.*, 137–156; Ogińska-Bulik N, Personality and posttraumatic stress symptoms in oncological patients — the mediating role of ruminations. *Advances in Psychiatry and Neurology*, 2018, Vol. 27, No. 2, pp. 87–101.

<sup>26</sup> Dutton M.A, Rubinstein F.L, Working with people with PTSD: Research implications, [in:] C.R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. New York: Brunner/Mazel Publishers, 1995, pp. 82–100.

<sup>27</sup> McCann I.L, Pearlman L.A, Vicarious traumatization..., *op. cit.*, pp. 131–149.

in a group of probation officers exposed to secondary trauma between the presence of STS symptoms and rumination on the traumatic events experienced by their clients.<sup>28</sup>

A factor that seems to prevent the development of negative consequences of secondary exposure to trauma is self-efficacy. A sense of self-efficacy expresses the individual's belief about their own competences and the possibility of achieving the intended goal.<sup>29</sup> Self-efficacy was categorised as generalised and specific; the former is formed on the basis of life experiences and concerns the perception of oneself as a person with the competence to deal with different life situations, while the latter refers to specific situations.<sup>30</sup> Available studies indicate that self-efficacy negatively correlates with STS symptoms.<sup>31</sup>

## Materials and Methods

The purpose of the study was to establish the predictors of risk of STS among police officers after exposure to secondary trauma. The independent variables tested comprised personality traits, ruminations on the events experienced by clients and secondary trauma self-efficacy. Professional experience in helping people after traumatic events and the number of hours in a week devoted to working with trauma victims were indicators of secondary exposure to trauma. The controlled variables were the sex, age and police division of the respondents.

It was assumed that ruminations, especially intrusive ones, and neuroticism would be positively associated with the severity of STS symptoms, while extraversion, openness to experience, agreeableness, conscientiousness, and secondary trauma self-efficacy would be negatively associated. Based on the Ehlers and Clark PTSD model<sup>32</sup>, it may be supposed that the main predictor will be intrusive ruminations.

The research was conducted from June to October 2021 at the Police Academy in Szczytno (Poland). The project was specifically approved by the National Police

<sup>28</sup> Ogińska-Bulik, N, Juczyński Z, Kiedy trauma innych staje się własną. Negatywne i pozytywne konsekwencje pomagania osobom po doświadczeniach traumatycznych. Warsaw: PWN, 2020, pp. 125–177.

<sup>29</sup> Bandura A, Self-efficacy: The exercise of control. New York, NY: Freeman, 1997, pp. 36–61; Benight C.C, Bandura A, Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behaviour Research and Therapy*, 2004, Vol. 42, pp. 1129–1148.

<sup>30</sup> Cyniak-Cieciura M, Popiel A, Zawadzki B, Poziom uogólnionego poczucia własnej skuteczności a zmiany negatywnych przekonań potraumatycznych i objawów pourazowego zaburzenia stresowego (PTSD) u ofiar wypadków drogowych. *Studia Psychologiczne*, Vol. 53, No. 1, pp. 19–32.

<sup>31</sup> Ortlepp K, Friedman M, Prevalence and correlates of secondary traumatic stress in workplace lay trauma counselors. *Journal of Traumatic Stress*, 2002, Vol. 15, pp. 213–222; Bonach K, Heckert A, Predictors of secondary traumatic stress among children's advocacy center forensic interviewers. *Journal of Child Sexual Abuse*, 2012, Vol. 21, pp. 295–314; Cieślak R, Shoji K, Luszczynska A, Taylor S, Rogala A, Benight Ch, Secondary Trauma Self-Efficacy: Concept and Its Measurement. *Psychological Assessment*, 2013, Vol. 25, No. 3, pp. 917–928.

<sup>32</sup> Ehlers A, Clark D.M, A cognitive model of posttraumatic stress disorder..., *op. cit.*, pp. 319–345.

Headquarters. The study involved 790 police officers, all of whom were university graduates who had taken postgraduate vocational training. These officers work in organisational units of the Police throughout Poland on a daily basis. The study was voluntary and anonymous.

In total, data was collected from 682 police officers (86.3% of the total sample) who worked directly with trauma victims and who fully completed the questionnaires provided to them. The participants represented three divisions of the police force: Uniformed Branch (n=200), Criminal Investigation (n=385) and Support Services (n=69); 28 people did not indicate affiliation to any police division. Their clients had experienced various types of traumatic events. The most common were various types of violence (n=443), death (n=336), accidents (n=201).

The group comprised 512 men and 157 women (13 people did not indicate their sex). The age of the participants ranged from 24 to 60 years (M=40.03, SD=4.41). The length of time working as a police officer assisting trauma victims ranged from 1 to 30 years (M=11.53, SD=5.42). The weekly number of hours devoted to helping trauma victims at work varied from 1 to 50 (M=10.89, SD=10.46).

The study employed a survey comprising questions about sex, age, police division, work experience as a police officer assisting trauma victims, and the weekly number of hours devoted to working with trauma victims. The last two variables were taken as an index of exposure to secondary trauma. In addition, the following three standard research tools were used:

**Secondary Traumatic Stress Inventory (STSI)** is a modification of the Post-Traumatic Stress Disorder Checklist developed by Weathers *et al.*<sup>33</sup> The present study used the Polish adaptation by Ogińska-Bulik *et al.*<sup>34</sup> It is a self-report measure created for the purpose of monitoring, screening, and diagnosing individuals providing help to trauma survivors. It contains 20 items/reactions to traumatic situations which refer to symptoms of posttraumatic stress disorder ('Repeated, disturbing, and unwanted memories of the stressful experience'). The STSI includes four dimensions: intrusions, avoidance, negative alterations in cognition and mood, as well as alterations in arousal and reactivity. In line with the instructions provided, the participants indicated the level to which they experienced each symptom over the previous month in connection with the help they provided recipients. All answers are given on a 5-point scale from 0 ('not at all') to 4 ('extremely'). The Cronbach's alpha coefficient was 0.90 for the entire inventory with values of 0.71, 0.85, 0.89 and 0.87 for the four dimensions (Ogińska-Bulik, & Juczyński, 2020)<sup>35</sup>.

