



Resilience of military physicians during wartime: Practical tools for development

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◆ **Abstract.** The relevance of the study is conditioned by the need for scientific substantiation of the psychological foundations of maintaining the reliability and psychological stability of military physicians in conditions of war. The activity of this category of specialists is characterised by the cumulative impact of combat stress, responsibility for preserving the lives and health of wounded and ill personnel, limited time for clinical decision-making, sustained psycho-emotional strain, and the need to address complex ethical dilemmas. Under such conditions, the risk of emotional exhaustion, burnout, secondary trauma, and reduced efficiency of functioning increases. This actualises the need to develop specialised programmes for the development of military doctors' resilience as an integrative psychological resource of self-regulation, adaptation, preservation of professional identity, and constructive interaction in extreme conditions of service and professional activity. The purpose of the study was to substantiate the content and structural foundations and practical tools of the author's programme for developing the resilience of a military doctor in war conditions. The empirical basis of the study was provided by materials from the formative phase of the piloting of the author's programme. The design included pre- and post-experimental evaluation of indicators in the control and experimental groups. The study involved 30 military interns divided into two groups of 15 people. The programme was designed for 30 hours and covered 10 interrelated classes. To assess its effectiveness, a set of psychodiagnostic techniques aimed at determining the level of resilience, professional resilience, coping strategies, basic beliefs, reflexivity, and communicative tolerance was used. The author's programme was based on a five-component model of military doctor resilience, which covered motivational and value, cognitive and reflexive, emotional and volitional, behavioural, and communicative and regulatory components. Positive dynamics of the integral resilience index and more pronounced changes in the experimental group compared to the control group were established. The most noticeable changes were found in indicators of professional resilience, engagement, control, problem-solving planning, acceptance of responsibility, and basic beliefs. The practical significance of the study lies in the development of a programme that can be implemented in the system of psychological support, training and support of military medical specialists

◆ **Keywords:** professional hardiness; emotional self-regulation; adaptive thinking; team interaction; psychological support; self-regulation under stress; development programme

◆ Introduction

In the conditions of a full-scale war, the problem of developing the resilience of a military doctor becomes particularly scientific and applied. Professional activity of this category of specialists is carried out under the combined influence of combat stress, intense service, and professional workload, lack of time for making clinical decisions, increased

responsibility for the life and health of the wounded and sick, and complex ethical and psychological situations. In such circumstances, a military doctor must not only ensure the quality of medical care provided, but also maintain emotional balance, cognitive clarity, the ability to self-regulate, make prompt decisions, and coordinate professional

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interaction. That is why the study of psychological conditions and means of developing the resilience of military doctors is important for maintaining their professional ability, mental well-being, and reliable functioning in extreme conditions of activity.

In contemporary scientific discourse, resiliency is increasingly considered not as a permanent individual trait, but as a dynamic psychological resource formed in the interaction of personal, professional, social, and organisational factors. C. Seo *et al.* (2021), analysing resiliency-oriented programmes in the medical education system, concluded that specially organised educational and psychological interventions can contribute to the prevention of professional burnout, strengthening adaptive capabilities, and maintaining the psychological well-being of future and practising doctors. Important for this study is the authors' opinion that the development of resilience requires not only informing, but also the development of specific skills of self-regulation, reflection, and overcoming stressful situations. C. Cohen *et al.* (2023), summarising the evidence on mental health interventions for healthcare workers, it was concluded that the most effective programmes are those that combine individualised stress management techniques, the development of psychological literacy, emotional self-regulation skills, and organisational support mechanisms. This conclusion is fundamentally important for the military medical sphere, since the activities of a military doctor do not take place in isolation, but in a system of official interaction, team coordination, and high responsibility for the consequences of professional decisions.

A. Castillo-González *et al.* (2024) in a meta-analysis on the relationship between resiliency and occupational burnout in healthcare professionals, found that higher levels of resiliency were associated with lower manifestations of emotional exhaustion, depersonalisation, and overall burnout. Consequently, the development of resilience can be considered not only as a means of psychological support, but also for preventing professional exhaustion. In the context of military medical activities, this provision is particularly important, since the emotional exhaustion of a doctor can negatively affect not only mental state, but also the quality of clinical thinking, communication, and professional decisions. Z. Sun *et al.* (2024), investigating the effectiveness of contemporary psychological interventions, focused on the importance of structured, skill-oriented, and preventive programmes aimed at developing emotional regulation, cognitive rethinking, and the ability to transfer acquired skills to real professional situations. For military doctors, this approach is particularly relevant, since their resilience should be manifested not only in their ability to withstand loads, but also in their ability to act in an organised, responsible and professional manner in conditions of uncertainty, risk, and time constraints. In military psychological research, the problem of resilience is also considered as one of the key factors of professional effectiveness in the face of threat. S. McInerney *et al.* (2024), analysing resilience development programmes in the U.S. Armed Forces,

highlighted the importance of self-regulation, self-efficacy, cognitive rethinking, and team cohesion as the main goals of such interventions. Similar conclusions were submitted by S. Panda *et al.* (2024), who noted that the psychological resilience of military personnel can be purposefully developed through systemic programmes focused on adaptive stress response, emotional regulation, and maintaining functional capacity in the face of danger.

