

## Original Article

# Burnout syndrome comparative study in doctors, psychologists, and law enforcement officers during the full-scale invasion in Ukraine

Vasyl Lefterov<sup>1</sup>, Volodymyr Artyomenko<sup>2,3\*</sup>, Lev Lefterov<sup>4</sup>, Serhii Harkavets<sup>5</sup>,  
Larysa Volchenko<sup>5</sup>, Natalia Melenchuk<sup>1</sup>, Vasylyna Gutsol<sup>6</sup>

<sup>1</sup> Department of Psychology, National University Odesa Law Academy, Odesa, Ukraine

<sup>2</sup> Department of Obstetrics and Gynecology, Odesa National Medical University, Odesa, Ukraine

<sup>3</sup> Odesa City Maternity Hospital No. 5, Odesa, Ukraine

<sup>4</sup> Department of Information Technology and Programming, Cyber Police Department, National Police of Ukraine, Kyiv, Ukraine

<sup>5</sup> Department of Psychology and Sociology, Volodymyr Dahl East Ukrainian National University, Severodonetsk, Ukraine

<sup>6</sup> Communal non-profit enterprise Center of Primary Health Care No. 18, Odesa, Ukraine

\* Correspondence to: Volodymyr Artyomenko, Odesa City Maternity Hospital No. 5, Beregova Str., 65037, Odesa, Ukraine. Phone: +38050316448715; E-mail: vartyomenko2017@gmail.com

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## Abstract

The article deals with theoretical and practical aspects of burnout syndrome manifestation peculiarities in doctors, psychologists, and law enforcement officers during the full-scale invasion of Ukraine and aims to provide its analysis and prevention. The empirical study, conducted in 2023–2024, involved 568 people, including 264 psychologists, 148 general practitioners-family physicians, and 156 law enforcement unit officers from the Odesa region. The study used the author's questionnaire for the burnout syndrome characteristics, as well as standardized psychodiagnostic techniques. More than a third of the surveyed showed various signs of emotional, physical, and mental burnout. Decreased physical vitality was more typical for doctors, loss of meaning in life and professional activity, regular physical ailments, frequent illnesses, and chronic disease exacerbation were more common for law enforcement officers. A third of psychologists have a partial or complete loss of professional motivation, a decreased sense of competence and work value, dissatisfaction with themselves, and negative self-perception in the professional sphere. The obtained data were taken as a basis for the development of the training program to prevent and correct the burnout syndrome manifestations and develop and improve their stress resistance and tolerance skills, especially during today's war conditions.

**Keywords:** burnout, psychology, doctors, prevention, armed conflict, education.

## Introduction

In today's socio-political and economic conditions of society, under the increasing pressure of the 3<sup>rd</sup> year of the full-scale invasion and more than 10 years of war, the issues of the individual psychological state of specialists in medical and security professions, including doctors, psychologists, social workers, law enforce-

ment officers, military personnel, rescuers etc. are becoming increasingly important. The activities of specialists in these professions take place under conditions of significant psycho-emotional and/or physical and mental stress and are characterized by a high level of responsibility and, in some cases, are extreme and risky. The large-scale war in Ukraine has led to a several-fold increase in the workload of defense and security



sector professionals, as well as healthcare specialists, whose effective work today requires real dedication and even self-sacrifice, which in turn can affect their behavior and personality, lead to their own psycho-emotional difficulties and cause burnout syndrome.

Today, the burnout syndrome (BS) problem study of people during professional activities has become widespread and continues to attract scientists' attention in various fields of activity to analyze the features and patterns of relations and interactions between the individual and his or her professional activities. At the same time, the manifestation peculiarities of burnout syndrome in healthcare and security professions under martial law remain insufficiently studied. Modern, effective technologies for BS prevention, including special psychological training for BS prevention and correction, need to be further developed, improved, and implemented in training and psychological support systems for doctors, psychologists, and law enforcement officers.

