Original Article

Cognitive-Behavioural Strategies for Coping with Combat Stress in Veterans with Varying Levels of Post-Traumatic Symptoms: Component of the National Strategy to Counteract Enemy Cognitive Influence

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SUMMARY

Objective

The study aimed to analyse the differentiated effectiveness and strategic role of cognitive-behavioural strategies in overcoming combat stress and strengthening veterans' resilience to informational and psychological influence.

Methods

Content analysis and monitoring of official resources were employed to examine international psychological support programmes. A structural-functional approach modelled interrelations among coping strategies, while comparative analysis enabled evaluation of key intervention components and outcomes across selected national models (USA, UK, Ukraine).

Results

The analysis demonstrated that cognitive-behavioural interventions function not only as clinical but also as strategic components of rehabilitation systems. A differentiated approach based on symptom severity proved more effective than standardised programmes by aligning specific cognitive-behavioural therapy (CBT) mechanisms with levels of functional impairment and corresponding functional outcomes across symptom groups. Cognitive restructuring showed the greatest relevance for mild and moderate manifestations, while controlled exposure techniques were most effective in stabilising intrusive symptoms and avoidance behaviour. For severe post-traumatic stress disorder (PTSD), integrated CBT combined with pharmacological and social-support interventions demonstrated the highest potential for functional recovery. Comparative analysis of international programmes showed that the most effective models combine evidence-based CBT with structured social-support systems and digital technologies demonstrating improved functional stabilisation and reintegration outcomes.

Conclusions

The findings confirmed the value of cognitive-behavioural strategies as a foundation for fostering resilience among veterans to both stress and informational influence. The results indicate the need for greater integration of mental health, cognitive security, and social reintegration. The approaches developed may inform national and international programmes of psychological rehabilitation and veteran support through stratified intervention models.

Key words: adaptation, rehabilitation, preventive programmes, clinical interventions, psychotherapeutic protocols

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Introduction

The issue of psychological well-being among service personnel and veterans has grown in significance amid the increasing intensity of armed

conflicts in the 2020s, which generate multi-layered psychotraumatic factors. Heightened cognitive load, disruption of established social ties, adaptation to harsh service conditions, and the risk of repeated traumatic experiences have led to increased levels of stress, anxiety, and the development of PTSD. Consequently, the search for effective preventive and rehabilitative strategies–ensuring psychological resilience, preservation of cognitive resources, and facilitating the reintegration of military personnel into civilian life–remains a priority for modern science and practice.

For example, the study by Bekesiene et al. [1] demonstrated the effectiveness of artificial neural networks in predicting stress levels among conscripts. The most accurate model was provided by a multilayer perceptron with a 6-2-2 architecture, enabling identification of the influence of factors such as team cohesion and adaptation to military routine. This confirmed the decisive role of socio-organisational conditions in maintaining recruits' psychological state.

Hojjat Kaveh et al. [2] showed statistically significant effectiveness of cognitive-behavioural group therapy in increasing marital satisfaction among spouses of veterans with PTSD. Results indicated that including coping methods based on CBT principles not only reduced psychological distress but also improved marital quality, highlighting the importance of family support in veterans' rehabilitation. Sun et al. [3], drawing on analysis of 25 studies, concluded that pre-deployment resilience-building programmes could act as effective tools for preventing combat stress. At the same time, the authors emphasised that identical interventions yielded varying effectiveness depending on the characteristics of the target group and service conditions, underscoring the need for differentiated, context-sensitive programmes.

Damirovich [4] examined the psychological adaptation of young servicemen to the specific environment of the army, stressing that the initial adaptation period determined later resilience and the ability to function effectively under combat conditions. Leung et al. [5] explored internet-based CBT for veterans with depressive disorders. Although CBT was confirmed effective in treating depression, the authors noted low awareness among patients and clinicians, which limited its uptake, revealing the need for clearer mechanisms to integrate digital therapies into veteran healthcare systems. Movsisyan et al. [6] described the psychological consequences of the 44-day war in Artsakh, including depression, anxiety, and PTSD among direct combatants, emphasising the significance of timely assessment of psycho-emotional state to prevent long-term disorders. In a systematic review, Pallavicini et al. [7] analysed stress-reduction training programmes based on virtual reality, demonstrating that such technologies increased service members' resilience and effectively simulated stressful situations for the development of self-regulation skills. Sangwan and Raj [8] systematised military competencies using the Be, Know, Do concept. Their analysis of over 300 articles and 15 military manuals enabled them to design a conceptual framework for cultivating the skills, knowledge, and personal qualities essential for preparing military personnel to face hybrid conflicts.