The results of research on the mental health of specialists in war conditions are particularly significant for the Ukrainian context. V. Lekhan *et al.* (2024) showed that wartime healthcare workers function in the presence of significant mental stress, which requires systematic decisions to maintain their mental health. R. Pietrzak *et al.* (2024), studying the psychological resilience of Ukrainian mental health professionals, established the importance of social connections, life-meaning orientations, and optimism as factors of higher psychological stability in war conditions. These conclusions confirm that the resilience of a specialist in extreme conditions is formed not only through individual qualities, but also through a system of professional support, value-semantic resources, and constructive interaction. The recommendations of the World Health Organisation (2022) are also an important regulatory and methodological guide, which substantiate the need to combine organisational measures, staff training, executive training, and psychosocial interventions to maintain mental health in the workplace. In the military medical sphere, this approach is especially appropriate, since the psychological stability of a military doctor is directly related to the quality of medical care, the safety of professional actions, and the reliability of performing official tasks. The analysis of contemporary studies showed that, despite the active investigation of the resiliency of military personnel and medical workers, specialised programmes for the development of resiliency addressed specifically to military doctors remain insufficiently represented in the scientific field.

The purpose of the study was to scientifically substantiate the author's programme for the development and support of military doctor resilience in war conditions and determine its conceptual and applied foundations. To achieve the goal, it was planned: to analyse the current state of scientific development of the problem of developing the resilience of specialists who operate in conditions of increased risk and psychoemotional stress; to substantiate the theoretical and methodological foundations of building a programme based on the author's five-component model of the resilience of a military doctor; to characterise the structural components of the programme and practical means of developing self-regulation, psychological stability, adaptive thinking, and effective professional interaction. The scientific originality of the study consists in the systematic substantiation of the programme for the development and support of the military doctor's resilience based on a five-component model that integrates motivational and value, cognitive and reflexive, emotional and volitional, behavioural, and communicative and

regulatory components, and specified the practical tools for its implementation.

◆ Materials and Methods

The empirical basis of the study was the materials of the formative stage aimed at testing the author's programme for the development and support of the resilience of military doctors. Methodologically, the research was based on the understanding of the military doctor's resiliency as a multidimensional psychological phenomenon that combines signs of a relatively stable personal property, a dynamic process of adaptation to stressful influences, and an integrative resource of professional functioning in war conditions. According to this, the assessment was carried out both by the integral indicator of resiliency, and by a set of psychological characteristics correlated with the motivational and value, cognitive and reflexive, emotional and volitional, behavioural, and communicative and regulatory components of the author's model.

The study was organised according to the scheme of pre- and post-experimental comparison using the control and experimental groups. The formative stage was attended by 30 military interns, who were divided into two groups of 15 people each. The sample was formed according to the target principle, considering the professional affiliation of the participants, the stage of their training, and the possibility of participating in the full cycle of research procedures. The criteria for inclusion in the study were: the status of a military intern; the presence of higher medical education; professional training in the military medical environment; voluntary consent to participate in the study; the possibility of passing primary and repeated psychodiagnostic assessment. The criteria for non-inclusion were: lack of informed consent, inability to participate in the full cycle of the programme and/or pass a second psychodiagnostic assessment.

The experimental group included participants who completed the author's programme for developing and maintaining resilience; the control group did not participate in the programme. According to the main socio-demographic characteristics, the groups were comparable. The average age of participants in the control group was 25.53 years, the experimental group – 25.00 years; no statistically significant differences in age were found ($p = 0.394$). By gender composition, the control group included 10 men and 5 women, the experimental group – 7 men and 8 women; no statistically significant differences were also found ($p = 0.462$). The average length of service in the control group was 1.87 years, in the experimental group – 2.27 years; intergroup differences were not statistically significant ($p = 0.394$). This sampling strategy allowed minimising the impact of basic socio-demographic differences on the results of the formative impact.

The study was conducted in compliance with the principles of voluntary participation, informed consent, confidentiality, and prevention of psychological harm. The ethical standards of the American Sociological

Association's Code of Ethics (2018) were met. Participants were informed about the purpose of the study, the general content of the procedures, the specifics of participating in the programme, the procedure for using generalised results, and the right to refuse to participate at any stage without negative consequences. The data obtained were processed in a generalised form, without disclosing personal information, which ensured anonymity and confidentiality of the results.