### Recent research and publication analysis

The research and publications analysis showed that a systematic scientific study of the emotional burnout syndrome phenomenon began in the XX century, 70s, and 80s in the United States. The most famous scientist in the study of emotional burnout was traditionally considered to be the American psychologist and psychiatrist G. J. Freudenberger, who proposed the term "burnout syndrome" to describe the demoralization, frustration, and extreme fatigue he observed in healthcare workers [1]. J. Edelwich and A. Brodsky, in their work "Burnout: Stages of Disillusionment in the Helping Professions", characterized burnout as an increasing loss of idealism, energy and purpose, mainly in specialists whose professional activities are aimed at helping other people [2]. According to K. Cherniss, the burnout process begins with an intense and prolonged level of work stress and ends with psychological detachment, apathy, cynicism, and rigidity toward work [3]. K. Maslach defined emotional burnout syndrome as a state of physical, emotional and mental exhaustion, a feeling of inner emotional emptiness directly caused by work and usually manifested in social professions. Based on factor analysis, K. Maslach identified the main components of BS, including depersonalization, emotional exhaustion, and reduction of professional achievements [4].

According to K. Kondo and our previous studies, those who work with a special interest and high motiva-

tion are more prone to burnout [5, 6]. People who have been helping others for a long time begin to feel disappointed if they fail to achieve the effect they expected. An excessive loss of mental energy accompanies such work, leads to psychosomatic fatigue and emotional exhaustion, and as a result - anxiety, irritation, anger, and low self-esteem against the background of cardiovascular disorders, respiratory dysfunction, headaches and sleep disturbances, which can affect family and work relationships [5, 7].

P.S. Biletskyi defines the components of medical specialists' professional health, including cognitive and evaluative (parameters of life values and meanings of the specialist's personality, time perspective, cyclicality, and semantic time differential), emotional and volitional (indicators of emotional burnout, stress resistance, anxiety levels, self-assessment of mental states, stress resistance, anxiety levels), competence-behavioral (indicators of professionally important norms of social regulation of behavior, prognostic competence, proactive coping strategies etc [8]. Unfortunately, all those BS consequences ultimately threaten the patient's safety [9].

A group of European scientists, the EGPRN (European Group for the Study of Emotional Burnout in General Practitioners), studied the level of burnout among family doctors in the European Union. Questionnaires were sent to doctors from 12 European countries, and only a third of the specialists showed no signs of emotional burnout [10]. During various specialties of Finnish doctors (2671 people) study, it was found that psychiatrists belong to the group with a "high level of burnout", as well as people whose work is related to chronically seriously ill patients [11]. This data highly correlates with our findings obtained during the emergency specialists training [12].

Today, there are numerous studies of emotional burnout in the field of law enforcement and extreme and crisis psychology, connecting the mental health state, organs' and systems' condition, and their environment [13]. In particular, T. Kodlubovska found that most law enforcement officers have a high level of stress intensity and the likelihood of stress-related diseases [14]. L. Lezhenina studied the psychological factors of security service of Ukraine investigators' emotional burnout and found that their BS development was caused by external factors, which include increased responsibility for the functions performed, a large number of cases under investigation, shortcomings or inaccuracy of information in cases, and a psychologically difficult contingent with whom the investigator

deals in the field of communication; directive style of management in the service, which causes chronic psycho-emotional tension, excessive workload etc [15].

The problem of studying and overcoming various psychological difficulties and disorders among both civilians and employees of the security and defense sector of Ukraine has become especially relevant in the context of the war in Ukraine and the extremely exhausting stresses and trials associated with it [16].

The analysis of the nature, factors, and features of the emotional burnout syndrome manifestation in specialists of medical and security professions became the theoretical basis for the emotional burnout peculiarities in doctors, psychologists, and law enforcement officers empirical study to develop the training program “Burnout Prevention in Specialists of Healthcare and Law Enforcement Professions” in the context of the war in Ukraine.

## Material and methods

### Study design and patients

Our study was performed in 2023–2024 with a total of 568 people, including 264 psychologists from educational and medical institutions, 148 family physicians-general practitioners, and 156 representatives of various law enforcement units in the Odesa region, including police officers, judges, and prosecutors. The sample was formed randomly and consisted of people aged 22–55, including 295 women and 273 men. Written informed consent was obtained from the participants in the study.

In conducting the empirical study, we used a methodological algorithm that included the following methods: 1) theoretical analysis of literature and documents; 2) observation; 3) interview; 4) questionnaire; 5) psychodiagnostic tests; 6) methods of mathematical statistics.

### Laboratory, anthropometric and clinical data collection

The literature analysis made it possible to determine the scientific significance and relevance of modern specialists BS in various fields of activity, including doctors, psychologists, and law enforcement officers. Observation and interview methods were used to collect psychological information about the subjects, register dynamic changes in their psyche and behavior, and elucidate necessary data.

