

## FORMULATING ALTERNATIVE APPROACHES TO STRESS MANAGEMENT BY UNDERSTANDING ITS EFFECTS ON PSYCHOLOGICAL AND PHYSIOLOGICAL WELL-BEING

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**Abstract:** The article highlights the importance of overcoming the effects of stress on the mental and physical health of individuals. It also emphasises the inadequacy and lack of research into the outlined issues in the scientific explorations of foreign and Ukrainian scholars. The study aims to identify the characteristics of stress impact on mental and physical health for further consideration in developing effective stress management strategies. The object of the study is stress as a type of destructive reaction of the organism to traumatic events. The research methodology comprises complex theoretical techniques (analysis, comparison, systematisation) and psychodiagnostic techniques (V. V. Boyko's 'Research of Emotional Burnout' technique, MBI burnout questionnaire (C. Maslach and S. Jackson), C. D. Spielberger's Anxiety Scale (adapted by Y. L. Hanin), SAN method) and methods of mathematical statistics. The results obtained permitted the formation of a profound comprehension of the extent to which stress impacts the mental and physical well-being of the respondents during a state of war. It was determined that there is a correlation between the prevalence of health issues among respondents and the prevalence of a destructive psycho-emotional state. It has identified a risk group that requires quality psychological assistance and support. Considering the results above, a comprehensive training programme has been developed to minimise the effects of stress. The system is suitable for the current context. It combines various types of psychotherapeutic work and can be implemented in three stages. The content of the training programme is presented to demonstrate the potential of its use. It is generally acknowledged that this direction of psychological assistance requires continuous improvement and the introduction of innovative approaches to minimise the negative impact of stressful situations to ensure a high level of psychological resilience under the conditions of the Russian-Ukrainian war.

**Keywords:** coping strategy, experiment, martial law, post-traumatic stress disorder, psychodiagnosics, stress types, traumatic stress, psychodiagnosics, experiment, coping.

### 1 Introduction

In the modern world, an individual's inclusiveness is associated with numerous and often significant stresses that negatively affect the psycho-physiological state of a person. There has been a significant increase in interest among psychologists and scientists in studying the phenomenon of stress. A fundamental characteristic and a key determinant of the emergence of stress in an individual – a civilian participant in military actions – is the conscious absence of the ability to satisfy basic safety needs.

In modern society, there is a demand for immediate and effective resolution of problematic situations, with the imperative that destructive consequences for physical and mental health be avoided. Individuals residing in complex and potentially traumatic conditions (for example, war) demonstrate superficially formed skills in using techniques to reduce the destructive impact of stress yet are not capable of choosing and implementing constructive actions to improve the current situation. Instead, they opt for the emulation of referent group representatives. This situation will likely become a fundamental basis for the appearance of destructive behaviour shortly. It could manifest as an increase in the level of aggressive manifestations, a decrease in control over one's actions, excessive use of psychoactive substances, and gamification. Furthermore, it could result in a deterioration in physical and mental health. Therefore, it is crucial to study this issue to develop effective stress management strategies to minimise the destructive consequences of prolonged stress.

### 2 Literature review

In recent decades, scientific studies have been investigating the determinants and phenomenology of stress and resilience manifestations. It is crucial in the current realities. Research into the emergence, development, and improvement of stress resilience is essential for individuals involved in various potentially stressful situations. The investigation of stress-inducing factors during wartime is hindered by the fact that the work of professionals does not consider the actual level of individuals' readiness to react constructively and act in stressful situations. In conditions of war, a person is subjected to a range of psycho-emotional influences.