Thus, previous studies highlighted diverse aspects of military psychological resilience and support – from artificial intelligence and digital therapies to family interventions and virtual reality training. However, the comprehensive integration of cognitive-behavioural strategies with multi-level approaches capable of uniting mental health, cognitive security, and social adaptation into a single system remains insufficiently conceptualised.

This study advances existing trauma-informed and resilience-based models by conceptualising cognitive-behavioural therapy as a multi-level mechanism linking clinical rehabilitation, cognitive resilience, and resistance to informational and psychological influence. Unlike conventional approaches that focus primarily on symptom reduction, the present framework introduces a stratified model that aligns CBT mechanisms with symptom severity while situating these interventions within a broader cognitive-security and societal-resilience context. This integrated positioning constitutes the study's principal conceptual contribution.

The aim of this study is to analyse the differentiated effectiveness of cognitive-behavioural strategies in overcoming combat stress among veterans with varying levels of post-traumatic symptoms and to determine their role in strengthening psychological resilience to informational and psychological influence. The study focuses on examining the correspondence between symptom severity and selected CBT mechanisms, as well as on evaluating their integration into contemporary rehabilitation and resilience-building frameworks.

Materials and methods

The methodological basis of the study rested on an interdisciplinary approach combining psychological, cognitive-behavioural, socio-behavioural, and biopsychophysiological concepts. The study employed a theoretical analysis of previously published scientific literature and a structured narrative review of documented rehabilitation programmes and clinical protocols. No primary empirical data were collected; the study represents an analytical narrative synthesis of existing literature and documented programmes.

Sources published between 2014 and 2025 were prioritised, with emphasis on evidence-based CBT interventions, veteran rehabilitation programmes, and conceptual works addressing cognitive resilience and informa-

tional influence. The selection of sources was guided by their clinical relevance, focus on combat-related stress and PTSD, and representation of widely implemented international rehabilitation models. The review followed a narrative-integrative design rather than a systematic protocol. The aim was not to provide exhaustive coverage of all available studies, but to synthesise conceptually and clinically significant models relevant to differentiated CBT application in veteran rehabilitation.

Content analysis and content monitoring of official resources were applied to examine state and international programmes documenting principles and mechanisms of veteran rehabilitation, enabling classification of coping strategies and identification of institutional and practical rehabilitation mechanisms. Structural-functional analysis was used to model relationships among emotional-regulatory, behavioural, and social coping strategies and to identify key components of coordinated rehabilitation systems.

The methodology also incorporated comparative analysis of psychosocial assistance programmes for veterans, allowing systematic comparison of national and international practices. The comparative analysis was conducted according to a unified set of analytical parameters, including programme structure and duration, target groups and symptom profiles, the range of cognitive-behavioural intervention mechanisms applied, expected psychosocial and functional outcomes, and the level of integration with social-support and digital rehabilitation tools.

These parameters enabled systematic comparison of selected national models (USA, UK, Ukraine). The sample included: in the USA–Veterans Affairs Readjustment Counselling Services and the National Center for PTSD [9]; in the United Kingdo–Combat Stress [10]; in Ukraine–the I'Mariupol Support Centers [11]. Programme selection criteria were: evidence-based effectiveness, focus on combat stress and PTSD, multidisciplinarity, and results described in scientific publications. This allowed identification of differences in programme emphasis, from individually oriented therapeutic models to collective social-integration approaches.

Another methodological approach was comparative systematisation of classifications of combat stress and post-traumatic manifestations. This enabled the alignment of psychological, cognitive, and behavioural parameters shaping an integrated picture of combat experience's impact on veterans' psycho-emotional functioning. A structural-paradigmatic approach conceptualised CBT as a multi-level system combining principles, techniques, and mechanisms affecting veterans' psycho-emotional state.