The formative influence was implemented through the author's programme for the development and support of the resilience of military doctors. The programme had a total duration of 30 hours and consisted of 10 classes of 3 hours each. It was built on the principle of a consistent transition from the actualisation of professional meanings and internal resources to the development of self-regulation skills, stabilisation of thinking under stress, algorithmisation of actions in crisis situations, and improvement of team communication. The programme structure combined psychoeducational, reflexive, and skill components. The main forms of work were mini-lectures, practical exercises, case analysis, role-playing scenarios, group discussion, reflection, homework, and keeping a reflexive diary as a tool for transferring the formed skills to professional activities. The programme involved the use of the STOP-pause, AAR/debriefing without self-blame, breathing and grounding techniques, the 24/72-hour recovery plan, the "first 60 seconds" algorithm, SBAR, assertive "I-statements", de-escalation, and empathic reflection.

A set of psychodiagnostic techniques was used to quantify the effectiveness of the programme. The integral level of resiliency was determined on the resiliency scale by K. Connor & J. Davidson (2003) (CD-RISC-25). The Basic Beliefs Scale by R. Janoff-Bulman (2002) was used to assess the motivational and value component, as well as Methods for diagnosing professional motivation by V. Osodlo (2007). The cognitive and reflexive component was studied using the Big Five questionnaire (Klimanska & Haletska, 2019). The emotional and volitional component was analysed based on the coping strategy questionnaire by S. Folkman & R. Lazarus (1988) and the IES-R Traumatic Event Impact Assessment Scale (Weiss & Marmar, 1996). To assess the behavioural component, the Professional Resilience Questionnaire (Kokun, 2021; 2024) was used, which was developed in line with S. Maddi's (2004) conceptual framework on resilience. The communicative and regulatory component was evaluated using the communicative tolerance test by V. Boyko (2005). Additionally, feedback forms and the digital service Mentimeter were used to quickly record a subjective assessment of the psychological safety of classes, their practical usefulness, and the readiness of participants to transfer the acquired skills to professional activities.

The results were processed using IBM SPSS 21.0 and Jamovi. The methods of descriptive statistics, the Student's t-test, the Mann-Whitney U-test, and the Wilcoxon criterion were used for statistical analysis. The use of these statistical procedures helped to assess both intra-group dynamics of

indicators before and after the programme, and inter-group differences in the amount of individual shift in the control and experimental groups. The combination of parametric and nonparametric procedures was conditioned by the nature of the sample and the need to improve the reliability of interpretation of the results obtained. Thus, the applied methodological scheme allowed comprehensively tracking changes in the structure of military doctors' resilience and assessing the practical effectiveness of the proposed programme.

◆ Results and Discussion

Structuring of the programme for the development of military doctors' resilience in war conditions was carried out based on the author's five-component model, which integrated motivational and value, cognitive and reflexive, emotional and volitional, behavioural, and communicative and regulatory components (Stasiuk & Matvieieva, 2025). The programme's key priorities, main activities, and expected outcomes are summarised in Table 1.

Table 1. Structure and content of the programme for developing the resilience of military doctors in war conditions

Programme component	Content accent	Basic forms of work	Expected results
Motivational and value	Updating the professional mission, service values, semantic supports of professional activity, boundaries of responsibility	Mini-lectures, exercises such as "Values → Decisions" and "Professional Compass", analysis of ethical dilemmas, reflection	Strengthening of professional motivation, strengthening of professional identity, development of stable semantic guidelines in the activity
Cognitive and reflexive	Development of thinking under stress, reflection, decision analysis, awareness of cognitive distortions	Case analysis, STOP-pause, "Facts – Interpretations – Solutions" technique, AAR/debriefing, decision checklists	Increasing cognitive flexibility, developing reflexivity, improving the ability to make informed decisions in difficult conditions
Emotional and volitional	Development of skills of self-regulation, emotional stabilisation, stress control, and resource recovery	Breathing techniques, grounding, progressive muscle relaxation, emotional barometer, 24/72 recovery plan, self-support exercises	Strengthening emotional endurance, increasing the ability to self-regulate, reducing the intensity of psycho-emotional stress
Behavioural (operational and activity)	Development of adaptive algorithms of action in conditions of time deficit, risk, and uncertainty	Role-playing scenarios, "First 60 seconds" algorithm, coping strategy training, structured change transfer, crisis situation modelling	Increasing the adaptability of behaviour, developing readiness for action in stressful situations, strengthening professional effectiveness
Communication and regulatory	Development of skills of team interaction, communication in tension, requesting support, de-escalation of conflict	SBAR, assertive "I-statements", empathic listening, safe feedback, role-playing exercises "difficult conversation"	Improving the effectiveness of team communication, improving coordination of interaction, developing constructive professional communication skills