**The NEO Five-Factor Inventory (NEO-FFI)**, developed by Costa and McCrae<sup>36</sup>, was used in its Polish adaptation by Zawadzki *et al.*<sup>37</sup> to assess five personality

<sup>33</sup> Weathers F, Litz B, Keane T, Palmieri P, Marx B, Schnurr P, The PTSD Checklist for DSM-5 (PCL-5). The National Center for PTSD, 2013. *Electronic source:* www.ptsd.va.gov

<sup>34</sup> Ogińska-Bulik N, Juczyński Z, Lis-Turlejska M, Miecz-Kot D, Polish adaptation of PTSD Checklist for DSM-5 – PCL-5. A preliminary communication. *Przeegląd Psychologiczny*, 2018, Vol. 61, No. 2, pp. 287–291.

<sup>35</sup> Ogińska-Bulik, N, Juczyński Z, Kiedy trauma innych..., *op. cit.*, pp. 125–177.

<sup>36</sup> Costa P.T, McCrae R.R, NEO-PI/FFI. Manual supplement. Odessa, FL: Psychological Assessment Resources, 1989, pp. 223–256.

<sup>37</sup> Zawadzki B, Strelau J, Szczepaniak P, Śliwińska M, The NEO-FFI Personality Inventory of Costa and McCrae. Warsaw: Psychological Test Laboratory of the PTP, 1998.

dimensions: extraversion, neuroticism, openness to experience, conscientiousness and agreeableness. The tool consists of 60 items ('I am not a worrier') with responses given on a scale ranging from 1 (strongly disagree) to 5 (completely agree). The Cronbach's alpha coefficients for the inventory ranged from 0.60 to 0.82.

**The Event Related Rumination Inventory (ERRI)** developed by Cann *et al.*<sup>38</sup> was adapted to Polish conditions by Ogińska-Bulik and Juczyński.<sup>39</sup> The tool contains two subscales, each of which consists of 10 statements. The first concerns intrusive ruminations ('I thought about the event when I did not mean to') and the second includes deliberate (reflective) ruminations ('I thought about whether I could find meaning in my experience'). The scores are calculated independently for each subscale. The instructions for completing the scale were modified, asking participants to rate the ruminations in relation to events experienced by their clients. The Cronbach's alpha coefficient for the Polish version was 0.96 for intrusive ruminations and 0.92 for deliberate ruminations.

**The Secondary Trauma Self-Efficacy (STSE) Scale** was developed to evaluate the perceived ability to cope with the challenging demands resulting from working with traumatised clients and to deal with secondary traumatic stress symptoms. It also concerns the ability to control emotional and cognitive reactions related to indirect exposure to trauma. Seven items were included in the scale ('My capacity to deal with my emotions (anger, sadness, depression, anxiety) related to working with these people'). The responses were given on a 7-point Likert-like scale, ranging from 1 (*very incapable*) to 7 (*very capable*). The STSE Scale consists of a single factor and obtained good internal consistency, with a Cronbach's alpha score of 0.87.<sup>40</sup>

## Results

Statistical analysis was performed using Statistica software. As the data obtained either met or approximated the criteria of normality, parametric tests were employed (Student's t-test, test F analysis of variance, Pearson's correlation coefficients). Two-tailed probability value of  $< 0.05$  was considered to be statistically significant. Multivariable stepwise regression analysis was used to identify dependent variable (STS) predictors among the independent variables (personality traits, ruminations and self-efficacy).  $R^2$  was used to assess the model fit. The conducted regression analysis also provided data regarding  $R$ , adjusted  $R^2$ , standardised regression coefficient ( $\beta$ ), unstandardised regression coefficient ( $B$ ),  $F$ -statistic, and  $p$ -value. Multicollinearity was checked based on tolerance ( $> 0.10$ ) and the variance inflation factor ( $< 5$ ). The means and standard deviations for the analysed variables are presented in Table 1.

<sup>38</sup> Cann A, Calhoun L.G, Tedeschi R.G, Triplett K.N, Vishnevsky T, Lindstrom C.M, Assessing posttraumatic cognitive processes..., *op. cit.*, pp. 137–156.

<sup>39</sup> Ogińska-Bulik N, Juczyński Z, Inwentarz Ruminalcji o Negatywnym Zdarzeniu — polska adaptacja: the Event Related Rumination Inventory. *Przegląd Psychologiczny*, 2015, Vol. 58, No. 3, pp. 383–400.

<sup>40</sup> Cieślak R, Shoji K, Luszczynska A, Taylor S, Rogala A, Benight Ch, Secondary Trauma Self-Efficacy..., *op. cit.*, pp. 917–928.



**Table 1. Descriptive statistics and correlation coefficients of analyzed variables (n=682)**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. STS total	15.80	13.43	-											
2. Intrusion	4.21	3.78	0.82***	-										
3. Avoidance	1.96	2.00	0.73***	0.62***	-									
4. Negative changes in cognition/ mood	4.48	4.56	0.91***	0.62***	0.55***	-								
5. Increased arousal and reactivity	5.15	5.14	0.92***	0.63***	0.55***	0.81***	-							
6. Neuroticism	15.09	7.24	0.36***	0.26***	0.22***	0.37***	0.33***	-						
7. Extraversion	30.62	5.97	-0.09*	-0.02	-0.04	-0.16**	-0.07	-0.43***	-					
8. Openness to experience	25.42	5.38	-0.01	0.04	-0.02	-0.02	-0.01	-0.23***	0.29***	-				
9. Agreeableness	31.26	5.32	-0.16***	0.06	-0.07	-0.20***	-0.18***	-0.31***	0.25***	0.08*				
10. Conscientiousness	35.93	5.33	-0.09*	-0.01	-0.01	-0.13**	-0.11**	-0.35***	0.34***	0.15***	0.26***	-		
11. Intrusive rumination	8.07	7.13	0.67***	0.63***	0.52***	0.54***	0.58***	0.35***	-0.09*	0.04	-0.02	-0.08*	-	
12. Deliberate rumination	9.02	6.80	0.59***	0.49***	0.47***	0.52***	0.53***	0.26***	-0.02	0.12**	-0.07	-0.01	0.68***	-
13. Secondary trauma self-efficacy	36.60	6.78	-0.27***	-0.20***	-0.17***	-0.23***	-0.28***	-0.37***	0.21***	-0.14***	0.16***	0.22***	-0.30***	-0.18***

Note. STS = secondary traumatic stress, \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001.