To operationalise CBT content in practice, principles, techniques, and underlying mechanisms described in the literature and programme documentation were extracted, categorised, and mapped to their expected psycho-emotional and behavioural effects, forming the basis for the systematisation presented in Table II ("Examples of implementing CBT principles, techniques, and mechanisms in work with veterans"). In addition, intervention stratification was operationalised through a severity-based framework (mild, moderate, severe/clinical) derived from comparative systematisation of post-traumatic symptom classifications; this framework guided the alignment of symptom profiles with priority CBT strategies and expected outcomes and underpinned the model presented in Table III ("Models for applying CBT strategies according to veterans' symptom severity").

The moral-psychological dimension was considered as a conceptual category identified in the literature [12]. Multi-level analytical frameworks proposed in contemporary trauma research [13] were used as a conceptual reference for synthesis and interpretation.

Modelling and scenario-analysis methods were used to formulate practical recommendations and outline trends in coping-strategy application. Biopsycho-physiological perspectives were incorporated through analysis of biomarkers (cortisol, heart-rate variability (HRV), sleep parameters) as indicators discussed in the literature. Standardised international instruments were included, such as the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0) [14], PCL-5 [15], Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) [9], Beck Depression Inventory (BDI) [16], Patient Health Questionnaire-9 (PHQ-9) [17], and Generalised Anxiety Disorder-7 (GAD-7) [18]. These instruments were referenced exclusively as methodological and clinical benchmarks for the interpretation and systematisation of existing research findings; no primary empirical data collection or psychometric assessment was conducted within the present study.

Results

Theoretical and methodological foundations for studying combat stress and post-traumatic symptoms

Combat stress is a complex multidimensional phenomenon arising under conditions of life threat, loss of control, and prolonged exposure to extreme environments. It emerges in military contexts characterised by constant danger and sustained mobilisation of psychological and physiological resources [19]. It may manifest as both an acute response and a prolonged strain capable of developing into persistent psychological disturbances.

From a physiological perspective, combat stress differs from other forms in that it entails maximal activation of the sympatho-adrenal system, sharp fluctuations in

cortisol and adrenaline levels, and depletion of energy reserves [20]. It also has a collective dimension affecting group dynamics and behavioural norms within military units.

Scholarly discourse also attends to the differences between combat stress and PTSD. Whereas PTSD represents a clinically established disorder, combat stress is conceptualised as a primary reaction that may either resolve or evolve into PTSD [21]. Accordingly, it functions both as a risk factor for later disorders and as a potential basis for resilience formation. Combat stress is also associated with moral-psychological injury, including guilt and moral doubt, which may shape post-traumatic trajectories [12; 22]. Early depressive reactions following war trauma have also been documented in clinical case analyses [23].

Post-traumatic symptoms constitute a multidimensional phenomenon arising from exposure to combat stress and prolonged traumatic experience[24,25]. They unfold along a spectrum from mild adaptive reactions to severe clinical manifestations of PTSD, with severity shaped by individual resources, trauma intensity, social support, and coping strategies [26].

For analytical clarity, post-traumatic symptoms were stratified into three severity levels–mild, moderate, and severe–reflecting increasing cognitive, emotional, and behavioural impairment (Tab. I).

Post-traumatic symptoms are dynamic and may intensify or attenuate depending on psychosocial environment and access to care. Post-traumatic manifestations involve disruptions in emotional regulation, cognitive appraisal, and behavioural functioning [30,31]. Cognitive distortions and avoidance patterns reinforce maladaptive trajectories and increase functional impairment [32,33]. Neurobiological models further suggest that systemic regulatory mechanisms may contribute to psychiatric vulnerability and resilience [34-36]. These interactions support the need for integrated psychological and psychosocial intervention models.

Comorbid depression, anxiety, and substance-use disorders further complicate prognosis and necessitate integrated intervention approaches.

Cognitive-behavioural strategies for overcoming combat stress

Cognitive-behavioural therapy (CBT) is among the most evidence-based psychotherapeutic approaches in clinical and military psychology, characterised by structured delivery and active patient involvement. Its theoretical basis integrates cognitive and behavioural approaches, addressing dysfunctional beliefs, automatic thoughts, and behaviour patterns that maintain maladaptive stress responses. Within this integrative framework, maladaptive responses to stress are understood as arising from the interaction between cognitive interpretations and behavioural patterns rather than from biological or social factors alone [37-39].

In veteran care, CBT contributes not only to symptom reduction but also to the development of long-term coping strategies that enhance adaptation and resilience. Within this paradigm, three interrelated components may be distinguished–principles, techniques, and psychological mechanisms–whose interaction becomes most evident in practical application with veterans, as illustrated in Table II.