Source: developed by the author based on V. Stasiuk & D. Matvieieva (2025)

The implementation of the programme was accompanied by changes in a number of integral and component indicators that reflect the specifics of the development of military doctors' resilience in war conditions. In the experimental group, more pronounced positive changes in these indicators were recorded compared to the control group. First of all, this applies to the integral resilience index: in the control group, its average value increased from 68.33 to 70.33 points, while in the experimental group – from 64.53 to 75.00 points. The intra-group change in the

experimental group was statistically significant according to the Wilcoxon criterion ($p = 0.006$), while according to the parametric t-test it did not reach the level of statistical significance ($p(t) = 0.172$). Simultaneously, intergroup comparison of individual shifts did not confirm a statistically significant effect of the programme on the integral resiliency Index ($p = 0.384$; $p(U) = 0.058$), which gives grounds to state a more pronounced positive trend in the experimental group. The corresponding changes are shown in Figure 1.

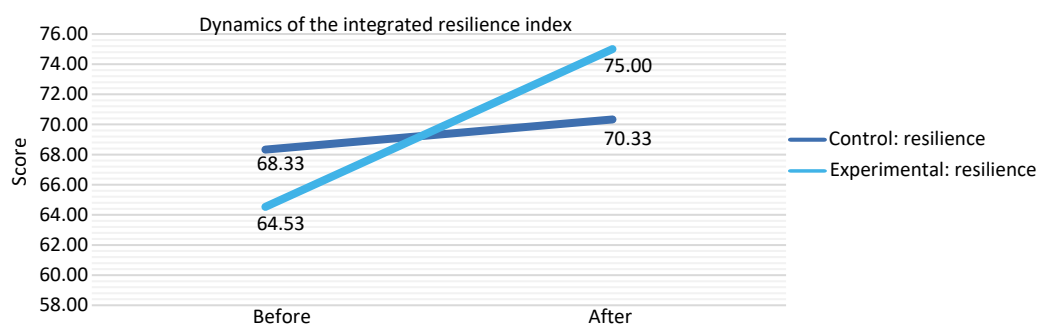


Figure 1. Changes in the integral resilience index in the control and experimental groups before and after the programme implementation

Source: developed by the author

Statistically significant changes after the implementation of the programme were identified by indicators of professional resilience. In the experimental group, the overall level of professional resilience increased from 60.33 to 67.13 points ($p(t) = 0.001$; $p(w) < 0.001$), while in the control group, the increase from 64.00 to 67.13 points was not statistically significant ($p(t) = 0.127$; $p(w) = 0.181$). Within the experimental group, statistically significant changes were also recorded for the subscales of professional inclusion – from 19.33 to 22.40 points ($p(t) = 0.001$; $p(w) = 0.001$) and professional control – from 19.87 to 22.80 points ($p(t) < 0.001$; $p(w) < 0.001$). Intergroup

comparison showed a statistically significant greater shift in the experimental group both in terms of professional inclusion ($p = 0.019$; $p(U) = 0.011$) and in terms of professional control ($p = 0.048$; $p(U) = 0.037$). In the experimental group, more pronounced changes were established in terms of indicators that characterise involvement in activities, subjectivity, and experience of own ability to influence complex official and professional circumstances. This gives grounds to consider these shifts as manifestations of the programme's influence on the behavioural and cognitive and regulatory aspects of resilience. The corresponding numerical values are shown in Table 2.

Table 2. Comparison of key psychological indicators in the control and experimental groups before and after the programme implementation

