



# The severity of post-traumatic stress disorder symptoms among prison officers.

Dr n. med. Aleksandra Radoń ("Varsovia" University of Business and Applied Sciences)

Lek. Grzegorz Hop

Lek. Hubert Gałaszkiwicz (Medical University of Lublin)

Jagoda Pękalska (Academy of Silesia)

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## Abstract

The study analyzes the relationships between resource distribution and the severity of post-traumatic stress disorder (PTSD) symptoms among prison officers. The research utilizes Stevan Hobfoll's Conservation of Resources theory, which indicates that stress arises in situations of resource loss or the threat of resource loss. The study involved 121 officers, and the Conservation of Resources Questionnaire (COR) as well as the PTSD Checklist for Military (PCL-M) were used to assess resources and PTSD symptoms, respectively. The results indicate a significant relationship between resource loss and the severity of PTSD symptoms, particularly in the male group. Furthermore, gains in psychosocial and personal resources negatively correlate with symptom severity in the female group. The study emphasizes the importance of social support and organizational stability as protective factors concerning the mental health of prison officers.

## I. Introduction

Post-traumatic stress disorder (PTSD) is a serious mental health condition that can occur in individuals who experience extreme stressful situations, such as violence or accidents. Prison officers are particularly vulnerable to its development, as their daily work is associated with numerous stress factors, including aggression and threats to life.

The research is based on Stevan Hobfoll's Conservation of Resources theory, which indicates that stress arises in situations where there is a threat of resource loss, actual loss of resources, or a lack of expected gain. In the context of prison officers, emotional, cognitive, and social resources are crucial, and their loss can lead to burnout, depression, and PTSD. Conversely, the availability of social support and organizational stability can act as protective factors. Despite the growing interest in mental health in high-risk professions, there is a lack of in-depth

analyses on this topic among Polish officers, which served as an impetus for conducting this research.

## II. Objective of the Study

The objective of this study is to examine the relationship between resource distribution and the severity of post-traumatic stress disorder (PTSD) symptoms among prison officers. The analysis considers both risk factors associated with resource loss and protective factors arising from resource acquisition. It is hypothesized that proper management of resource distribution can serve as a buffer, mitigating the negative effects of traumatic experiences, while a lack or loss of resources may contribute to an increase in PTSD symptoms.

## Conservation of Resources Theory (COR)

Stevan Hobfoll's Conservation of Resources (COR) theory is a key approach in analyzing the mechanisms of stress and coping strategies, especially in high-risk professions. According to the theory, stress arises in situations where there is a threat of resource loss, actual resource loss, or a lack of expected benefits from investments in those resources. Resources can be material, psychological, or social in nature, allowing for a multifaceted analysis of an individual's functioning under occupational stress (Chibowski, 2018).

In the context of prison officers, the COR theory explains how a demanding work environment impacts the processes of resource loss and protection. Working in high-stress conditions can lead to the depletion of resources such as a sense of security and social support, thereby increasing the risk of developing PTSD (Van Bortel et al., 2016). Research indicates that the consequences of resource loss are more significant than the gains, which may exacerbate symptoms of post-traumatic stress, particularly in the absence of adequate institutional support (Piasecka et al., 2023). Psychological and social resources are crucial, as they can serve a



protective role and aid in the rebuilding of emotional resources. Understanding the dynamics of resource gains and losses becomes an essential element in analyzing occupational stress and in designing preventive and intervention measures aimed at reducing the risk of PTSD among prison officers.

Material, psychological, social, and cognitive resources play a crucial role in coping with occupational stress among prison officers. Financial stability and appropriate equipment enhance the sense of security and can reduce stress levels (Harasim, 2018). Psychological resources, such as resilience and tolerance for failure, are also significant as they promote better adaptation to difficult situations and decrease the risk of developing PTSD (Olszewska-Turek et al., 2024).