CBT principles structure the therapeutic process by providing a predictable and safe framework for intervention [44,45]. Techniques directly address symptomatology by reducing anxiety, depressive manifestations, and avoidance, while underlying psychological mechanisms ensure stability of outcomes through cognitive reappraisal, desensitisation, and reinforcement. For example, in a veteran experiencing persistent guilt-related cognitions (e.g., "I am responsible for my comrades' deaths"), cognitive restructuring combined with graded exposure to traumatic memories may reduce avoidance

TABLE I. *Classification of post-traumatic symptoms and their impact on veterans' cognitive and behavioural domains.*

Symptom level	Psychological features	Cognitive features	Behavioural features
Mild (adaptive)	Heightened anxiety, hypervigilance, moderate sleep disturbances, emotional tension	Fragmented attention, difficulties with concentration, temporary reduction in thinking productivity	Avoidance of reminders of the traumatic experience, increased reactivity, caution in social contacts
Moderate	Intrusive memories, episodic flashbacks, regular nightmares, emotional instability	Impairment of long-term memory, reduced cognitive flexibility, slowed thinking, rigidity in decision-making	Social isolation, avoidance of communication, reduced motivation, problems in occupational functioning
Severe (clinical, PTSD)	Marked anxiety, depressive states, feelings of guilt and shame, emotional burnout	Significant memory deterioration, distortions in reality appraisal, generalisation of threat, formation of pathological beliefs	Aggressive reactions, impulsivity, substance misuse, loss of capacity for social adaptation

Source: compiled by the authors based on [27-29].

TABLE II. *Examples of implementing CBT principles, techniques, and mechanisms in work with veterans.*

Component	Examples of implementation with veterans	Expected impact on psycho-emotional state and behaviour
Principle of present-focus	Analysing responses to combat triggers; planning concrete daily actions	Reduced anxiety; development of a sense of control
Principle of active participation	Completing a thought diary; between-session behavioural experiments	Increased autonomy; greater responsibility for one's own progress
Principle of structured delivery	Protocol-based CBT for PTSD; setting specific goals	Reduced uncertainty; more predictable therapeutic process
Principle of time-limitation	A 12-16 session stabilisation programme	Rapid functional recovery; efficient use of resources
Exposure therapy	Working through flashbacks under therapist guidance	Reduced fear; gradual overcoming of avoidance
Self-regulation training	Breathing techniques and relaxation exercises	Lower physiological arousal; improved sleep stability
Behavioural experiments	Practised entry into social situations without avoidance	Increased confidence; support for social adaptation
Cognitive reappraisal	Replacing beliefs "I am helpless" with "I can cope"	Higher self-efficacy; restored motivation
Desensitisation	Narrative exposure or visualisation of traumatic experience	Lower intensity of traumatic memories
Learning through reinforcement	Positive reinforcement when refraining from avoidance	Durable acquisition of constructive behaviour patterns

Source: compiled by the authors based on 40-43.

behaviour, facilitate more balanced responsibility appraisal, and improve everyday functioning.

Applying cognitive-behavioural strategies for veterans with differing levels of post-traumatic symptoms requires a differentiated approach that accounts for symptom intensity and personal resources. The symptom spectrum ranges from mild anxiety to severe PTSD with dissociation and social maladaptation, requiring differentiated CBT application.

At a mild level of symptoms, the primary task is prevention of chronicity and development of stable self-regulation skills. Emphasis is placed on cognitive reappraisal and stress-management techniques that minimise avoidance and preserve functioning. Mindfulness practices, breathing techniques, and behavioural experiments support integration of military experience into everyday life without significant dysfunction.

A moderate level of symptoms entails more pronounced emotional and cognitive disturbances, including intrusive memories and concentration difficulties. Combining cognitive restructuring with controlled exposure enables gradual processing of traumatic memories and restoration of adaptive behaviour. Work with dysfunctional beliefs, particularly those related to guilt or shame, is especially important.

A severe level of symptoms is characterised by persistent impairments across cognitive, emotional, and behavioural domains. In such cases, CBT is integrated with pharmacological treatment, group therapy, and social-support systems. The main objectives are stabilisation, reduction of intrusive symptoms, and gradual restoration of behavioural control and social functioning. The models are detailed in Table III.