A special questionnaire was developed to study the BS peculiarities, which included many questions grouped into 10 groups (scales) that may signal certain defects in human behavior and personality and are the main areas of BS. In particular, these were the following groups of questions: 1) feeling of vivacity/fatigue; 2) level of performance; 3) physical condition; 4) level of enthusiasm at work; 5) presence of mistakes and shortcomings in work; 6) attitude to changes and innovations; 7) balance/irritability; 8) level of social contact; 9) mood and well-being; 10) goals and meaning of life.

The following psychodiagnostic techniques were used in the study:

“The MBI Burnout Questionnaire”, developed by American psychologists H. Maslach and S. Jackson, was designed to measure the degree of burnout in person-to-person professions [17]. N.E. Vodopianova adapted the used version and includes an analysis of the manifestation of burnout syndrome by the following scales: 1) emotional exhaustion; 2) depersonalization (personal detachment); 3) reduction of personal achievements (professional motivation).

The methodology “The level of emotional burnout diagnostics by V. Boyko” allowed us to analyze the severity of twelve symptoms of burnout syndrome, which are grouped into three components: 1) “Tension”, 2) “Resistance”, and 3) “Exhaustion” [18].

### Statistical analysis

The materials obtained during the study were statistically processed using SPSS Statistics 23.0 for Windows, a specialized package of application programs for psychological research. This ensured the calculation of variation statistical indicators of Student’s t-test, Spearman’s correlation coefficient and Pearson’s correlation coefficient [19].

## Results

The survey results revealed that, regarding determining their own workload, only 8% of all respondents said they were not feeling their workload. Another 19% of the respondents said their workload was generally within the normal range. The rest of the respondents stated that their workload was either high (46%) or they experienced significant overload and the need to sometimes work to the limit of their psychophysical strength (27%). So, more than 2/3 of the respondents defined their workload as high and excessive. At

the same time, such indicators were generally found in all the professional groups studied – doctors, psychologists, and law enforcement officers.

Among the significant results of the study, it was found that 42% of the respondents often feel tired and unable to fully recover. 23% of them experienced chronic fatigue, which they attribute to their professional activities; they note that they have an urgent need for rest, but even when they have time for it, they cannot fully recover. It should be noted that the data on fatigue correlates with their answers to the previous question about the workload level. Frequent and chronic fatigue with the impossibility of full recovery, found in more than half of the respondents, is due to high and excessive workload levels during their professional activities. Despite this fatigue and workload, most subjects (65%) managed to maintain a high and average level of performance.

The largest number of respondents (41%) who reported decreased physical vitality and sleep disturbances belong to the professional group of doctors. And 18% of law enforcement officers reported regular physical ailments in recent times, frequent illnesses, or chronic disease exacerbations. At the same time, this indicator was also found to be interrelated in law enforcement officers with the above indicators of chronic fatigue, overwork, and the need to sometimes work to the limit of psychophysical strength.

23% of the respondents had poor moods and health, and 12% reported having pessimistic moods and indifference to many areas of their professional and personal lives. 15% of the surveyed declared a lack of understanding of the meaning of everything that happens and their goals in life. A particularly alarming signal is that among the law enforcement officers, 8% openly reported disappointment and loss of meaning in their lives, and an unwillingness to make plans for the future.

The psychodiagnostic study revealed increased average scores on all the main scales of the MBI Burnout Questionnaire by H. Maslach and S. Jackson (Table 1).

At the same time, the average integral index of BS was also found to be within the high level—0.52. And almost a third of the respondents from all professional groups had a high level of the integral index of emotional burnout.

The psychological characteristics of professional burnout in law enforcement officers and doctors were characterized by the fact that a significant number of them (35%) have a high level on the Emotional Exhaustion scale (Figure 1).

Table 1: Number of subjects by levels of the MBI Burnout Questionnaire scales.

Name of the scale	Low level (percentage)			Intermediate level (percentage)			High level (percentage)		
	Psychologists	Doctors	Law enforcement officers	Psychologists	Doctors	Law enforcement officers	Psychologists	Doctors	Law enforcement officers
Emotional exhaustion	28%	26%	27%	42%	41%	38%	30%	33%	35%
Depersonalization	21%	23%	19%	51%	54%	50%	28%	23%	31%
Personal achievements reduction	21%	23%	24%	45%	48%	47%	34%	29%	29%
Burnout syndrome integral index	25%	24%	23%	51%	51%	50%	24%	25%	27%