The scientists who have significantly impacted this issue's development are also worth noting. Their achievements correspond to current social challenges. Accordingly, the study conducted by J. Kong et al. (2021) has significant scientific and practical value, making an essential contribution to understanding the relationship between the anamnesis of childhood adverse experiences, stress, and health. It also indicates potentially effective strategies for supporting the target audience. D. B. O'Connor et al. (2021) highlight the potential impact of stress on various biological systems within the human body. They conclude that further research is necessary to investigate the influence of stress on health, particularly the role of early-life adversities in shaping subsequent stress responses in adulthood. In the work of R. D. Romeo (2017), the impact of stress on the brain structure of adolescents and its consequences for mental health are considered. Special attention is paid to the amygdala, hippocampus formation, and the brain's prefrontal cortex. A. Akpınar (2021) noted in his study that teenagers are facing an unprecedented level of stress and mental health problems. In their systematic review, Z. Li and F. Hasson (2020) investigated the interaction of resilience, stress, and psychological well-being among students from different countries. The authors concluded that high-stress levels among student youth often affect their psychological well-being. N. Zhyhailo and T. Sholubka (2022) analysed the process of forming psychological resilience in students of higher education institutions during the war. The research of I. Vahia and colleagues (2020) focused on the elderly.

D. O'Connor et al. (2021) examine the cumulative relationship between stress and adverse health outcomes. They highlight that stress can affect health in two ways: directly, through autonomic and neuroendocrine responses, and indirectly, through changes in health-related behaviour. J. Gianaros and T. D. Wager (2015) investigated the connection between psychological stress and physical health, as well as the underlying mechanisms of this connection. P. M. Lehrer et al. (2020) conducted a systematic and meta-analytic review of biological feedback with heart rate variability (HRVB) for various symptoms and human functioning in states of rest and stress. H. Yarıbeygi et al. (2017) examined some of the primary effects of stress on the major physiological systems of the human body. K. S. Khan et al. (2020) examined the mental health issues faced by various cohorts and groups, including the general population, medical staff, students, school children, sports and entertainment workers, and other vulnerable groups.

The authors have identified and characterised the most common types of stress. Special attention is given to traumatic stress, which is the emotional reaction of an individual to severe events. Traumatic stress is considered a normal reaction to abnormal circumstances (events that go beyond the usual life experience of a person). D. Rose et al. (2017) explored the connection between work-related fatigue and mental and physical health in working people. The study by D. Yuan et al. (2022) investigated the impact of professional stress on the emergence of health risks among employees in the sewing industry.

In the study by K. Lee et al. (2020), several factors that negatively impact human health were analysed, including stress caused by the pandemic, self-integration, self-efficacy, and resilience. Practical and detailed suggestions and guidelines were also developed using research that considers these factors, particularly for overcoming stress caused by COVID-19, social support, and physical activity. K. Tsamakis et al. (2020) indicate that the COVID-19 pandemic has led to a catastrophic situation of global proportions in the healthcare sector, causing unprecedented fear and anxiety in some individuals. Stress related to this biothreat has clinical consequences in all aspects of medicine, both mental and physical health. The study's findings by A. Shimura et al. (2021) aim to provide empirical evidence of the consequences of the new work scenario using remote technologies for individuals and organisations in connection with the COVID-19 pandemic, considering health status and stress levels.

A. D. Crosswell and K. G. Lockwood (2020) provide a comprehensive account of the optimal methodologies for measuring stress, delineating the specific aspects of stress factors and stress responses to be recorded and how they should be recorded. They also consider the circumstances under which it is preferable to utilise psychological or physiological stress indicators. The study by V. Violant-Holz et al. (2020) found that physical activity is an effective strategy for combating the psychological consequences of the COVID-19 pandemic, which contributes to the further anticipated increase in the prevalence of mental disorders. C. Herbert et al. (2020) noted regular physical and aerobic exercises' health benefits and stress reduction. P. Coventry et al. (2021) examined various practical methods for minimising the negative impact of stress and improving mental health, including gardening, physical exercises, and nature therapy.

As a result of the theoretical analysis of scientific sources dedicated to studying various aspects of the impact of stress on mental and physical health, it should be noted that several discrepancies justify further research into the outlined issues. It is also important to note the limitations of the available empirical evidence, which reflects stress's complex and multifaceted impact on mental and physical health. It makes it challenging to identify the fundamental indicators of the impact of stress on mental and physical health. However, the high practical applicability of systematic approaches to psychological support makes them a valuable tool in this context.

The study aims to identify the peculiarities of stress's impact on mental and physical health and consider them in developing effective stress management strategies.