The effectiveness of CBT strategies depends on symptom severity. For mild symptoms, prevention and adaptive coping are prioritised; for moderate symptoms, restructuring dysfunctional beliefs and restoring emotional control are central; for severe conditions, CBT forms part of integrated multidisciplinary support. This differentiated application underscores CBT's flexibility as both a clinical and strategic tool for restoring psychological resilience.

Coping strategies function as mediators between traumatic experience and long-term recovery. They regulate cognitive interpretation, emotional response, and social behaviour, shaping whether combat stress leads to adaptive transformation or chronic maladaptation [49]. Cognitive coping strategies such as reappraisal and narrative restructuring help reduce automatic negative thoughts and restore a sense of control [50,51].

TABLE III. *Models for applying CBT strategies according to veterans' symptom severity.*

Symptom level	Main manifestations	Priority CBT strategies	Example techniques	Expected outcomes
Mild	Heightened anxiety, emotional tension, initial sleep difficulties, increased vigilance	Building self-regulation skills; cognitive reappraisal; prevention of avoidance	Mindfulness; breathing exercises; behavioural experiments	Reduced anxiety; maintained social activity; prevention of chronicity
Moderate	Intrusive memories; concentration problems; emotional instability; trigger avoidance	Cognitive restructuring; exposure therapy; stress-management development	Controlled immersion in traumatic imagery; addressing beliefs "I am guilty", "I am dangerous"	Reduced intensity of intrusive thoughts; formation of adaptive beliefs; emotional stabilisation
Severe	Flashbacks; dissociative episodes; aggressiveness; social maladaptation; somatic manifestations	Integration of CBT with pharmacotherapy; desensitisation; deep cognitive restructuring; social support	Work with dissociation; training in safe emotional expression; group therapy	Lower frequency and intensity of symptoms; restoration of basic control; gradual resocialisation

Source: compiled by the authors based on 21, 46-48.

Emotion-regulation strategies–including relaxation, mindfulness, and distress-tolerance techniques–reduce affective instability and prevent impulsive reactions that disrupt social functioning. These strategies also support autonomic regulation and sleep stability, reinforcing cognitive and social functioning. Behavioural strategies–gradual exposure, behavioural activation, and return to meaningful activity–reinforce adaptive routines and support reintegration into civilian life. Social coping strategies, including peer support and group interventions, buffer stress and rebuild social capital [52,53].

Comparative analysis of international programmes demonstrates that effective veteran-support systems integrate CBT-based interventions with social and community-support mechanisms. International programmes illustrate integration of clinical treatment with family, social, and community support across different national contexts.

Moderators of intervention effectiveness include symptom severity, comorbidities, time since trauma, and availability of social support. Mediating mechanisms include restoration of self-efficacy, reduction of avoidance, and improved sleep and emotional regulation [54-56]. Recognition of these factors allows tailoring of CBT strategies to individual recovery trajectories.

Clinical implementation of coping strategies should rely on measurable indicators of effectiveness, including symptom reduction, functional recovery, and improvements in social functioning. Measurement-based care using validated PTSD, depression, and functioning scales enables monitoring of progress and adjustment of interventions over time.

Integration of clinical, psychosocial, and digital support mechanisms (*e.g.*, teletherapy and mobile self-help tools) enhances the scalability and accessibility of CBT-based interventions. Population-level analyses of psychiatric service utilisation during large-scale crises demonstrate that mental health burden and patterns of admission change significantly under conditions of collective stress, underscoring the importance of scalable and structured intervention systems [57-59]. Accordingly, CBT contributes to both symptom reduction and longer-term functional recovery by strengthening self-regulation, adaptive coping, and reintegration capacities. Thus, differentiated CBT application provides a clinically grounded and scalable framework for restoring psycho-emotional stability, adaptive functioning, and long-term resilience among veterans.

Compared with conventional trauma-informed and resilience-based approaches, the present synthesis conceptualises CBT as a structured multi-level system linking symptom-oriented therapy with cognitive resilience and long-term functional reintegration, thereby extending existing clinical and rehabilitation models.

Discussion

The findings are interpreted within a multi-level framework linking clinical rehabilitation, psychosocial adaptation, and resilience to informational stressors and are compared with existing studies on combat stress and post-traumatic disorders.