Indicator	CG before (M $\pm$ m)	CG after (M $\pm$ m)	p(t) CG	p(w) CG	EG before (M $\pm$ m)	EG after (M $\pm$ m)	p(t) EG	p(w) EG	p(t) between groups	p(U) between groups
Resilience	68.33 $\pm$ 2.92	70.33 $\pm$ 3.99	0.273	0.271	64.53 $\pm$ 5.78	75.00 $\pm$ 3.72	0.172	0.006	0.384	0.058
General level of professional resilience	64.00 $\pm$ 1.66	67.13 $\pm$ 1.99	0.127	0.181	60.33 $\pm$ 2.44	67.13 $\pm$ 2.20	<0.001	<0.001	0.159	0.184
Professional engagement	20.53 $\pm$ 0.74	20.80 $\pm$ 0.82	0.754	0.779	19.33 $\pm$ 1.10	22.40 $\pm$ 0.66	0.001	0.001	0.019	0.011
Professional control	22.07 $\pm$ 0.57	23.07 $\pm$ 0.76	0.047	0.064	19.87 $\pm$ 0.85	22.80 $\pm$ 0.76	<0.001	<0.001	0.048	0.037
Planning to solve the problem	13.67 $\pm$ 0.54	14.00 $\pm$ 0.63	0.417	0.558	12.60 $\pm$ 0.87	14.33 $\pm$ 0.64	0.006	0.009	0.044	0.019
Acceptance of responsibility	8.00 $\pm$ 0.53	7.67 $\pm$ 0.49	0.430	0.435	7.53 $\pm$ 0.68	8.40 $\pm$ 0.63	0.041	0.035	0.046	0.057
Benevolence of the world	17.47 $\pm$ 0.94	16.93 $\pm$ 0.84	0.310	0.340	14.67 $\pm$ 1.36	16.80 $\pm$ 1.22	0.003	0.005	0.002	0.001
Fairness of the world	14.20 $\pm$ 0.81	13.47 $\pm$ 1.03	0.268	0.368	13.87 $\pm$ 1.17	15.60 $\pm$ 0.97	0.015	0.017	0.010	0.006
Controllability of the world	14.67 $\pm$ 0.76	14.80 $\pm$ 0.93	0.841	1.000	12.47 $\pm$ 0.67	14.60 $\pm$ 0.51	0.002	0.003	0.028	0.016
Value of your own "self"	18.60 $\pm$ 0.92	18.73 $\pm$ 0.85	0.719	0.668	15.60 $\pm$ 1.28	17.27 $\pm$ 1.12	0.019	0.023	0.044	0.030
Randomness of events	14.53 $\pm$ 1.16	14.53 $\pm$ 1.23	1.000	0.722	16.67 $\pm$ 0.77	13.93 $\pm$ 1.08	0.008	0.009	0.010	0.008
Inability to accept the individuality of another	5.40 $\pm$ 0.87	5.07 $\pm$ 0.81	0.511	0.503	7.93 $\pm$ 0.89	6.47 $\pm$ 0.61	0.005	0.010	0.096	0.117
Life goals	11.00 $\pm$ 0.55	11.13 $\pm$ 0.64	0.829	0.855	8.73 $\pm$ 0.71	10.00 $\pm$ 0.65	0.020	0.016	0.082	0.165

Note: CG – control group; EG – experimental group; $p(t)$ – P-value according to the Student's *t*-test; $p(w)$ – P-value according to the Wilcoxon criterion; $p(U)$ – p-value according to the Mann-Whitney U-test. Intergroup values reflect a comparison of individual indicator shifts in the control and experimental groups

Source: developed by the author

Additionally, the social component of professional resilience increased statistically significantly in the experimental group – from 14.40 to 16.53 points ($p(t) = 0.006$; $p(w) = 0.007$) and the professional component – from 13.60 to 16.13 points ($p(t) = 0.007$; $p(w) = 0.017$). Although these shifts did not reach statistical significance in intergroup comparison, they show a significantly important positive trend that is consistent with the general logic of the programme. A significant result of the formative impact is a change in constructive coping strategies. In the experimental group, the indicators of planning problem solving increased statistically significantly – from 12.60 to 14.33 points ($p(t) = 0.006$; $p(w) = 0.009$) and acceptance of responsibility – from 7.53 to 8.40 points ($p(t) = 0.041$; $p(w) = 0.035$). No such shifts were detected in the control group. Comparison of the magnitude of changes between the groups showed that on the scale of planning for solving the problem, the advantage of the experimental group is statistically significant both according to the *t*-test and according to the U-test ($p = 0.044$; $p(U) = 0.019$). On the scale of acceptance of responsibility, the intergroup

difference reached statistical significance according to the *t*-test ($p = 0.046$), but was not confirmed according to the Mann-Whitney test ($p(U) = 0.057$). This suggests that the programme contributed to the transition to more active, problem-oriented, and subject-based ways to overcome stressful situations.

Equally important results were obtained in terms of basic beliefs. In the experimental group, after completing the programme, the indicators of commitment the world increased statistically significantly – from 14.67 to 16.80 points ($p(t) = 0.003$; $p(w) = 0.005$), justice of the world – from 13.87 to 15.60 points ($p(t) = 0.015$; $p(w) = 0.017$), controllability of the world – from 12.47 to 14.60 points ($p(t) = 0.002$; $p(w) = 0.003$) and the value of own "self" – from 15.60 to 17.27 points ($p(t) = 0.019$; $p(w) = 0.023$). The randomness of events decreased statistically significantly from 16.67 to 13.93 points ($p(t) = 0.008$; $p(w) = 0.009$), which is a positive change. No such shifts were recorded in the control group. Inter-group comparison of the magnitude of changes confirmed the superiority of the experimental group in all these indicators: benevolence of the world

($p = 0.002$; $p(U) = 0.001$), justice of the world ($p = 0.010$; $p(U) = 0.006$), controllability of the world ($p = 0.028$; $p(U) = 0.016$), self-esteem ($p = 0.044$; $p(U) = 0.030$), and randomness of events ($p = 0.010$; $p(U) = 0.008$). In a psychological sense, this means strengthening the subjective sense of order, meaningfulness, and a certain manageability of life events, and strengthening self-perception as a valuable and capable subject. For a military doctor in wartime, such a restructuring of beliefs is of particular importance, since it reduces helplessness, increases professional resistance, and creates a psychological basis for more stable functioning in situations of uncertainty.