Source: Author's own calculation.

Assuming a cut-off point of 33 points<sup>41</sup> for STSI, 587 police officers (86.1%) reported a low risk of occurrence of STSD and only 95 (13.9%) of them reported a high probability of STSD.

The severity of STS symptoms were not affected by sex (men:  $M=15.78$ ,  $SD=13.27$ ; women:  $M=16.04$ ,  $SD=14.20$ ,  $t(df=677)=-0.21$ ) or police division (Prevention:  $M=17.43$ ,  $SD=13.34$ ; Criminal:  $M=15.41$ ,  $SD=13.18$ ; Supportive:  $M=12.96$ ,  $SD=13.27$ ;  $F(df(2,651)=0.687$ ). STS symptoms were not significantly associated with age ( $r=0.04$ ) or the weekly number of hours devoted to working with trauma victims ( $r=0.06$ ) but were correlated, although rather weakly, with work experience as a police officer assisting trauma victims ( $r=0.19$ ,  $p<0.001$ ).

The results presented in Table 2 indicate that symptoms of STS are positively correlated with four dimensions of personality: positively with neuroticism and negatively with extraversion, agreeableness and conscientiousness. The strongest correlation was found for neuroticism. STS is also positively associated with both types of ruminations, with a stronger relationship observed for intrusive ruminations. Self-efficacy is negatively related to STS and all of its criteria.

Four personality traits were included in the regression analysis, excluding *openness to experiences*, which did not correlate with STS. Similarly, due to the lack of any correlation, it did not include the weekly number of hours devoted to helping trauma victims. Overall, eight explanatory variables were included in the regression model. Of these, six entered the regression equation, of which four appeared to play a predictive role for STS. The results are presented in Table 2.

**Table 2. Predictors of STS**

	$\beta$	$BE \beta$	$B$	$BE B$	$t$	$p$	$R^2$
Constance			10.27	3.51	2.92	0.003	
Intrusive ruminations	0.45	0.03	0.84	0.07	11.71	0.001	0.45
Deliberate ruminations	0.24	0.03	0.47	0.07	6.54	0.001	0.04
Agreeableness	-0.10	0.03	-0.25	0.07	-3.49	0.001	0.02
Neuroticism	0.09	0.03	0.17	0.06	2.88	0.001	0.01
Work experience	0.08	0.02	0.21	0.06	3.17	ni	0.01
Self-efficacy	-0.03	0.02	-0.07	0.05	-1.28	ni	0.001

$R=0.718$ ;  $R^2=0.516$ ; adjusted  $R^2=0.512$ ;  $F(6,668)=119.02$   $p<0.001$ ; Standard error estimate=9.25  
 $\beta$  = standardized regression coefficient;  $BE \beta$   $\beta$  error of;  $B$  = unstandardized regression coefficient;  $BE B$  =  $B$  error;  $t$  =  $t$ -test value;  $p$  = the level of significance);  $R$  = correlation coefficient;  $R^2$  = determination coefficient; Adj.  $R^2$  = adjusted  $R^2$ .

Intrusive ruminations on the situations experienced by clients were found to be the main predictor of STS; this factor had the greatest influence on the variance of the general STSI result, explaining 45%. A higher toward intrusive rumination was associated with a higher intensity of STS symptoms. The remaining variables explained no more than 5% of the variance of the dependent variables. Almost all of them (except agreeableness) seem to favour the occurrence of STS. Neither

<sup>41</sup> Ogińska-Bulik, N, Juczyński Z, Kiedy trauma innych... *op. cit.*, pp. 125–195.

secondary trauma self-efficacy nor work experience as a police officer assisting trauma victims played any predictive role for the negative consequences of secondary exposure to trauma.

Separate analyses were also carried out for the individual criteria of STS. The findings confirm that intrusive ruminations play an essential role in the occurrence of STS symptoms. Four predictors were revealed for Intrusion: intrusive ruminations ( $Beta=0.54$ ;  $R^2=0.40$ ), work experience ( $Beta=0.09$ ;  $R^2=0.09$ ), deliberate ruminations ( $Beta=0.09$ ;  $R^2=0.07$ ) and neuroticism ( $Beta=0.07$ ;  $R^2=0.003$ ). Three variables appeared to be the predictors of Avoidance: intrusive ruminations ( $Beta=0.38$ ;  $R^2=0.27$ ), deliberate ruminations ( $Beta=0.20$ ;  $R^2=0.03$ ), work experience ( $Beta=0.08$ ;  $R^2=0.006$ ). Four variables could predict the level of Negative changes in cognition/mood: intrusive ruminations ( $Beta=0.31$ ;  $R^2=0.30$ ), deliberate ruminations ( $Beta=0.26$ ;  $R^2=0.04$ ), neuroticism ( $Beta=0.14$ ;  $R^2=0.03$ ), and agreeableness ( $Beta=-0.12$ ;  $R^2=0.01$ ). Finally, six variables predicted increased arousal and reactivity: intrusive ruminations ( $Beta=0.37$ ;  $R^2=0.34$ ), deliberate ruminations ( $Beta=0.22$ ;  $R^2=0.03$ ), agreeableness ( $Beta=-0.12$ ;  $R^2=0.02$ ), work experience ( $Beta=0.10$ ;  $R^2=0.009$ ), secondary trauma self-efficacy ( $Beta=-0.08$ ;  $R^2=0.008$ ), and neuroticism ( $Beta=0.09$ ;  $R^2=0.003$ ).