### 3 Methods

A survey method was employed to diagnose the specific impact of stress on mental and physical health. This method allowed for the rapid acquisition of psychodiagnostic material with a high level of reliability, which could then be used in further research and the development of a training programme to minimise the destructive impacts of stress on mental health. The data obtained from the study were analysed, systematised and compared within the defined sample.

The initial psychodiagnostic technique employed in the experiment was V. V. Boyko's 'Research of Emotional Burnout' method, designed to assess the degree of emotional burnout. The Maslach Burnout Inventory (MBI) (by C. Maslach and S. Jackson) facilitated a deeper comprehension of the respondents' psycho-emotional state. The utilisation of C. D. Spielberger's Anxiety Scale (adapted by Hanin) facilitated the formation of a comprehensive understanding of the current levels of personal and reactive anxiety. The fourth psychodiagnostic technique employed in the experiment was the SAN methodology for diagnosing well-being, activity, and mood. The sample (90 respondents aged 20-45) was divided into three groups according to their health status to confirm or refute the empirical hypothesis. The first group - no health problems - comprised 30 people. The second group - 30 people with chronic diseases diagnosed before the war. The third group - 30 people with health problems that appeared during the war. The study focused on empirical testing of the following hypothesis: the emotional state of a respondent in a stressful situation may have a different configuration of health status and the effectiveness of combining psychological resources of resilience to emotional burnout.

### 4 Results

The 'Diagnosis of Emotional Burnout Level' technique proposed by V. V. Boyko was employed to ascertain the extent of emotional burnout. The findings are presented in Figure 1 for summary and analysis.

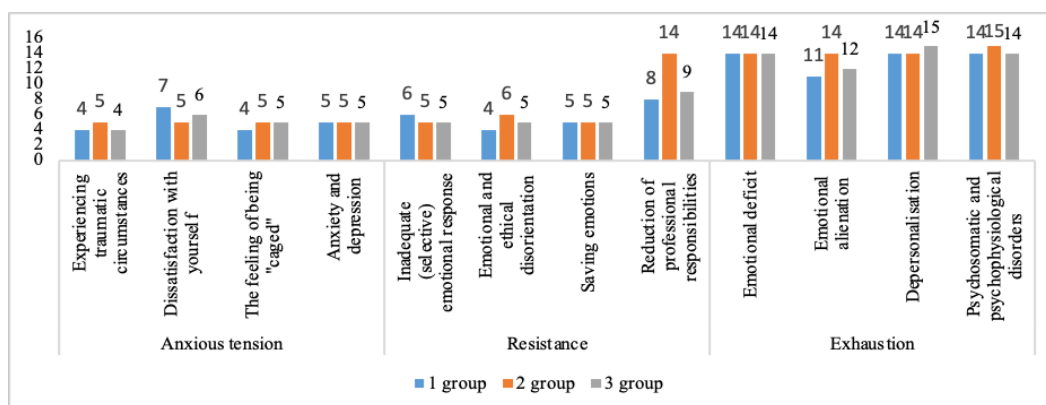


Figure 1. Phases of Emotional Exhaustion in Respondents with Different Health Conditions  
Source: own research

It is important to note that the symptomatology of emotional burnout in respondents from the first group (who do not have health problems) indicates an initial formation stage. These respondents have a simplified attitude towards their professional duties, manifested in the desire to optimise factors that lead to destructive emotional reactions. Indicators of the control group (0.19 and 0.5, respectively), we can assert the proven effectiveness of the proposed pedagogical technology.

Figure 2 reveals that emotional burnout is three-dimensional, encompassing three subscales: emotional exhaustion, depersonalisation, and reduced personal accomplishment. Directing attention to respondents who exhibit a high level of emotional exhaustion is crucial. This aspect is considered the primary component of emotional burnout, manifesting as a decline in emotional tone, indifference, or excessive emotional tension. A reduced emotional tone can result in losing interest in studying or work, communication with others, and leisure

activities. It often leads to a sense of meaninglessness in life. Respondents exhibit symptoms of excessive emotional tension,

such as anxiety, irritability, and nervousness. It can result in sleep problems and health deterioration.