Special attention should be paid to reducing the indicator of inability to accept the individuality of another. In the experimental group, this indicator decreased from 7.93 to 6.47 points ($p(t) = 0.005$; $p(w) = 0.010$). In the motivational and semantic aspect, a statistically significant increase in the indicator of life goals was revealed – from 8.73 to 10.00 points ($p(t) = 0.020$; $p(w) = 0.016$). However, in intergroup comparison, the shifts in both indicators did not reach statistical significance: for the inability to accept the individuality of the other, $p = 0.096$; $p(U) = 0.117$, for life goals – $p = 0.082$; $p(U) = 0.165$. Although intergroup differences have not reached statistical significance here, intragroup positive dynamics are significant. It fits well with the content of the programme, which focuses on team communication, SBAR, assertiveness, empathic listening, safe feedback, and de-escalation. Thus, the results show that the programme affected not only individual mechanisms of self-regulation, but also interpersonal aspects of professional interaction, which is especially important for the military medical environment.

A meaningful interpretation of the obtained results allowed correlating them with the logic of the author's five-component model. The positive dynamics of resilience, professional resilience, inclusivity, control and basic beliefs reflects, first of all, the strengthening of motivational and value, cognitive and reflexive, and emotional and volitional components. The growth of problem-solving planning, acceptance of responsibility, and the focus on algorithms such as STOP, AAR, "first 60 seconds" and 24/72 indicate the development of a behavioural (operational and activity) component. Instead, shifts in acceptance of the other, team clarity, and secure feedback logically relate to the communication and regulatory component. The qualitative component of the assessment included monitoring the participation of participants in group work, analysing behavioural and emotional changes in the course of the programme, using feedback forms, and recording a subjective assessment of practical usefulness, psychological security, and readiness to apply the acquired skills in professional activities. An important element of the programme was LogBook, in which participants recorded the transfer of the developed skills to real professional situations, reflected changes in their own state, difficulties in applying techniques, and the results of their use. Additional importance was given to homework assignments aimed at developing

reflection and awareness of internal resources, in particular, short essays on professional meaning and motivation, for example: "What inspires me to be a doctor?", "What supports me in my profession during the war?", "What is my professional strength?". Such forms of work helped not only to consolidate the content of the programme, but also to deepen the understanding of own professional role, values, and ways of self-support.

The results of the study give grounds to consider the development of a military doctor's resilience in war conditions as a separate area of psychological support aimed at maintaining psychological stability, self-regulation, functional reliability, and the ability to effectively interact in conditions of increased load. The identified changes are not reduced to an isolated improvement in individual indicators, but reflect interrelated shifts in the areas of professional resilience, coping behaviour, basic beliefs, and individual communication and regulatory characteristics. The results obtained are consistent with contemporary approaches to understanding the resiliency of medical professionals as a multi-level phenomenon that depends not only on individual psychological skills, but also on the organisational context, professional environment, and opportunities for resource recovery. In Particular, C. Stewart *et al.* (2024), analysing interventions to support the well-being of medical professionals, focused on the importance of targeted measures aimed at reducing professional stress and maintaining the psychological well-being of medical personnel. In turn, C. Frias *et al.* (2025), summarising strategies to support the mental health and well-being of health workers, concluded that effective support should combine individual, team, and organisational measures.

The positive changes established in the study in terms of indicators of professional resilience, professional involvement and professional control can be interpreted as increasing involvement in activities, increasing subjectivity, and strengthening the experience of own ability to influence difficult professional circumstances. This interpretation correlates with the conclusions of P. Vaquero-Cepeda *et al.* (2024), which proved the relevance of further generalisation of data on the relationship between occupational burnout of physicians and patient safety. S. Amiri *et al.* (2024), in their analysis of occupational risk factors for burnout among healthcare workers, highlighted the significance of work-related stress, communication difficulties and a lack of a supportive environment in the development of occupational burnout.