## Discussion

Polish police officers working with trauma victims demonstrate a rather low intensity of secondary traumatic stress symptoms. The mean STS score for the policemen examined was lower than that obtained from a previous study on other professionals working with trauma survivors (using the same measurement tool), including therapists, social workers, probation officers, medical rescuers and nurses ( $M=24.14$ ,  $SD=16.11$ ).<sup>42</sup>

Only 13.9% of policemen present a high risk of secondary trauma stress disorder (STSD) and most (86.1%) present a low risk. This data is largely consistent with results obtained in other countries<sup>43</sup>. It is also in line with previous research indicating a relatively low level of PTSD symptoms in policemen who were directly exposed to traumatic events. A meta-analysis of 28 studies collected from Asia, Europe and North America found that the prevalence of PTSD among representatives of the emergency services does not exceed 10%<sup>44</sup>. Police officers seem to show a greater

<sup>42</sup> Ogińska-Bulik, N, Juczyński Z, Kiedy trauma innych..., *op. cit.*, pp. 125–195.

<sup>43</sup> Greinacher A, Derezza-Greeven C, Herzog W, Nikendei C, Secondary traumatization in first responders..., *op. cit.*, Vol. 10, No. 1; Hargrave P.A, Sudden death: The impact of the immediate aftermath on police officers, victim support workers, and bereaved survivors: A thesis presented in partial fulfilment of the requirements for the degree of Doctor of Philosophy in psychology at Massey University, Wellington. New Zealand: Massey University. *Electronic source*: <http://hdl.handle.net/10179/3872>; Maran D.A, Zito M, Colombo L, Secondary Traumatic Stress..., *op.cit.*, pp. 1–11; Molnar B, Sprang G, Kilian K, Gottfried R, Emery V, Bride B, Advancing science and practice..., *op. cit.*, pp. 120–142.

<sup>44</sup> Berger W, Coutinho E, Figueira I, Marques-Portella C, Luz M, Neylan T, Marmar C, Mendlowicz M, Rescuers at risk: A systematic review and meta-regression analysis of the worldwide current prevalence and correlates of PTSD in rescue workers. *Social Psychiatry and Psychiatric Epidemiology*, 2012, Vol. 47, pp. 1000–1011.

ability to cope with the trauma experienced by others compared with representatives of other professionals exposed to secondary trauma, such as paramedics, social workers or probation officers<sup>45</sup>. It can be assumed that they are well-prepared for practising their profession.

Neither age, sex, police division nor weekly number of hours devoted to working directly with trauma victims were associated with STS symptoms. Only the years of experience working with trauma victims as a police officer correlated positively with negative consequences of secondary exposure to trauma.

STS symptoms correlated more strongly with ruminations, especially intrusive ones, than with personality traits and secondary trauma self-efficacy. Intrusive ruminations appeared to be the main predictor of STS and all its factors. The results confirm the significant role of cognitive trauma processing in the form of ruminations in the prevalence of STS symptoms and risk of STS. These results are also consistent with data indicating a positive relationship between ruminations and the symptoms of STS among other professionals working with victims of trauma, such as medical personnel<sup>46</sup> or probation officers<sup>47</sup>. They are also consistent, at least partly, with data obtained by other studies on various negative effects of experienced stress.<sup>48</sup> Ruminations may contribute to the maintenance of STS symptoms because abstract thinking resulting from traumatic experiences leads to the persistence of negative mood and arousal. Our findings confirm that specific methods of emotional regulation and coping with stress, mainly maladaptive ones, expressed as intrusive ruminations, may favour the development of adverse effects of indirect trauma exposure. Moreover, they indicate that the Ehlers and Clark model created for PTSD<sup>49</sup> can also be applied to secondary trauma.

Personality traits and secondary trauma self-efficacy seem to play a minor role in the occurrence of STS symptoms. Among the dimensions of personality, neuroticism displays the strongest relationships with STS; this trait seems to predominantly favour negative changes in cognition and mood. Data indicates that police officers with a high level of neuroticism are more likely to experience the negative impact of secondary trauma exposure. Similarly, a positive relationship was also

<sup>45</sup> Ogińska-Bulik, N, Juczyński Z, Kiedy trauma innych..., *op. cit.*, pp. 125–195.

<sup>46</sup> Turliuc M.N, Măirean C, Turliuc M.D, Rumination and suppression as mediators of the relationship between dysfunctional beliefs and traumatic stress. *International Journal of Stress Management*, 2015, Vol. 22, No. 3, pp. 306–322.

<sup>47</sup> Ogińska-Bulik N, Juczyński Z, Kiedy trauma innych..., *op. cit.*, pp. 125–195.

<sup>48</sup> Ehring T, Ehlers A, Does rumination mediate the relationship between emotion regulation ability and posttraumatic stress disorder? *Psychotraumatology*, 2014, Vol. 26, No. 5; Michael T, Halligan S.L, Clark D.M, Ehlers A, Ruminations in posttraumatic stress disorder. *Depression and Anxiety*, 2007, Vol. 24, pp. 307–317; Ogińska-Bulik, N, Michalska P, The relationship between emotional processing deficits and posttraumatic stress disorder symptoms among breast cancer patients: The mediating role of rumination. *Journal of Clinical Psychology in Medical Settings*, 2019, Vol. 27, pp. 11–21; Roelofs J, Huibers M, Peeters F, Arntz A, Effects of neuroticism on depression and anxiety: Rumination as possible mediator. *Personality and Individual Differences*, 2008, Vol. 44, No. 3, pp. 576–586; Turliuc M.N, Măirean C, Turliuc M.D, Rumination and suppression as mediators..., *op. cit.*, pp. 306–322.

<sup>49</sup> Ehlers A, Clark D.M, A cognitive model of posttraumatic stress disorder..., *op. cit.*, pp. 319–345.

demonstrated between STS and neuroticism among investigators dealing with the problem of online child abuse<sup>50</sup> and in medical personnel<sup>51</sup>.