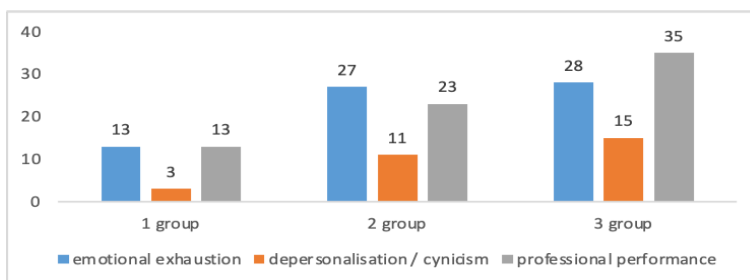


Figure 2. Dynamics of Psychological Burnout Indicators in Respondents with Different Health Conditions  
Source: own research

The group with a high level of depersonalisation included respondents who, according to the study results, were classified as having a high or medium level of emotional exhaustion, which manifested in deteriorating relationships with others. An increase in feelings of negativity and a cynical attitude towards other people can accompany this. Respondents who exhibited a high level of reduction in personal achievement were found to engage in negative self-evaluation, tend to devalue their achievements and feel limited in their capabilities and obligations towards others.

of war can exacerbate their physical problems, intensifying existing illnesses or the emergence of new ones. These respondents require a comprehensive approach that includes medical but also psychological and social support.

The second group of respondents may demonstrate greater stress resilience than the first group. Their health issues are less vulnerable to changes associated with the war as they have adapted to living with chronic diseases. However, they can still experience stress due to the war, which can lead to the exacerbation of their chronic issues or deterioration of their condition.

The third group, comprising respondents with health problems that emerged during the war, was included in the group with a high level of psychological burnout. Those in the second group, with chronic diseases that manifested before the war, were included in the medium-level group. In contrast, those in the first group, without health problems, were included in the low-level group. The third group of respondents exhibits not only physical symptoms but also psychological symptoms such as anxiety, depression, feelings of helplessness, and loss. The stress factors

Respondents in the first group are the least vulnerable to stress compared to the other groups. They show greater resilience and adaptability to new conditions, which may help them better cope with the stress of war. Nevertheless, they can also be subjected to stress due to the war and exhibit psychological symptoms, especially if the war is in an active phase for an extended period.

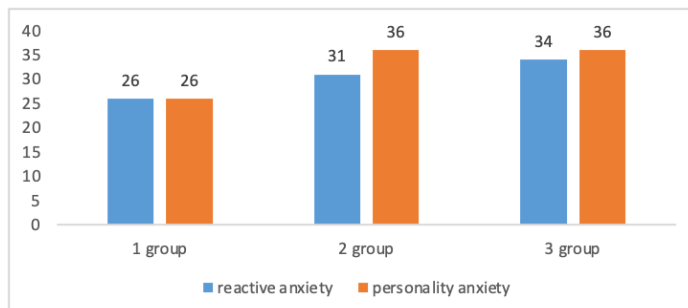


Figure 3. Personal and Situational Anxiety of Respondents with Different Health Conditions  
Source: own research

The results obtained using C. D. Spielberger's Anxiety Scale (adapted by Y. L. Hanin) (see Figure 3) indicate that as health status deteriorates, both reactive level and personal anxiety levels increase. Furthermore, personal anxiety levels rise more rapidly

and reach 36 points in both the second and third groups of subjects.

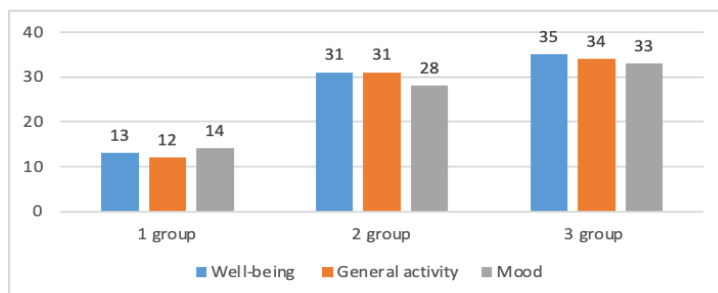


Figure 4. Health Dynamics in Respondents with Different Health Conditions  
Source: own research

The findings presented in Figure 4 corroborate the notion that alongside a decline in health, there is a concomitant deterioration in well-being and mood and a reduction in overall activity. While there are respondents with more favourable indicators according to this methodology, their results represent a minority and do not significantly impact the broader picture of the research findings. The formulated empirical hypothesis has been validated.