It is advisable to consider the results obtained in the context of research on the effectiveness of specially developed programmes for developing the resilience of doctors. C. Seo *et al.* (2021), analysing resiliency-oriented programmes in the medical education system, concluded that structured educational and psychological interventions contribute to strengthening the adaptive capabilities of doctors, developing self-regulation skills, and preventing professional burnout. In this context, the positive dynamics of professional resilience, engagement, and control

recorded in the study can be considered as one of the manifestations of the effectiveness of the proposed programme. This is of particular importance for the military medical environment, where the professional stability of a specialist is determined not only by the level of knowledge and experience, but also by the ability to maintain internal organisation, psychological capacity, and readiness for responsible decisions in difficult working conditions.

No less significant are the detected changes in coping behaviour indicators. The growth of problem-solving planning and responsibility acceptance indicators shows an increase in active and problem-oriented ways to overcome stress. M. Goniewicz *et al.* (2023), investigating resilience in emergency medicine in the context of COVID-19, emphasised the importance of staff readiness, psychological endurance, and the ability to act in crisis situations. I. Sharin *et al.* (2025), summarising personal psychoeducational approaches to reducing burnout in nurses, emphasised the importance of developing practical stress management skills that can be integrated into professional activities. Taken together, this gives grounds to consider changes in coping strategies as one of the important mechanisms for programme effectiveness.

Thus, the results of the study can be correlated with the results of the systematic review by B. Melnyk *et al.* (2020), dedicated to interventions aimed at improving the mental health, well-being, physical condition, and lifestyle of doctors and nurses. The researchers showed that targeted and structured programmes that cover not only the emotional state of a specialist, but also behavioural and adaptive aspects of their functioning are most effective. In this context, the changes in coping strategies should be considered as one of the important mechanisms for the effectiveness of the programme, since it is the transition to more active ways to overcome stress that creates a psychological basis for maintaining the professional reliability of a military doctor in war conditions.

A separate discussion will require changes in the scales of basic beliefs. An increase in the indicators of commitment to the world, justice of the world, controllability of the world, and the value of own "self" against the background of a decrease in the indicator of randomness of events can be interpreted as signs of a greater orderliness of the experience of the situation, a higher level of subjective control, and a lower severity of helplessness. P. Rzońca *et al.* (2024), examining the prevalence of post-traumatic, anxiety, and depressive manifestations among Ukrainian civilian doctors and paramedics during wartime, showed a significant mental load of this professional group. S. Zhang & L. Li (2025), summarising data on the phenomenon of military anxiety, concluded that prolonged exposure to military threats poses long-term risks to mental health and requires targeted psychological interventions. In this context, the changes in basic beliefs recorded in the study can be considered as signs of increased internal organisation of psychological resources in response to chronic stress.

For the Ukrainian context, it is fundamentally important that the results of the study are consistent with studies on the functioning of the medical system and the mental health of specialists during the war period. A. Deac *et al.* (2024), analysing the situation of Ukrainian health workers in the first year of a full-scale war, showed that the combination of military threats, the consequences of the pandemic, and personnel depletion makes it difficult to maintain the mental well-being of medical professionals. E. Dale *et al.* (2024), examining the sustainability of primary health care in Ukraine in the context of pandemic and war, concluded that maintaining the functioning of the health system largely depends on adaptability, local resources, and organisational flexibility. This gives grounds to consider the results obtained as an argument in favour of the fact that military medical specialists need not only general mental health support programmes, but also specialised approaches that consider the combination of clinical, organisational, and military workload. The study also recorded positive changes not only in the integral indicator of resiliency, but also in individual communicative and regulatory and motivational and semantic indicators, although not all of them reached statistical significance at the intergroup level. This may indicate that some of the programme's effects are gradual and require more time to stabilise or test on a larger sample. This conclusion is consistent with the opinion of C. Stewart *et al.* (2024) and C. Frias *et al.* (2025), who viewed maintenance of the psychological well-being and resilience of healthcare professionals as a complex process involving a combination of individual, professional, and organisational factors.

The findings of C. West *et al.* (2020) are also important for interpreting the results obtained. The researchers showed that a higher level of resilience of doctors is associated with a lower probability of professional burnout, but resilience itself does not completely eliminate the risk of exhaustion, since systemic and organisational factors of the professional environment play a significant role in its occurrence and maintenance. Thus, the positive changes identified in the study should be considered not as a self-sufficient solution to the problem of professional stress of a military doctor, but as an empirically based direction for strengthening his psychological resources, which should be combined with broader organisational and professional-environmental support measures.

Particular attention should be paid to the findings of R. Pietrzak *et al.* (2024), who, in their study of the psychological resilience of Ukrainian mental health professionals during the Russia-Ukraine war, identified social connections, life-meaning orientations, and optimism as factors contributing to greater psychological resilience. This conclusion is important for interpreting the results of the study, since the proposed programme is also aimed not only at developing individual self-regulation skills, but also at strengthening professional meanings, team interaction, and the ability to seek support in conditions of prolonged stress. However, the results should be interpreted with the

consideration of the limitations of the study. The formative sample was small, which reduced the statistical power of the analysis and partially explains the combination of significantly different, but not always statistically significant differences between groups. However, even under these conditions, the data obtained demonstrate a complete picture of positive changes, which allows considering the proposed programme as a promising tool for psychological support of military doctors in wartime.