A negative association was found between secondary trauma self-efficacy and STS, which is consistent with previous studies.<sup>52</sup> Secondary trauma self-efficacy was expected to play a stronger role as a factor preventing STS. Self-efficacy is regarded as a proximal determinant of health-related outcomes after a traumatic event.<sup>53</sup> However, our present findings did not confirm that it has a predictive role for STS, and neither did those of a previous study on a group of forensic interviewers from children's advocacy centers in the USA, in which only weak associations were found and only 1% of STS variance was explained by self-efficacy<sup>54</sup>.

In turn, Cieślak *et al.* found that self-efficacy, measured with the STSE Scale, explains 23%–39% of the variance in STS. These findings indicate that the role of self-efficacy in the occurrence of STS varies and that it may be influenced by the choice of study group. In the case of Cieślak *et al.*, the participants were clinical psychologists, counselors and social workers providing services for a military population, whose work differed from that of police officers.<sup>55</sup> In the case of the policemen participating in the present study, it should be taken into account that helping trauma victims was only one of their many professional duties and that the time devoted to working with people who suffered traumatic experiences varied greatly. Moreover, it should not be forgotten that the police officers surveyed demonstrated a relatively low intensity of STS and such conditions do not require the involvement of secondary trauma self-efficacy.

It is also possible that in a group of police officers exposed to secondary trauma, a greater role in the occurrence of STS is played by generalised self-efficacy than secondary trauma self-efficacy, which measures beliefs about the ability to deal with barriers associated with secondary exposure to trauma. However, self-efficacy beliefs related to specific stressful situations should closely reflect the demands related to these situations.<sup>56</sup> Nevertheless, it should also be taken into account that the intensity of STS symptoms may influence self-efficacy in coping with secondary trauma, particularly since self-efficacy may fluctuate over time due to mastery experiences in environmental and intrapersonal challenges.<sup>57</sup> It is also possible that secondary trauma self-efficacy may promote positive post-traumatic changes,

---

<sup>50</sup> Tehrani N, Extraversion, neuroticism and secondary trauma..., *op. cit.*, pp. 403–407.

<sup>51</sup> Măirean C, Turliuc M, Predictors of vicarious trauma beliefs among medical staff. *Journal of Loss and Trauma*, 2013, Vol. 18, No. 5, pp. 414–428.

<sup>52</sup> Ortlepp K, Friedman M, Prevalence and correlates of secondary traumatic stress..., *op. cit.*, pp. 213–222; Bonach K, Heckert A, Predictors of secondary traumatic stress..., *op. cit.*, pp. 295–314; Cieślak R, Shoji K, Luszczynska A, Taylor S, Rogala A, & Benight Ch, Secondary Trauma Self-Efficacy..., *op. cit.*, pp. 917–928.

<sup>53</sup> Benight C.C, Bandura A, Social cognitive theory of posttraumatic recovery..., *op. cit.*, pp. 1129–1148; Cieślak R, Shoji K, Luszczynska A, Taylor S, Rogala A, & Benight Ch, Secondary Trauma Self-Efficacy..., *op. cit.*, pp. 917–928.

<sup>54</sup> Bonach K, Heckert A, Predictors of secondary traumatic stress..., *op. cit.*, pp. 295–314.

<sup>55</sup> Cieślak R, Shoji K, Luszczynska A, Taylor S, Rogala A, & Benight Ch, Secondary Trauma Self-Efficacy..., *op. cit.*, 917–928.

<sup>56</sup> *Ibid.*, pp. 917–928.

<sup>57</sup> Bandura A, Self-efficacy: The exercise of control..., *op. cit.*, pp. 36–61.

expressed as secondary post-traumatic growth, rather than prevent the negative outcomes of secondary exposure to trauma. Indeed, a positive relationship was revealed between secondary trauma self-efficacy and secondary post-traumatic growth in a study on clinical psychologists, counselors and social workers providing services for a military population.<sup>58</sup> Generally, however, the above data indicate that the role of secondary trauma self-efficacy is ambiguous and requires further exploration.

The present study does, however, have certain limitations. Due to its cross-sectional character, unequivocal conclusions cannot be drawn with regard to causality. In addition, the group of participants was not characterised by homogeneity: most were men and the group was dominated by police officers from the Criminal Division, with few representatives of the Support Services; furthermore, the participants were restricted to those receiving vocational training for university graduates. Moreover, the study did not attempt to make any association between STS symptoms in police officers and the type of traumatic event experienced by their clients, mostly because it was multiple events in most cases, nor did it examine the traumatic events experienced by police officers. It is possible that the relationship between ruminations, personality or secondary trauma self-efficacy and STS would differ depending on whether the police officers themselves experienced a trauma or not. It is important to emphasise that it is difficult to clearly separate the occurrence of PTSD symptoms from STS in this professional group.

Another important consideration is that ruminations are highly similar to intrusions: symptoms of both STS and PTSD. However, as indicated by Ehrling and Ehlers, these concepts are not identical: 'intrusive memories are sensory experiences of short duration that represent the experience of the trauma itself, whereas rumination is described as a train of thoughts of longer duration that elaborate on the experience'<sup>59</sup>.

Despite the limitations given above, our findings provide new information regarding the predictors of adverse effects of exposure to secondary trauma in police officers. It is also important to highlight that little research has been carried out so far on police officers who experience secondary exposure to trauma and that the present study employed a new tool, the Secondary Traumatic Stress Inventory, which was developed according to the DSM-5 criteria.

The study may inspire further research addressing other factors determining the negative consequences of secondary exposure to trauma, including many different indexes of cognitive processing of trauma like disruption in core beliefs or personal resources; factors such as a sense of coherence, dispositional optimism or resiliency may protect police officers from these negative consequences. It would also be interesting to establish the role of social support both in and outside the work environment. Moreover, a longitudinal approach would be desirable in future studies to capture the changes in the intensity of the adverse effects of secondary trauma exposure over time. Future research should also consider the possibility of positive secondary post-traumatic changes, in the form of secondary/vicarious post-traumatic growth, which may coexist with STS symptoms.