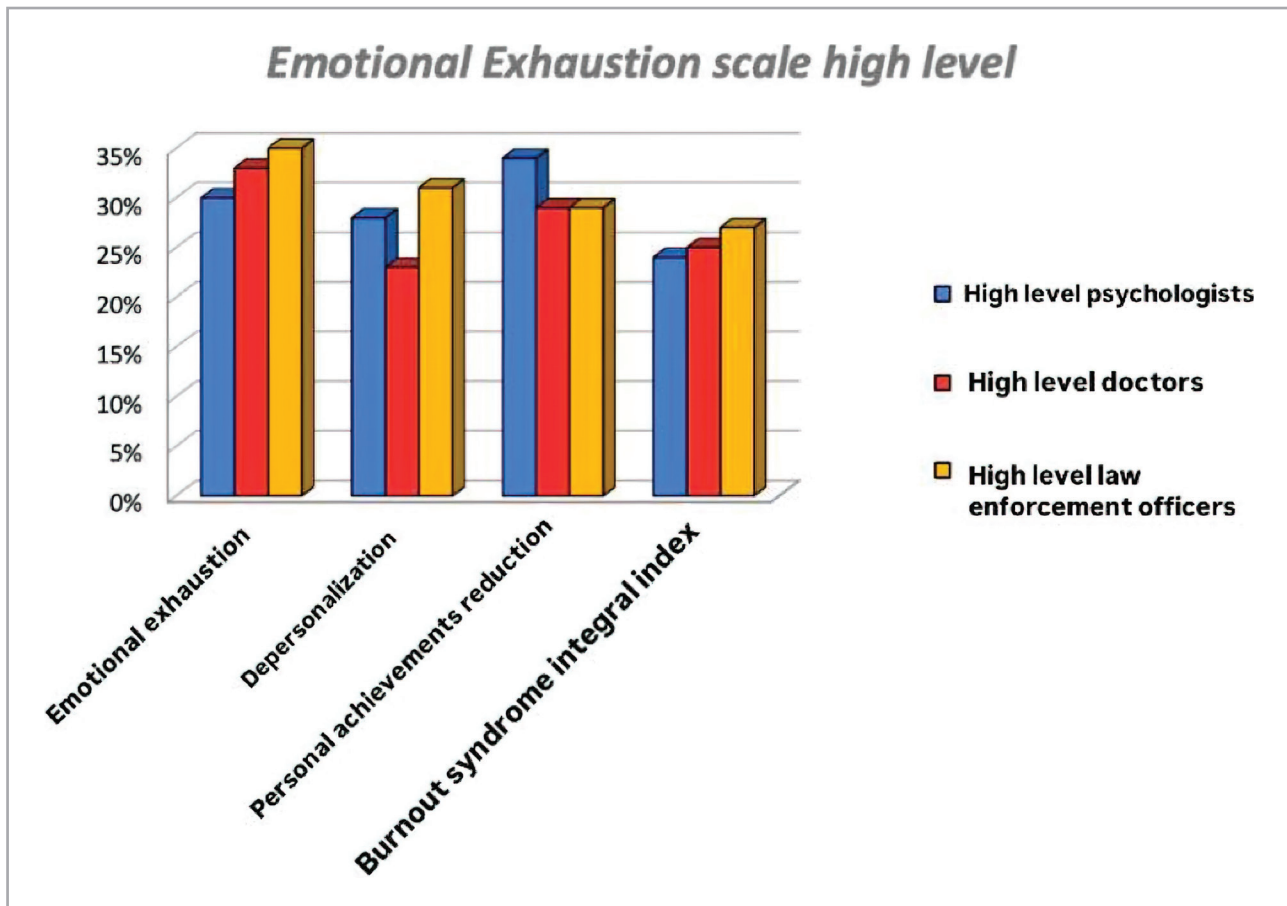


Figure 1: Respondents' group comparison with high levels on the Emotional Exhaustion scale.

This indicates the presence of a negative emotional background, signs of chronic emotional and physical exhaustion and devastation, and manifestations of coldness and indifference toward others. These people also showed depression and irritability signs. At the same time, doctors have a professional tendency to maintain communicative competence, empathy and assertiveness despite the high emotional exhaustion in many of them. A third of psychologists have a partial or complete loss of professional motivation, a decreased sense of competence in their work and their work value, dissatisfaction with themselves, and negative self-perception in the professional sphere.

Comparing the professional groups studied according to the high level of the MBI Burnout Questionnaire scales showed that law enforcement officers have the highest parameter of the emotional burnout syndrome integral index (Figure 1).