◆ Conclusions

The study theoretically substantiated and empirically tested the programme for the development and support of military doctor resilience, built considering the specifics of military medical activities. Its content was focused on the consistent development of motivational and value, cognitive and reflexive, emotional and volitional, behavioural, and communicative and regulatory components. The proposed approach allowed considering resiliency not as a separate skill of stress tolerance, but as a complex professional and personal resource necessary for maintaining psychological stability, self-regulation, professional identity, and functional reliability of a military doctor in extreme working conditions. The results of the formative stage showed that the implementation of the programme was accompanied by positive changes in a number of integral and component psychological indicators. The most expressive shifts were established in terms of indicators of professional resilience, professional involvement, professional control, problem solving planning, and basic beliefs associated with the experience of controllability, order of the world, and the value of own "self". The results obtained give grounds to assert that the programme contributes to strengthening psychological stability, developing adaptive ways to overcome

difficulties, strengthening subjectivity, increasing readiness for responsible decisions, and maintain professional effectiveness in challenging work-related circumstances. The scientific originality of the study consisted in the systematic substantiation of the programme for the development and support of the military doctor's resilience based on the author's five-component model, which integrates motivational and value, cognitive and reflexive, emotional and volitional, behavioural, and communicative and regulatory components. The practical significance of the study lies in the possibility of using the proposed programme in the system of psychological support, professional training, and support of military medical specialists. Its content and practical tools are focused on application in real-world conditions of activity and can be used to maintain psychological stability, prevent professional exhaustion, and strengthen the reliability of the professional activity of a military doctor. The results obtained open up prospects for further empirical testing of the programme on wider samples and among various categories of military medical specialists. It would also be worthwhile to investigate the stability of the observed effects over time, to compare the effectiveness of individual programme modules, and to adapt its structural elements to different formats of psychological support in line with the conditions of military medical practice.

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◆ Conflict of Interest

None.

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Резильєнтність військового лікаря в умовах війни: практичні інструменти розвитку

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♦ **Анотація.** Актуальність дослідження зумовлена потребою наукового обґрунтування психологічних засад збереження надійності та психологічної стійкості військових лікарів в умовах війни. Діяльність цієї категорії фахівців характеризується поєднанням впливом бойового стресу, високої відповідальності за життя і здоров'я поранених і хворих, дефіциту часу для прийняття клінічних рішень, тривалого психоемоційного напруження та етично складних ситуацій вибору. За таких умов підвищується ризик емоційного виснаження, вигорання, вторинної травматизації та зниження ефективності функціонування. Це актуалізує необхідність розроблення спеціалізованих програм розвитку резильєнтності військових лікарів як інтегративного психологічного ресурсу саморегуляції, адаптації, збереження фахової ідентичності та конструктивної взаємодії в екстремальних умовах службово-професійної діяльності. Метою статті стало обґрунтування змістово-структурних засад і практичного інструментарію авторської програми розвитку резильєнтності військового лікаря в умовах війни. Емпіричну основу дослідження становили матеріали формувального етапу апробації авторської програми. Дизайн передбачав до та післяекспериментальне оцінювання показників у контрольній та експериментальній групах. У дослідженні взяли участь 30 військових лікарів-інтернів, розподілених на дві групи по 15 осіб. Програма була розрахована на 30 годин і охоплювала 10 взаємопов'язаних занять. Для оцінювання її результативності застосовано комплекс психодіагностичних методик, спрямованих на визначення рівня резильєнтності, професійної життєстійкості, копінг-стратегій, базових переконань, рефлексивності та комунікативної толерантності. Авторська програма побудована на п'ятикомпонентній моделі резильєнтності військового лікаря, що охопило мотиваційно-ціннісний, когнітивно-рефлексивний, емоційно-вольовий, поведінковий та комунікативно-регулятивний компоненти. Встановлено позитивну динаміку інтегрального показника резильєнтності та більш виразні зміни в експериментальній групі порівняно з контрольною. Найбільш помітні зрушення виявлено за показниками професійної життєстійкості, включеності, контролю, планування вирішення проблеми, прийняття відповідальності та базових переконань. Практична цінність дослідження полягає в розробленні програми, що може бути впроваджена в систему психологічного супроводу, підготовки та підтримки військово-медичних фахівців

♦ **Ключові слова:** професійна життєстійкість; емоційна саморегуляція; адаптивне мислення; командна взаємодія; психологічний супровід; саморегуляція в стресі; програма розвитку