---

<sup>58</sup> Cieślak R, Shoji K, Luszczynska, A, Taylor S, Rogala A, & Benight Ch, Secondary Trauma Self-Efficacy..., *op. cit.*, pp. 917–928.

<sup>59</sup> Ehrling T, Ehlers A, Does rumination mediate..., *op. cit.*, p. 1.

The conducted research may also have some practical implications, especially for the development of preventive activities aimed at reducing the symptoms of STS and lowering the risk of STSD among police officers exposed to secondary trauma. The importance of interventions directed against STS symptoms was underlined by Molnar *et al.* and Ogińska-Bulik and Juczyński.<sup>60</sup> Such interventions should include the development and fostering of self-efficacy to improve control over the environment and develop the competencies associated with coping with trauma, including reducing maladaptive ruminations and encouraging the use of more adaptive coping strategies, such as resolution, acceptance or positive cognitive restructuring. It is also desirable to encourage police officers to express negative emotions related to secondary trauma. Wider use of self-care practices (*e.g.*, leisure time) may also be useful, particularly since they are a very popular method of providing support among police officers.<sup>61</sup>

## Conclusions

Police officers working with trauma victims are prone to develop STS symptoms. These symptoms are positively related to both types of ruminations, with a stronger relationship observed for intrusive ruminations. They are also associated with four traits from the Big Five personality model, with neuroticism showing a positive and stronger correlation than the other personality traits and ruminations. STS symptoms are also negatively correlated with secondary trauma self-efficacy. Intrusive ruminations serve as the main predictor of the occurrence of STS. It is important to include police officers working with trauma victims in the actions aimed at the prevention and reduction of STS symptoms and risk of STSD.

## References

1. APA — American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC, 2013.
2. Bandura A, *Self-efficacy: The exercise of control*. New York, NY: Freeman, 1997.
3. Benight C.C, Bandura A, *Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy*. *Behaviour Research and Therapy*, 2004, Vol. 42.
4. Berger W, Coutinho E, Figueira I, Marques-Portella C, Luz M, Neylan T, Marmar C, Mendlowicz M, *Rescuers at risk: A systematic review and meta-regression analysis of the worldwide current prevalence and correlates of PTSD in rescue workers*. *Social Psychiatry and Psychiatric Epidemiology*, 2012, Vol. 47.
5. Bonach K, Heckert A, *Predictors of secondary traumatic stress among children's advocacy center forensic interviewers*. *Journal of Child Sexual Abuse*, 2012, Vol. 21.

---

<sup>60</sup> Molnar B, Sprang G, Kilian K, Gottfried R, Emery V, Bride B, *Advancing science and practice for vicarious/secondary traumatic stress...*, *op. cit.*, pp. 120–142; Ogińska-Bulik N, Juczyński Z, *Kiedy trauma innych...*, *op. cit.*, pp. 125–195.

<sup>61</sup> Conn S.M, Butterfield L.D, *Coping with Secondary Traumatic Stress by General Duty Police Officers...*, *op. cit.*, pp. 272–298.

6. Bourke M.L, Craun S.W, Coping with secondary traumatic stress: difference between U.K. and the U.S. child exploitation personnel. *Traumatology: An International Journal*, 2014, Vol. 20, No. 1.
7. Brewin C, Miller J, Soffia M, Peart A, Burchell B, Posttraumatic stress disorder and complex posttraumatic stress disorder in UK police officers. *Psychological Medicine*, 2020.
8. Bride B.E, Prevalence of secondary traumatic stress among social workers. *Social Work*, 2007, Vol. 52, No. 1.
9. Cann A, Calhoun L.G, Tedeschi R.G, Triplett K.N, Vishnevsky T, Lindstrom C.M, Assessing posttraumatic cognitive processes: the Event Related Rumination Inventory. *Anxiety, Stress & Coping*, 2011, Vol. 24.
10. Cieślak R, Shoji K, Luszczynska A, Taylor S, Rogala A, Benight Ch, Secondary Trauma Self-Efficacy: Concept and Its Measurement. *Psychological Assessment*, 2013, Vol. 25, No. 3.
11. Conn S.M, Butterfield L.D, Coping with Secondary Traumatic Stress by General Duty Police Officers: Practical Implications. *Canadian Journal of Counselling and Psychotherapy*, 2013, Vol. 47, No. 2.
12. Costa PT, McCrae R.R, NEO-PI/FFI. Manual supplement. Odessa, FL: Psychological Assessment Resources, 1989.
13. Cronje J.H, Vilakazi M.J, Secondary traumatic stress in police detective officers dealing with complainants of sexual crime. *South African Journal of Psychology*, 2020, Vol. 50, No. 4.
14. Cyniak-Cieciura M, Popiel A, Zawadzki B, Poziom uogólnionego poczucia własnej skuteczności a zmiany negatywnych przekonań potraumatycznych i objawów pourazowego zaburzenia stresowego (PTSD) u ofiar wypadków drogowych. *Studia Psychologiczne*, Vol. 53, No. 1.
15. Dudek B, Zaburzenie po stresie traumatycznym. Gdańsk: GWP, 2003.
16. Dutton M.A, Rubinstein F.L, Working with people with PTSD: Research implications, [in:] Figley C.R (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. New York: Brunner/Mazel Publishers, 1995.
17. Ehlers A, Clark D.M, A cognitive model of posttraumatic stress disorder. *Behavioral Research and Therapy*, 2000, Vol. 38.
18. Ehring T, Ehlers A, Does rumination mediate the relationship between emotion regulation ability and posttraumatic stress disorder? *Psychotraumatology*, 2014, Vol. 5.
19. Figley C.R, Compassion fatigue as secondary traumatic stress disorder: An overview, [in:] Figley C.R (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. New York: Brunner/Mazel Publishers, 1995.
20. Figley C.R, Compassion fatigue: Toward a new understanding of the cost of caring, [in:] Stamm B.H (Ed.), *Secondary traumatic stress*, Towson, MD: Sirdan Institute, 1999.
21. Figley C.R, Compassion fatigue: Psychotherapists chronic lack of self-care. *Journal of Clinical Psychology*, 2002, Vol. 58.
22. Greinacher A, Derezza-Greeven C, Herzog W, Nikendei C, Secondary traumatization in first responders: a systematic review. *European Journal of Psychotraumatology*, 2019, Vol. 10.