Social support from family, colleagues, and institutions serves an important protective function, helping to mitigate the effects of occupational stress (Ogińska-Bulik, 2018). Additionally, cognitive resources, including knowledge and skills for managing crises, support effective emotion regulation and adaptation to job demands. At the same time, the loss of resources, particularly psychological and social ones, can contribute to an increase in PTSD symptoms (Holiczer et al., 2007).

### **Materials and Methods**

The study group comprised 121 individuals ( $n=121$ ), including 71 men ( $n_1=71$ ) and 50 women ( $n_2=50$ ). The average age of participants was 34 years ( $M=34$ ,  $SD=9$ ), with the youngest participant being 21 years old and the oldest 45. All respondents were active-duty officers of the Prison Service who had direct contact with inmates and were not engaged solely in administrative roles.

### **III. Description of Psychological Measurement Methods**

#### **COR Questionnaire**

To evaluate resource distribution, the Conservation of Resources (COR) Questionnaire developed by Stevan Hobfoll was utilized. This tool enables the analysis of the significance, gains, and losses of resources in the context of the Conservation of Resources theory. It allows for the identification of adaptive mechanisms related to coping with stress and traumatic experiences. The questionnaire consists of 74 resources divided into four categories: material, personal, state, and energy. Participants rate the significance of each resource, as well as their levels of gains and losses, on a five-point scale.

The tool demonstrates very good psychometric properties, with a Cronbach's alpha reliability

coefficient of 0.97 for resource significance and 0.98 for gains and losses (Kalinowski et al., 2010). The questionnaire is a pencil-and-paper method and is widely used in research related to stress and coping mechanisms in crisis situations.

#### **PCL-M Scale**

To evaluate the severity of post-traumatic stress disorder (PTSD) symptoms, the PCL-M (PTSD Checklist – Military) scale was utilized, developed according to the diagnostic criteria of DSM-5. This tool allows for the measurement of key PTSD symptoms, such as intrusion, avoidance, hyperarousal, and mood changes, and facilitates the analysis of individual differences in their severity. The questionnaire includes questions regarding the frequency of symptoms experienced over the past month, which are rated on a five-point scale.

The total score ranges from 17 to 85 points, with a score of 50 or higher indicating a high probability of PTSD. The scale demonstrates solid psychometric properties, with a Cronbach's alpha reliability coefficient ranging from 0.88 to 0.90, and its validity has been confirmed through positive correlation with clinical PTSD diagnoses based on the SCID interview (Carvalho et al., 2014, 2015). This tool also belongs to the "pencil-and-paper" method category and is widely used in research related to post-traumatic stress.

#### **Demographic Data**

The demographic section, which is a non-psychological component of the research tools, included questions about age, gender, education, and place of residence. It also contained consent for participation in the study.

#### **Method of Conducting the Study**

The study was conducted as part of a seminar during the Psychology program at the Varsovia University of Business and Applied Sciences. The participants included active-duty officers of the Prison Service employed in various units, who have direct contact with inmates and whose responsibilities do not involve administrative positions.

#### **Characteristics of Statistical Data Analysis**

Statistical analysis of the data was conducted using Spearman's rank correlation coefficient, a non-parametric counterpart to Pearson's  $r$  (Krysicki et al., 2006). The choice of this method was justified by the small sample size, which precluded the use of Pearson's  $r$ . Spearman's  $\rho$  assesses the strength of the relationship between variables, and its calculation does not require normal distribution, which further contributed to its selection. As a rank-based method,



Spearman's rho is less sensitive to outliers (Lehmann, 1975). The collected data were numerically coded, which is a standard procedure necessary for proper data processing (Bedyńska, Cypriańska, 2013).

The following summary presents a description of the variables based on the statistical data. In the initial phase of the study, basic descriptive statistics were calculated, including the mean (M), standard deviation (SD), as well as the minimum and maximum values for each variable.