To confirm the relationship between the emotional BS integral index and the examined socio-demographic, professional and psychological characteristics, the Pearson correlation coefficient was used, which made it possible to assess the strength and direction of the

relationship between the two quantitative variables. In our study, the correlation coefficients for age, work experience, workload level during professional activities, feeling of vitality/fatigue, and physical condition showed positive values, indicating a direct relationship between these characteristics and the emotional burnout index. In particular, it was found that the emotional BS integral index correlations were most significant (at the  $p \leq 0.01$  level) with the respondents' age and work experience.

This confirms numerous studies that the greater a person's age, service length, and work duration, the higher emotional burnout level is possible in the presence of other unfavorable and professionally deforming factors in the workplace. Also, at a high level of significance ( $p \leq 0.01$ ), the correlation between all professional groups' BS level and the level of workload during professional activity was established, but primarily in the law enforcement officers' group.

The significance test ( $p$ -value) was used to assess the statistical significance of the correlation coefficients. A value of  $p \leq 0.05$  or  $p \leq 0.01$  indicates that the obtained correlations are statistically significant. Thus,

significant correlations were obtained for all variables in Table 2, which confirms the presence of statistically confirmed relationships between them and the level of BS. In addition, the determination coefficient was calculated to estimate the BS integral index variation share to be explained by the studied socio-demographic, professional and psychological factors. High correlation coefficient values (for example, for work experience and workload level) indicate that these variables significantly affect the BS level changes.

The statistical analysis results showed that:

1. There is a statistically significant positive correlation between the age of respondents and the BS integral index with age;
2. Work experience also has a significant positive relationship with the BS integral index ( $r=0.417, p\leq 0.01$ ), which indicates the accumulation of professional stress as work experience increases;
3. The workload level during professional activity showed one of the highest correlations ( $r=0.402, p\leq 0.01$ ), confirming that high workload is one of the main factors in BS development;
4. Feeling of vigor/fatigue and physical condition were also found to be statistically significant factors influencing the burnout level ( $r=0.245, p\leq 0.05; r=0.247, p\leq 0.05$ , respectively).

Thus, the obtained results confirm the presence of significant relationships between the BS integral index and a number of socio-demographic, professional and psychological characteristics, which indicates the mul-

tifactorial nature of emotional burnout and the need for a comprehensive approach to its prevention.

Testing according to the methodology “Diagnostics of the emotional burnout level by V. Boyko” revealed that the examined had increased indicators in all three phases of emotional burnout. In particular, the formed phase of “Tension” was noted, which indicates a feeling of emotional exhaustion and fatigue as a result of their own professional activity. In this phase, the highest rates were diagnosed for the symptoms of “Self-dissatisfaction” and “Anxiety and depression”, which indicates the development of anxiety in the professional activities of the surveyed, increased nervousness, and depressive moods.

In the resilience phase, the interview showed increased rates of “Expanding the sphere of the emotional economy” and “Reducing professional responsibilities» symptoms. This indicated their emotional withdrawal, alienation, desire to stop any communication, and the desire to spend as little time as possible on professional duties.

In the third phase of “Exhaustion,” the symptoms of “Emotional deficit” and “Emotional alienation” were formed, which indicates the development of respondents’ emotional insensitivity against the background of exhaustion, minimization of emotional contribution to work, automation, the devastation of a person in the performance of professional duties, and the creation of a protective barrier in professional communications.

In general, the analysis of the results obtained by the methodology “Diagnostics of the emotional burnout

Table 2: BS integral index correlations significance with socio-demographic, professional and psychological characteristics.

Socio-demographic, professional and psychological characteristics	Statistical indicators	Correlation with the BS integral index
Age	Correlation coefficient	0.339
	Significance (p)	$\leq 0.01$
Length of service	Correlation coefficient	0.427
	Significance (p)	$\leq 0.01$
Level of workload during professional activity	Correlation coefficient	0.422
	Significance (p)	$\leq 0.01$
Feeling refreshed/tired	Correlation coefficient	0.265
	Significance (p)	$\leq 0.05$
Physical condition	Correlation coefficient	0.257
	Significance (p)	$\leq 0.05$

level by V. Boyko” showed that BS was formed in 27% of the respondents, in 51% of the examined it was at the stage of formation, and only in 22% – absent.