23. Hargrave P.A, Sudden death: The impact of the immediate aftermath on police officers, victim support workers, and bereaved survivors: A thesis presented in partial fulfilment of the requirements for the degree of Doctor of Philosophy in psychology at Massey University, Wellington. New Zealand: Massey University, 2010.
24. Lis-Turlejska M, Stres traumatyczny. Występowanie, następstwa, terapia. Warsaw, 2002.
25. Lis-Turlejska M, Psychologiczne konsekwencje traumatycznego stresu: współczesne kierunki badań. *Nowiny psychologiczne*, 2000, Vol. 2.
26. MacEachern A.D, Dennis A.A, Jackson S, Secondary Traumatic Stress: Prevalence and Symptomology Amongst Detective Officers Investigating Child Protection Cases. *Journal of Police and Criminal Psychology*, 2019, Vol. 34.
27. Mairean C, Turluc M, Predictors of vicarious trauma beliefs among medical staff. *Journal of Loss and Trauma*, 2013, Vol. 18, No. 5.
28. Maran D.A, Zito, M, Colombo L, Secondary Traumatic Stress in Italian Police Officers: The Role of Job Demands and Job Resources. *Frontiers in Psychology*, 2020, Vol. 11.
29. McCann I.L, Pearlman L.A, Vicarious traumatization: A framework to understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 1990, Vol. 3, No. 1.
30. Michael T, Halligan S.L, Clark, D.M, Ehlers A, Ruminations in posttraumatic stress disorder. *Depression and Anxiety*, 2007, Vol. 24.
31. Molnar B, Sprang G, Kilian K, Gottfried R, Emery V, Bride B, Advancing science and practice for vicarious/secondary traumatic stress: A research agenda. *Traumatology*, 2017, Vol. 23, No. 2.
32. Newell J.M, Nelson-Gardell D, MacNeil G, Clinician responses to client traumas: A chronological review of constructs and terminology. *Trauma, Violence & Abuse*, 2016, Vol. 17.
33. Ogińska-Bulik N, Dwa oblicza traumy. Negatywne i pozytywne skutki zdarzeń traumatycznych u pracowników służb ratowniczych. Warsaw, Difin SA, 2015.
34. Ogińska-Bulik N, Personality and posttraumatic stress symptoms in oncological patients — the mediating role of ruminations. *Advances in Psychiatry and Neurology*, 2018, Vol. 27, No. 2.
35. Ogińska-Bulik N, Juczyński Z, Inwentarz Ruminaacji o Negatywnym Zdarzeniu — polska adaptacja: The Event Related Rumination Inventory. *Przegląd Psychologiczny*, Vol. 58, No. 3.
36. Ogińska-Bulik N, Juczyński Z, Kiedy trauma innych staje się własną. Negatywne i pozytywne konsekwencje pomagania osobom po doświadczeniach traumatycznych. Warsaw: PWN, 2020.
37. Ogińska-Bulik N, Michalska P, The relationship between emotional processing deficits and posttraumatic stress disorder symptoms among breast cancer patients: The mediating role of rumination. *Journal of Clinical Psychology in Medical Settings*, 2019, Vol. 27.
38. Ogińska-Bulik N, Juczyński Z, Lis-Turlejska M, Merecz-Kot, Polish adaptation of PTSD Checklist for DSM-5 – PCL-5. A preliminary communication. *Przegląd Psychologiczny*, 2018, Vol. 61, No. 2.
39. Ortlepp K, Friedman M, Prevalence and correlates of secondary traumatic stress in workplace lay trauma counselors. *Journal of Traumatic Stress*, 2002, Vol. 15.

40. Papazoglou K, Koskelainen M, Stuewe N, Examining the relationship between personality traits, compassion satisfaction, and compassion fatigue among police officers. *Sage Open*, 2019, Vol. 23.
41. Roelofs J, Huibers M, Peeters F, Arntz A, Effects of neuroticism on depression and anxiety: Rumination as possible mediator. *Personality and Individual Differences*, 2008, Vol. 44, No. 3.
42. Soravia L.M, Schwab S, Walther S, Müller T, Rescuers at Risk: Posttraumatic Stress Symptoms Among Police Officers, Fire Fighters, Ambulance Personnel, and Emergency and Psychiatric Nurses. *Psychiatry*, 2021.
43. Tehrani N, Compassion fatigue: Experiences in occupational health, human resources, counseling and police. *Occupational Medicine*, 2010, Vol. 60.
44. Tehrani N, Extraversion, neuroticism and secondary trauma in internet child abuse investigators. *Occupational Medicine*, 2016, Vol. 66, No. 5.
45. Turliuc M.N, Măirean C, Turliuc, M.D, Rumination and suppression as mediators of the relationship between dysfunctional beliefs and traumatic stress. *International Journal of Stress Management*, 2015, Vol. 22, No. 3.
46. Weathers F, Litz B, Keane T, Palmieri P, Marx B, Schnurr P, The PTSD Checklist for DSM-5 (PCL-5). The National Center for PTSD. *Electronic source: www.ptsd.va.gov*
47. Zawadzki B, Strelau J, Szczepaniak P, Śliwińska M, Inwentarz Osobowości NEO-FFI Costy i McCrae. Warsaw: Pracownia Testów Psychologicznych PTP, 1998.