**IV. Results**

Table 1 - Descriptive Statistics for Resource Significance

Statistics	Resource Significance	Resource Significance of Resilience	Resource Loss	Resource Loss in Material	Resource Loss of Personal Resources	Resource Loss of Energy	Resource Loss of State
M	3,96	4,10	2,37	2,54	2,37	2,38	2,29
SD	0,60	0,57	0,77	1,03	0,90	0,79	0,81
Minimum	2,3	2,3	1,0	1,0	1,0	1,0	1,2
Maximum	5,0	5,0	3,9	4,7	4,1	4,0	3,7

M - mean  
 SD - standard deviation

Table 2 - Descriptive Statistics for Resource Significance (continued)

Statistics	Gain Psychological Resources	Gain in Personal Resources	Gain in State Resources	Severity of PTSD Symptoms
M	3,39	3,49	3,28	41,11
SD	0,45	0,47	0,5	8,92
Minimum	2,34	2,4	2,3	18
Maximum	4,05	4,4	4,1	58

M - mean  
 SD - standard deviation

To verify the hypotheses regarding the relationship between resource distribution and the severity of PTSD symptoms, Spearman's rho statistic was used. The results are presented in Table 3, Table 4, and Table 5.

Table 3 - Spearman's Rho Correlation between Overall PTSD Score and Selected Categories of Resource Distribution in the Entire Study Group (n=121)

Category	r	p
Resource Significance	-0,02	n.s.
Resource Significance of Resilience	-0,09	n.s.
Resource Loss	0,45	0,011
Resource Loss in Material	0,41	0,017



Resource Loss of Personal Resources	0,41	0,016
Resource Loss of State	0,45	0,010
Resource Loss of Energy	0,234	n.s.
Gains in Socioeconomic Resources	-0,04	n.s.
Gains in Personal Resources	-0,09	n.s.
Gains in State Resources	0,01	n.s.

r - Spearman's rho correlation value

p - significance level

n.s. = not significant

Table 4 - Spearman's Rho Correlation between Overall PTSD Score and Selected Categories of Resource Distribution in the Male Group (n=71)

Category	r	p
Resource Significance	0,09	n.s.
Resource Significance of Resilience	-0,05	n.s.
Resource Loss	0,69	0,000
Resource Loss in Material	0,50	0,015
Resource Loss of Personal Resources	0,71	0,000
Resource Loss of State	0,70	0,000
Resource Loss of Energy	0,50	0,015
Gains in Socioeconomic Resources	0,23	n.s.
Gains in Personal Resources	0,23	n.s.
Gains in State Resources	0,25	n.s.

r - Spearman's rho correlation value

p - significance level

n.s. = not significant

Table 5 - Spearman's Rho Correlation between Overall PTSD Score and Selected Categories of Resource Distribution in the Female Group (n=50)

Category	r	p
Resource Significance	0,28	n.s.
Resource Significance of Resilience	-0,27	n.s.
Resource Loss	-0,02	n.s.



Category	r	p
Resource Significance	0,28	n.s.
Resource Loss in Material	0,21	n.s.
Resource Loss of Personal Resources	-0,21	n.s.
Resource Loss of State	-0,24	n.s.
Resource Loss of Energy	-0,01	n.s.
Gains in Socioeconomic Resources	-0,71	0,032
Gains in Personal Resources	-0,84	0,005
Gains in State Resources	-0,55	n.s.

r - Spearman's rho correlation value  
p - significance level  
n.s. = not significant

The results obtained indicate no relationship between the significance of resources and the severity of PTSD symptoms. The analysis did not confirm this relationship in any of the identified study groups, as the significance level for all correlations of these variables in the overall group and in the groups of women and men showed no statistical significance ( $p > 0.05$ ). Consequently, the correlation values obtained among the studied Prison Service Officers cannot be interpreted.