## Discussion

The empirical study found that almost two-thirds of the doctors, psychologists, and law enforcement officers in Ukraine currently define their workload as high and excessive, often making them feel tired and unable to fully recover. This leads to psychosomatic disorders in all studied professional groups, such as a decrease in physical vitality, regular physical ailments, frequent illnesses etc. In addition, a significant number of respondents reported increased or excessive irritability and anxiety, a decrease or significant reduction in social and communication contacts, solitude and social isolation, poor mood and well-being, pessimism and indifference to many areas of professional and personal life, and a lack of understanding of the life meaning and purpose.

The psychodiagnostic testing revealed that psychologists, doctors, and law enforcement officers had elevated average scores on most burnout scales. Almost a third of the subjects had a high level of the BS integral index.

Our obtained data correspond to K. Kondo and our previous studies, which state that those who work with a special interest and high motivation are more prone to burnout, especially if they have been helping others for a long time and fail to achieve the effect they expected [5–7]. In comparison with our European colleagues and our own results obtained before the full-scale invasion in our study, we revealed more severe expressions of cognitive and evaluative, emotional and volitional, and competence-behavioral medical specialists’ professional health components [10–12].

The single studies of emotional burnout in the fields of law enforcement and extreme and crisis psychology, connecting the mental health state, organs’ and systems’ condition, and their environment, stated only the high level of stress intensity causing chronic psycho-emotional tension and the likelihood of stress-related diseases, concentrating mostly on external factors. All of them were performed before the full-scale invasion in 2022 [13–15].

In our recent publication, just after the full-scale invasion, we already raised the problem of studying and overcoming various psychological difficulties and disorders among both civilians and employees of the security and defense sector of Ukraine [16].

This necessitates the implementation of targeted psychoprophylactic work among psychologists, doctors and law enforcement officers to prevent the development of BS.

Psychological training is considered to be one of the most effective psychological methods of preventing and eliminating emotional burnout in modern conditions, which, given its methodological versatility, practical orientation and accessibility, is now being used for the development, psychocorrection, and psychotherapy of individuals and groups.

Taking into account the results of the empirical study, we developed and proposed the methodological basis of the training program “Prevention of Burnout Syndrome in Healthcare and Law Enforcement Professions”. The purpose of the training was to develop professional psychological skills and abilities of specialists to prevent and correct the manifestations of BS in their professional activities, to develop stress resistance and tolerance to the deforming effects of work and modern life in the conditions of the full-scale invasion.

The strength of our study is deep comparative analysis using different assessment and evaluation tools, different social groups involved, full-scale invasion war conditions situation, training program development. The weakness of the study is small quantity of each group, training program assessment effectiveness absence, difficulty to make any groups of comparison.

Though our study contains some unsolved questions and issues mentioned above we consider that our findings will support and challenge us personally as well as other investigators for the future research in essence, factors, signs and symptoms of specialists BS in healthcare and law enforcement professions as well as training programs development, assessment and validation.

## Conclusions

The majority of surveyed working in the current wartime conditions in Ukraine usually have overtime work and complex professional tasks and feel great responsibility for the final result of their activities. All of this forces them to work, often neglecting time for rest to restore the physical and emotional balance of the body, which leads to overstrain of all organs and systems, the chronic stress state condition development, and the BS manifestation.

More than a third of the examined showed various signs of BS, which was expressed in chronic fatigue,

frequent physical ailments due to significant overload at work, reduced social and communication contacts, pessimism, and indifference. Decreased physical vitality was more typical for doctors, while loss of meaning in life and professional activity, regular physical ailments, frequent illnesses, or chronic disease exacerbation were more common for law enforcement officers. A third of psychologists have a partial or complete loss of professional motivation, a decreased sense of competence in their work and their work value, dissatisfaction with themselves, and negative self-perception in the professional sphere.

The correlations of the BS integral index with the workload level, age and length of service were confirmed. The relationship between emotional burnout and the respondents' physical condition, the presence of psychophysical and psychosomatic disorders, fatigue, irritability, and anxiety, which can be both determinants of emotional burnout and its consequences, was determined.

The training program "Prevention of Burnout Syndrome in Healthcare and Law Enforcement Professions" was developed to prevent and correct their BS manifestations, develop and improve their skills of stress resistance and tolerance to the deforming effects of work and modern life especially during today's war conditions.

More wide cohort studies need to be conducted in that field as well as training programs development, assessment and validation.

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## Conflict of interest

The authors declare no conflict of interest.

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