Flood and Keegan [60] emphasised the role of cognitive resilience in sustaining performance under extreme stress. Compared with these findings, the present results indicate that veterans' resilience extends beyond operational performance to the post-service period, when psycho-emotional stability becomes central to adaptation and resistance to informational stressors. While Flood and Keegan [60] focused on resilience in combat

conditions, the present analysis extends this perspective to post-service rehabilitation through integration of CBT within broader psychosocial support systems.

Reuter et al. [61] pointed to the need for a comprehensive and individualised approach to treating post-traumatic disorders that incorporated a range of psychotherapeutic tools–CBT, prolonged exposure, EMDR, and group formats. They stressed that therapeutic success depended on tailoring interventions to the veteran's individual characteristics and the degree of involvement of their social environment. These observations support the present findings, which confirm the value of individualisation and indicate that strengthening resilience to informational stressors also requires coordination with broader psychosocial support systems. While Reuter et al. [61] focused on restoring quality of life, this analysis also highlights the role of CBT in supporting stable cognitive appraisal and adaptive decision-making under informational pressure.

Pietrzak et al. [62], in a cohort of Operation Enduring Freedom and Operation Iraqi Freedom veterans, found that insufficient social support mediated PTSD manifestations via maladaptive coping strategies such as avoidance, self-punishment, and excessive rumination. Greater social integration and perceived understanding from others reduced PTSD symptoms. These findings align with the present results, which indicate that social support is most effective when combined with CBT interventions restoring adaptive decision-making and realistic cognitive appraisal. Accordingly, the effectiveness of social support appears to increase when embedded within coordinated CBT-based rehabilitation.

Jensen et al. [63] further confirmed that resilience-training methods improve cognitive functions, stress regulation, and operational performance, with reductions in cortisol and increases in IGF-1 providing a biological basis for adaptation and decision-making in critical situations. Beyond physiological indicators, the present analysis emphasises the broader role of CBT strategies in establishing long-term psychological resilience. Whereas Jensen et al. [63] focused on short-term physiological adaptation, the present findings highlight the role of CBT in supporting longer-term cognitive stability and adaptive functioning.

Smith [64] examined the therapeutic potential of canine-assisted therapy, demonstrating reductions in PTSD manifestations, social isolation, and re-traumatisation symptoms. The positive effect was attributed to the interpersonal bond between veteran and animal, which enhanced emotional support and reduced anxiety and depressive symptoms. From this perspective, the present study focuses on CBT as a structured approach to modifying dysfunctional beliefs and developing adaptive behaviour patterns. While Smith's [64] therapeutic effect was mediated by emotional interaction and social support, the present findings indicate that systematic cognitive restructuring also improves decision-making and functional stability.

Pashkov et al. [65] considered rehabilitation through the prism of comprehensive international programmes that combine psychological support, rehabilitative technologies, and standardised mechanisms of inter-state cooperation. In contrast, the present study suggests that unified models may be less effective than differentiated protocols calibrated to symptom severity. While Pashkov et al. [65] emphasised integration of global practices into a single system, these findings highlight the advantages of personalised CBT strategies within coordinated rehabilitation systems. Johnston [66] conceptualised combat-related PTSD as complex (C-PTSD), calling for a fundamental re-thinking of therapeutic models, integrating classical methods with positive psychology and the moral-spiritual dimension of trauma. Within this context, the present study prioritises CBT and the restoration of functional mechanisms for cognitive appraisal and decision-making. Whereas Johnston [66] treated the spiritual-moral component as the key to holistic recovery, these findings emphasise the effectiveness of differentiated psychotherapeutic methods in strengthening psychological and cognitive resilience.

Finally, Beckner et al. [67] focused on the biological bases of military stress resilience, treating physiological markers as primary indicators of adaptation centred on neuroendocrine and immune regulation. They argued that resilience arises from the interplay of neuroendocrine, inflammatory, and anabolic markers, with real-time biomarker panels and monitoring systems as optimal future tools. While acknowledging the importance of biological resilience, the present findings indicate that long-term cognitive stability is also supported by CBT-based interventions. Whereas Beckner et al. [67] emphasised physiological adaptation, the present analysis highlights the role of cognitive appraisal and decision-making mechanisms in adaptive functioning under informational stress.