The analysis revealed positive correlations between resource loss and the severity of post-traumatic stress disorder (PTSD) symptoms. A moderate, statistically significant correlation was found between overall resource loss and PTSD symptoms in the entire study group ( $r = 0.45$ ;  $p < 0.05$ ). Similar relationships were observed concerning individual resource categories. Loss of material resources showed a moderate positive correlation with the severity of PTSD symptoms ( $r = 0.50$ ;  $p < 0.05$ ), suggesting that greater loss of material resources is associated with stronger symptom severity. A similar relationship was noted for the loss of personal resources ( $r = 0.42$ ;  $p < 0.05$ ) and state resources ( $r = 0.45$ ;  $p < 0.01$ ), indicating moderate, statistically significant associations as well. Additionally, in the group of male Prison Service Officers, a significant positive correlation was observed between energy resource loss and the severity of PTSD symptoms ( $r = 0.50$ ;  $p < 0.05$ ). The findings suggest that an increase in the level of loss across various resource categories is associated with an increase in the severity of post-traumatic stress

symptoms. These results are consistent with previous studies and the assumptions of Stevan Hobfoll's Conservation of Resources theory, which emphasizes the significance of resource loss as a critical factor in increasing stress levels and the risk of developing PTSD.

Gains in psychosocial and personal resources are negatively correlated with the severity of post-traumatic stress disorder (PTSD) symptoms. In the group of women employed in the Prison Service, a significant, strong negative correlation was found between gains in psychosocial resources and PTSD symptoms ( $r = -0.71$ ;  $p < 0.05$ ) and a very strong negative correlation between gains in personal resources and the severity of PTSD symptoms ( $r = -0.84$ ;  $p < 0.01$ ). These results indicate that greater gains in these resource categories are associated with lower levels of post-traumatic stress symptoms. For gains in state resources, a negative trend with the severity of PTSD symptoms was also observed; however, the obtained results did not reach statistical significance in either the overall study group or in analyses for female and male Prison Service Officers ( $p > 0.05$ ), which prevents interpretation of these associations.

## V. Discussion

The results obtained in the entire study group indicate a relationship between resource loss, including material, personal, state, and energy resources, and the severity of post-traumatic stress disorder (PTSD) symptoms. The analysis conducted in the group of male Prison Service Officers revealed



statistically significant relationships between resource loss, both overall and in specific categories (material, personal, state, and energy), and the level of PTSD symptom severity. In contrast, the group of women working in the Prison Service observed a relationship between gains in psychosocial and personal resources and the severity of PTSD symptoms.

Compared to other high-risk occupational groups, such as paramedics and soldiers, prison officers report a higher incidence of PTSD symptoms. This may result from both the nature of their work and limited access to support resources. Research on paramedics shows that the loss of personal and psychosocial resources is a key predictive factor for the severity of PTSD symptoms (Ogińska-Bulik, 2016). The results of this study suggest that similar mechanisms may occur among Prison Service Officers, despite the different types of stressors involved. Paramedics often experience acute and sudden stress, while officers are exposed to chronic and repetitive stress related to aggression and threats in the correctional environment.

Comparisons with international studies confirm the universality of Hobfoll's Conservation of Resources theory, while also emphasizing the need to adapt intervention strategies to the specific requirements of the prison environment. Polish correctional institutions may have various cultural, social, and economic conditions that affect the experiences of officers. Additionally, differences in legal regulations compared to other countries can significantly shape working conditions and available support for staff, which also has a substantial impact on their daily experiences.

## VI. Conclusions

The conducted analysis highlights the significance of the discussed issue for the mental health of Prison Service Officers and their ability to effectively fulfill their professional duties. Understanding the dynamics of resources and their role in protecting against PTSD symptoms is crucial for developing effective support strategies at both the individual and institutional levels. It is also worthwhile to expand the scope of research to include other occupational groups in Poland to compare the specifics of high-risk environments and identify universal resource protection mechanisms. Such comparisons may aid in creating more comprehensive support programs that take into account differences in legal regulations as well as cultural and social conditions.

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