#### About the Authors

---

**Nina Ogińska-Bulik**, Full Professor, Institute of Psychology, Head of Health Psychology Department, University of Łódź, Poland. Field of scientific interest: health psychology, psychology of stress. The author of 300 publications. E-mail: janina.oginska@uni.lodz.pl

**Grzegorz Bąk**, MA in Psychology and Political Science, Institute of Social Sciences, Police Academy in Szczytno, Poland. Field of scientific interest: health psychology, E-mail: g.bak@wspol.edu.pl

---

**Streszczenie.** Funkcjonariusze policji są szczególnie narażeni na stres związany z pracą, a jedną z trudnych sytuacji, w jakich się znajdują, jest kontakt z ofiarami traumy. Może on pociągać za sobą szereg negatywnych konsekwencji dla osób udzielających pomocy, takich jak objawy wtórnego stresu traumatycznego (WST) i ryzyko wystąpienia zespołu stresu pourazowego (ZSP). Celem tego badania jest ustalenie predyktorów wystąpienia objawów WST u funkcjonariuszy policji narażonych na wtórny stres traumatyczny w trakcie pełnienia służby. Jako potencjalne predyktory uznano następujące czynniki: cechy osobowości, ruminacje na temat swoich doświadczeń oraz poczucie własnej skuteczności w radzeniu sobie z traumą doświadczoną przez innych. Badania, o których mowa w artykule, zostały przeprowadzone w Wyższej Szkole Policji w Szczytnie w 2021 r. wśród uczestników szkoleń i kursów zawodowych dla policjantów. Zastosowano cztery standardowe narzędzia pomiarowe, tj. Inwentarz Stresu Wtórnego, Inwentarz Pięciu Czynników NEO, Inwentarz Ruminaacji Związanych z Wydarzeniem, Skalę Samoskuteczności w Sytuacji Traumatycznej oraz ankietę opracowaną na potrzeby badania. Uczestnicy wykazali stosunkowo niskie ryzyko doświadczania negatywnych konsekwencji narażenia na wtórną traumę. Objawy STS były dodatnio skorelowane z ruminacjami na temat traumatycznych wydarzeń, których doświadczyli klienci, zwłaszcza z ruminacjami intruzywnymi. Intruzywne ruminacje okazały się być głównym predyktorem WST. Mimo że badanie przeprowadzone wśród policjantów pracujących z ofiarami traumy wykazało raczej niskie nasilenie objawów WST, wskazane jest poszerzenie ich kompetencji w zakresie radzenia sobie z traumą, w tym zmniejszanie tendencji do ruminowania na temat traumatycznych wydarzeń doświadczonych przez klientów.

**Zusammenfassung.** Polizeivollzugsbeamte\*innen sind besonders anfällig für arbeitsbedingten Stress, und eine der schwierigen Situationen, mit denen sie auch konfrontiert sind, ist der Kontakt mit traumatisierten Menschen. Dies kann eine Reihe negativer Folgen für die Einsatzkräfte haben, wie z. B. Symptome von sekundärem traumatischem Stress (CTS) und das Risiko einer posttraumatischen Belastungsstörung (PTSD). Ziel dieser Studie ist es, Prädiktoren für CTS-Symptome bei Polizeivollzugsbeamte\*innen zu ermitteln, die während ihres Dienstes sekundärem traumatischem Stress ausgesetzt sind. Die folgenden Faktoren wurden als potenzielle Prädiktoren identifiziert: Persönlichkeitsmerkmale, Grübeln über die eigenen Erfahrungen und Selbstwirksamkeit bei der Bewältigung von Traumata, die von anderen erlebt wurden. Die Untersuchung, auf die sich der Artikel bezieht, wurde an der Polizeiakademie in Szczytno 2021 unter den Teilnehmern der Ausbildungs- und Fortbildungskurse für Polizeivollzugsbeamte\*innen durchgeführt. Es wurden vier Standardmessinstrumente verwendet, nämlich das Secondary Stress Inventory, das NEO Five Factor Inventory, das Event-Related Ruminations Inventory, die Secondary Trauma Self-efficacy Scale und ein für die Studie entwickelter Fragebogen. Die Teilnehmer\*innen wiesen ein relativ geringes Risiko auf, negative Folgen der Exposition gegenüber sekundären Traumata zu erfahren. STS-Symptome korrelierten positiv mit dem Grübeln über traumatische Ereignisse, die die Klienten erlebt hatten, insbesondere mit intrusivem Grübeln. Intrusives Grübeln scheint ein wichtiger Prädiktor für STS zu sein. Obwohl eine Umfrage unter Polizeivollzugsbeamte\*innen, die mit traumatisierten Menschen arbeiten, ein eher geringes Maß an CTS-Symptomen ergab, ist es ratsam, ihre Kompetenz im Umgang mit Traumata zu erhöhen, einschließlich der Verringerung der Tendenz, über die von den Klienten erlebten traumatischen Ereignisse zu grübeln.

**Резюме.** Сотрудники полиции особенно подвержены стрессу, связанному с работой, и одной из сложных ситуаций, с которыми они сталкиваются, является контакт с потерпевшими. Это может повлечь за собой ряд негативных последствий для сотрудников предоставляющих помощь, таких как симптомы вторичного травматического стресса (ВТС) и риск развития посттравматического стрессового расстройства (ПТСР). Целью проведенного исследования являлось выявление предикторов развития симптомов травматического стресса у сотрудников полиции, подвергшихся вторичному травматическому стрессу во время службы. В качестве потенциальных предикторов были определены следующие факторы: личностные особенности, руминации и убеждение о возможности самостоятельно преодолеть травму, пережитую другими. Исследование, о котором идет речь в статье, проводилось в Полицейской академии в г. Щитно в 2021 году среди участников учебных и профессиональных курсов для сотрудников полиции. Были использованы четыре стандартных измерительных инструмента, а именно: опросник вторичного стресса, пятифакторный опросник NEO, опросник событийных руминаций, шкала самооффективности вторичной травмы и анкета, разработанная для исследования. В результате, у участников исследования зафиксирован относительно низкий риск испытать негативные последствия воздействия вторичной травмы. Симптомы травматического стресса положительно коррелировали с размышлениями о травматических событиях, пережитых клиентами, особенно с навязчивыми размышлениями. Навязчивые размышления оказались основным предиктором ВТС. Хотя исследование полицейских, работающих с пострадавшими, показало довольно низкий уровень симптомов травматического стресса, целесообразно расширить их компетенцию в сфере преодоления травматического стресса, включая снижение склонности к размышлениям о травматических событиях, пережитых их клиентами.