In sum, juxtaposing these approaches with the present findings shows that, while prior work consistently stresses individual and social determinants of overcoming combat stress and PTSD, integrating CBT with broader psychosocial and resilience-oriented frameworks offers a qualitatively expanded perspective on rehabilitation. Psychological rehabilitation of veterans can therefore be viewed not only as restoration of mental health but also as a component of broader societal resilience and long-term reintegration. This integrative perspective clarifies the specific conceptual contribution of the present study in relation to existing trauma-informed and resilience-based models. Unlike traditional trauma-informed or resilience-based models, the present framework explicitly integrates CBT mechanisms with

informational resilience and system-level rehabilitation architecture, thereby extending existing approaches to post-traumatic recovery.

The present study contributes to the existing literature in three principal ways. First, it conceptualises CBT as a multi-level mechanism linking clinical recovery with cognitive resilience. Second, it proposes a differentiated model of CBT application based on symptom severity and functional outcomes. Third, it extends existing trauma-informed approaches by situating psychological rehabilitation within broader frameworks of informational resilience and long-term social reintegration. These contributions clarify the study's theoretical and applied relevance within contemporary clinical and military psychology.

Conclusions

This study demonstrates, on the basis of comparative and structural analysis of existing programmes and CBT models, that CBT strategies for overcoming combat stress in veterans with varying levels of post-traumatic symptoms are not only clinically effective tools of rehabilitation. They also function as multi-layered components of a national strategy to counter an adversary's cognitive influence by restoring cognitive appraisal, self-regulation, and decision-making capacities essential for resistance to informational pressure.

Comparative analysis of international programmes and intervention models revealed a direct relationship between differentiated CBT application (according to symptom severity) and improvements in functional stability, emotional regulation, and adaptive coping capacity. This, in turn, highlights the need for greater integration of clinical, social, and cognitive-security frameworks.

These relationships are further reflected in the stratified CBT models presented in Tables II and III, which systematise the correspondence between symptom severity, selected intervention mechanisms, and expected functional outcomes across different veteran groups.

The analysis demonstrated that a differentiated approach–based on prior stratification by severity of post-traumatic symptoms (mild, moderate, severe clinical)–is markedly more effective than unified programmes because it enables targeted selection of CBT mechanisms and rehabilitation intensity. This is due to precise targeting of mechanisms such as cognitive restructuring of dysfunctional beliefs for groups with mild manifestations; controlled exposure therapy to overcome avoidance at moderate severity; and comprehensive desensitisation combined with pharmacological support for veterans with diagnosed PTSD.

In aggregate, these measures yield not only symptomatic improvement but also the restoration of functional cognitive mechanisms for reality appraisal and decision-making and increased capacity for social and occupational reintegration. Systemic analysis of international experience demonstrated that programme success depends on combining individualised, evidence-based therapeutic protocols with robust social-support infrastructure (peer-to-peer networks, family therapy, employment schemes) and the mandatory integration of modern digital technologies including teletherapy, mobile self-help applications, and ecological momentary assessment tools that ensure continuity of care and monitoring of rehabilitation outcomes. Together, these elements form a scalable and measurable system of veteran rehabilitation integrating clinical effectiveness with long-term resilience-building.

The originality of the proposed framework lies in conceptualising CBT not solely as a clinical intervention but as a multi-level mechanism linking individual rehabilitation, cognitive resilience, and resistance to informational and psychological influence. Unlike conventional trauma-informed or resilience-based models, the proposed approach integrates clinical, psychosocial, and cognitive-security dimensions into a unified analytical framework applicable at both individual and system levels.

The principal limitation of this work is the absence of original empirical data collection; conclusions are based on secondary analysis and synthesis of existing publications. A promising direction for future research is a cohort study assessing the effectiveness of specific CBT interventions across veteran subgroups and their resilience to informational influence.

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Conflicts of interest

The authors declare no conflict of interest.

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Author contributions

O.S. and O.K. conceptualised and designed the study; O.S., O.M., and T.B. performed the theoretical and methodological analysis; V.R. conducted the comparative and analytical evaluation of international programmes; O.S. and V.R. prepared the first draft of the manuscript; O.K., O.M., and T.B. critically revised and edited the manuscript. All authors agreed to be accountable for all aspects of the work and approved the final version of the manuscript.

Ethical consideration

The study is based exclusively on the analysis of previously published scientific sources and publicly available materials. It did not involve human participants or personal data; therefore, ethical approval and informed consent were not required.

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