For the three experimental groups, an optimal algorithm for the comprehensive improvement of the respondents' psycho-emotional state has been developed using methods of psychotherapy and psycho-correction.

Research convincingly demonstrates that a quarter of individuals who have experienced traumatic situations develop post-traumatic stress disorder (PTSD). Most successfully adapt over time, function effectively, and perform social roles qualitatively. Post-traumatic personality disorder (during the subsequent life of a person who has experienced trauma) is associated with the ability to adapt to extreme and sub-extreme conditions successfully. Post-traumatic stress disorder is a non-psychotic delayed reaction to traumatic stress, capable of causing mental disturbances in virtually anyone. PTSD is a complex of human reactions to trauma, where *trauma* is defined as an experience or shock that causes fear, horror, or helplessness in most people.

Symptoms characteristic of traumatic stress include very high levels of anxiety; persistent re-experiencing of the event that is the source of the trauma while avoiding any circumstances in real life that may be related to the so-called stressor; sleep disturbances; the emergence of illnesses defined as traumatic stress after a certain period following the traumatic factor; prolonged tension that can last for several years. The treatment of traumatic stress is based on psychotherapy, as well as social integration activities.

The application of a set of psychodiagnostic techniques and the organisation of psychotherapeutic measures will allow for a comprehensive understanding of the respondents' psycho-emotional state and identify ways to improve their psychological well-being. Psychological rehabilitation techniques diminish the deleterious impact of stressful circumstances, optimise the overall psycho-emotional state, and enhance the quality of life of the respondents during periods of stress.

## 5 Discussion

In order to enhance or stabilise psycho-emotional resilience, it is advisable to activate the necessary resources that will help minimise the impact of stress on mental and physical health. By resources, we mean internal and external variables that provide psycho-emotional resilience in stressful situations. Given that a person is a social being, social support is fundamental for stabilising psycho-emotional resilience in stress conditions. The social environment can provide optimal conditions for reducing the extent of destructive influence under challenging situations and contributing to the growth of psycho-emotional resilience (Stults-Kolehmainen & Sinha, 2013).

Psychological competence, which determines the level of education on current issues, is also an essential resource for psycho-emotional resilience. Physical resilience ensures the activation of care for one's health status and determines its value priority. The availability of material resources profoundly influences the formation of psycho-emotional resilience. Using developed information resources enables the skilful application of various tools to achieve goals (Zhyhailo & Sholubka, 2022).

It is crucial to highlight that during the minimisation of the destructive impact of psycho-emotional stress on physical and mental health, group therapy is the most effective approach, as it provides an environment conducive to the expression of current

experience in stressful situations, minimises the destructive desire for isolation and the feeling of guilt (Shavitt et al., 2016).

A high level of mutual trust and guaranteed confidentiality are fundamental to ensuring an open psychotherapeutic environment where participants can feel support and safety while displaying their emotional reactions. It is, therefore, of the utmost importance to understand group dynamics to facilitate successful communication between participants and define and resolve potential conflicts or difficulties. In this context, developing effective stress management strategies becomes particularly relevant. Their application is appropriate in the current realities (Schulz et al., 2011). The psychotherapeutic system comprises specific directions of psychological work, which are implemented in three stages.

Experimental studies demonstrate that the level of psychological stress depends on dominant coping strategies. Individuals who actively employ active coping strategies to manage stress appear to be less susceptible to stress's negative impact and experience its effects less. When passive coping is used, stress initially takes hold of emotions and consciousness, reflecting the response to the individual's physiology. Consequently, this leads to psychosomatic disorders. Experimental studies have shown that each person uses coping strategies to overcome stress based on their own experience and personal psychological resources.

The initial stage of the psychotherapeutic process involves the implementation of psychological training, which includes the differentiation of the primary indicators of destructive psycho-emotional reactions and mental states, the utilisation of autogenic methods of psychological assistance, self-control, and psycho-emotional self-regulation, the application of emergency psychological assistance to others, and the minimisation of the destructive impacts of stressful situations on the psyche in the future, along with the identification of effective strategies for their successful levelling.

In the second stage of minimising the destructive impact of stress, the following measures can be implemented: a comprehensive assessment of the psychological state and psychological support, including emergency psychological assistance (if necessary).

The final stage of the process is aimed at implementing preventative measures and controlling the psycho-emotional state. This stage includes the following psychological measures: psychodiagnostic to detect signs of psychological traumatization, the current level of psychological safety, the likelihood of developing post-traumatic stress disorder (PTSD) in the future, and the provision of psychological assistance in an individual format (if necessary). The 30-hour training programme reduces stress's negative impact on mental health and emotional state. It aims to increase individuals' awareness of optimising their psycho-emotional state and implementing effective stress management strategies.

During the training programme, participants should analyse and identify:

- what situations during martial law cause tension, anxiety, fear, and uncertainty, i.e. understand the reasons for their behaviour and emotions (manifestations of irritability, shyness, impulsivity, restraint, joy, satisfaction, happiness, intemperance) (Gianaros & Wager, 2015);
- own motives, needs, aspirations, and attitudes; assess their adequacy, realism and constructiveness (Roberts et al., 1994);
- peculiarities of interpersonal interaction, causes of possible misunderstandings (Schneiderman et al., 2005).

A training programme was developed to facilitate developing and implementing effective coping strategies for stress management (Table 1).

Table 1. Health Dynamics in Respondents with Different Health Conditions

| Training block                       | Techniques and exercises   | Application purpose  |
|--------------------------------------|--|--|
| Improving mental stability           | Techniques of breathing exercises  | to teach participants effective stress management strategies, increase their psychological resilience and adaptability to negative life situations, and provide them with the means to overcome emotional difficulties and maintain mental health in the context of military conflict  |
| Development of communication skills  | Reflective listening, "Mirror" technique, role play "Self-presentation", empty chair technique   | to develop practical communication skills to improve psychological well-being and the ability to adapt to stressful situations; teach participants how to express their feelings, effectively listen and understand others, build positive interpersonal relationships and develop conflict resolution skills; help participants identify and use appropriate ways to express their needs and aspirations, which will improve their emotional state and perception of psychological distancing in stressful situations |
| Regulation of psycho-emotional state | Role modelling of reality using the method of analysing practical situations (case study); exercises to identify emotions and feelings | to train participants in effective strategies for self-regulation of emotions and reducing psychological discomfort in the face of stress and traumatic events, relaxation techniques, breathing exercises, meditation and other techniques that help calm the nervous system and reduce anxiety and tension. Participants gain the skills to understand and control their emotional reactions to stressful situations, which helps to maintain mental health and improve overall well-being.                          |

Source: own research

In selecting methods and tools for working with individuals at risk of a destructive psycho-emotional state, it was considered that they require additional assistance in overcoming difficulties that prevent effective and rapid communication. It included increasing motivation for productive activity, developing alternative strategies and solutions, and understanding internal states and psycho-physiological features. Significant attention must be devoted to developing trust, communication skills, and observational abilities. Additionally, fostering the acquisition of self-acceptance and the capacity to accept others is crucial for providing adequate support to those in need.

## 6 Conclusion

Effectively minimising the consequences of stress is fundamental to ensuring individuals' psychological stability and preventing health deterioration. The study's results indicate that during a state of war, individuals display various symptoms of emotional burnout, depending on their health status and other factors. The presented training programme optimises the psycho-emotional state and can be implemented into the psychological assistance system. The programme will enable participants to gain an understanding of the circumstances that can give rise to feelings of tension, anxiety, fear, or self-doubt during a state of war. Given the complexity of the chosen problem, it is essential to define a narrower context for further study. Research on the Russian-Ukrainian war represents a novel and pertinent avenue for investigation. In-depth analysis and the development of a comprehensive framework of psychological and psychotherapeutic tools are essential for implementing effective stress management strategies in Ukrainians' daily lives. Further research and advancements in this field may lead to specific recommendations for enhancing psychological support programs.

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**Primary Paper Section: A**

**Secondary Paper Section: AN**